DUKE ENERGY®

Lynn J. Good
President, CEO and Vice Chair

Duke Energy Corporation
550 South Tryon Street
Charlotte, NC 28202

March 12, 2014

Mr. Pat McCrory
Governor of the State of North Carolina
NC State Capitol
1 East Edenton Street
Raleigh, NC 27601

Mr. John Skvarla
Secretary, Department of Environment and Natural Resources
NC State Capitol
1 East Edenton Street
Raleigh, NC 27601

Dear Governor McCrory and Secretary Skvarla:

This letter provides an update to my February 28 letter and delivers recommendations for near-term and longer-term actions at our ash basins in North Carolina. Taken together, these near-term and longer-term actions comprise our comprehensive ash basin plan. Our recommendations have been developed around guiding principles designed to prevent future events and to identify opportunities to improve ash pond management activities.

We are committed to working with the State of North Carolina, the North Carolina General Assembly, the North Carolina Utilities Commission (NCUC) and all of our regulators as we develop an updated, comprehensive plan that protects the environment and provides safe, reliable and cost-effective electricity to North Carolinians. As we progress through implementation, we will continue to refine and expand these recommendations, including the design, engineering and cost estimates. We will also be working on these matters with our regulators in other states we serve.

We have accepted responsibility for the Dan River ash discharge and have taken a number of immediate actions following the event:

- We installed a permanent plug on the 48-inch stormwater pipe on February 8, and permanently plugged the 36-inch pipe on February 21.
- Crews have removed coal ash in an area of the riverbed below the broken stormwater pipe's discharge point. We will continue to work with state and federal agencies as we determine next steps needed for the river.

- Company representatives presented information about the Dan River ash release to the North Carolina General Assembly's Environmental Review Commission on February 17 and to the NCUC on February 24.
- We have worked with the North Carolina Division of Water Resources to redirect stormwater around the basins in a manner compliant with our National Pollution Discharge Elimination System (NPDES) permit, until a permanent solution is devised.
- We, along with various agencies, have continually tested the water in the Dan River. The drinking water has remained safe.

We will continue to work with you, your staffs and all appropriate regulatory agencies to finalize our work at Dan River.

For more than a century, our company has provided reliable and affordable electricity to our customers. Coal-fired power plants produced a good portion of that electricity. Throughout the past few decades, we have dedicated significant resources to the management and monitoring of our ash basins. We continue to place the safe operations of these ash basins as one of our highest priorities.

We have formed a team dedicated to strengthening our comprehensive strategy for managing all of our ash basins. John Elnitsky, most recently the company's vice president of project management and construction, is leading this effort. This team will focus on implementing our recommendations listed below as well as identifying and addressing ongoing improvement opportunities. This work will provide an opportunity for us to assess our ongoing storage techniques and will influence the ash basin closure strategies for our retired facilities, recognizing that any storage technique embodies cost and risk-reduction tradeoffs. We want to make certain that we, our regulators and other stakeholders can have a high degree of confidence in the integrity of our ash basins.

As stated above, our comprehensive plan is comprised of both near-term and longer-term actions. Our near-term actions set forth below address three specific retired plants, specific actions related to three active operating units (Cliffside 5 and both Asheville units), and an approach to reduce risk on remaining ponds at all retired plants. These actions are first steps in a more comprehensive plan that will address all retired sites (21 ponds/7 sites) and pond management at active sites (12 ponds/7 sites). Of course, implementing our near-term recommendations and longer-term plans depends on state and federal agreement that these are prudent, cost-effective and environmentally sound options. They are as follows, with associated time frames:

- Permanently close the Dan River ash ponds and move ash away from the river to a lined structural fill solution or a lined landfill. This work will be started immediately upon securing the appropriate fill solution or landfill location and any necessary permits, with an expected completion thereafter of 24-30 months.
- Accelerate planning and closure of the Sutton ash ponds to include evaluation of possible lined structural fill solutions and other options. A conceptual closure plan will be submitted to the North Carolina Department of Environment and

Natural Resources (NCDENR) within six months, and removing the water from the ash basins will be completed in the next 18-24 months.

- Move all ash from Riverbend away from the river to a lined structural fill solution or a lined landfill. Work will begin immediately upon securing the appropriate fill solution or landfill location and any necessary permits, with an expected completion thereafter within 48-54 months.
- Continue moving ash from the Asheville plant to a lined structural fill solution. We continue to look for ash reuse opportunities where such uses remain permissible under the upcoming coal ash regulations.
- Convert the three remaining North Carolina units to dry fly ash (Cliffside 5 and both Asheville units) or retire the units. Conversion work, if selected, will be completed within 30-36 months of receiving permits.
- Minimize the potential risk of a discharge similar to Dan River by accelerating the removal of water from the ash ponds at all retired coal plants. Upon receipt of permits, dewatering will be completed within 24-36 months.

In addition, we have taken immediate action to initiate a near-term comprehensive engineering review of all of our ash basins to identify and address potential risks. This review consists of a risk-informed approach to confirm the structural integrity of the ash basins and associated structures, as well as the characterization and evaluation of all stormwater discharges near ash basins. We expect this engineering review to continue over the next six-to-eight months.

We are also developing a comprehensive longer-term ash basin strategy for all ash ponds in North Carolina and throughout our service territory. This strategy will include a review of active ponds, inactive ponds and closure strategies for the remaining retired plants, will be informed by outside experts, and will include a risk-informed, tiered approach. The work will include a review of the effectiveness of ash storage management programs and practices to confirm that longer-term solutions are sustainable and lessons learned are captured for company-wide application. This comprehensive strategy will evaluate options up to and including complete conversion to all dry handling. This work will be completed by year-end.

We want to get the near-term and longer-term strategies right and implemented in a timely way. That will require close coordination with NCDENR and/or the United States Environmental Protection Agency (EPA) on permitting, as well as consideration of many factors including environmental and transportation issues for each community where coal ash is stored. We look forward to working with and incorporating the input of those agencies, as well as your offices and the General Assembly, to accomplish these objectives.

As our plans progress, it will be important to align our steps with upcoming federal regulations. The EPA issued a proposed rule on June 21, 2010, regarding federal regulation of coal ash. A final rule is expected by December 19, 2014. In addition, the EPA issued a proposed rule June 7, 2013, for Steam Electric Effluent Guidelines that

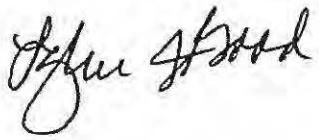
regulates wastewater streams from power plants. The final rule is expected no sooner than May 2014. Our longer-term solutions must satisfy these rules.

As we continue to refine our recommendations, we would like to meet to discuss the near-term items and our comprehensive strategy. Such a meeting should include technical expertise from the company and your agencies to listen to and challenge assumptions. Cost estimates to implement these recommendations are very dependent upon the actual disposal methods that are approved (e.g., cap in place versus structural fill or lined landfills), and we will work with the state to make estimates available as we narrow the range of options at each particular site.

Low-cost power generation has fueled the development of our state over the last century. As scientific knowledge and technology have advanced, we have worked constructively with the policymakers and regulators of our state to develop cost-effective ways to continue providing reliable, low-cost energy to our citizens while protecting public health and the environment.

We look forward to continuing this work as we develop and implement these recommendations for both immediate and longer-term solutions to coal ash storage and disposal.

Sincerely,



Lynn J. Good
President and Chief Executive Officer

IN THE UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NORTH CAROLINA
WESTERN DIVISION

UNITED STATES OF AMERICA,	)	
	)	
	)	
	)	**Case No.**
	)	**5:15-CR-62-H**
	)	**5:15-CR-67-H**
DUKE ENERGY BUSINESS SERVICES, LLC;	)	**5:15-CR-68-H**
DUKE ENERGY CAROLINAS, LLC;	)	
DUKE ENERGY PROGRESS, INC.,	)	
Defendants.	)	

PLEA TO CRIMINAL INFORMATION AND SENTENCING HEARING
BEFORE SENIOR JUDGE MALCOLM J. HOWARD
MAY 14, 2015; 10:00 A.M.
GREENVILLE, NORTH CAROLINA

FOR THE GOVERNMENT:

Banu Rangarajan
Erin C. Blondel
Seth Morgan Wood
Thomas G. Walker
U.S. Attorney's Office
310 New Bern Avenue, Suite 800
Raleigh, North Carolina 27601-1461

Lana N. Pettus
U.S. Department of Justice -
Environmental Crimes Section
P.O. Box 7611
Washington, DC 20044

Steven R. Kaufman
Jill Westmoreland Rose
U.S. Attorney's Office - Criminal Division
Western District of North Carolina
227 West Trade Street
Charlotte, North Carolina 28202

FOR THE GOVERNMENT (CONTINUED)

Jodi A. Mazer
U.S. Attorney's Office
99 NE 4th Street
Miami, Florida 33132

Stephen T. Inman
JoAnna G. McFadden
U.S. Attorney's Office
Middle District of North Carolina
101 South Edgeworth Street, 4th Floor
Greensboro, North Carolina 27401

FOR THE DEFENDANT:

James P. Cooney, III
Claire J. Rauscher
Womble, Carlyle, Sandridge & Rice, LLP
301 South College Street
3500 One Wells Fargo Center
Charlotte, North Carolina 28202-6037

Karen Ann Popp
David T. Buente
Sidley Austin, LLP
1501 K Street, N.W.
Washington, DC 20005

Proceedings recorded by mechanical stenography, transcript produced by computer.

DAVID J. COLLIER, RMR, CRR
FEDERAL OFFICIAL COURT REPORTER
413 MIDDLE STREET
NEW BERN, NC 28560

P R O C E E D I N G S

- - - o0o - - -

THE COURT: Good morning, ladies and gentlemen, and welcome to the United States District Court for the Eastern District of North Carolina sitting here in Greenville.

Madam Clerk, call the calender for the matters for disposition this morning.

THE CLERK: Calling for a plea pursuant to a criminal information and sentencing: United States of America versus Duke Energy Business Services, United States of America versus Duke Energy Progress, United States of America versus Duke Energy Carolinas; Case Numbers 5:15-CR-62-1H, 5:15-CR-67-1H, 5:15-CR-68-1H.

THE COURT: On or about February 20, 2015, the United States filed criminal informations in each of the three Federal Districts in North Carolina, charging three corporations that are before the Court today, all of whom are subsidiaries of Duke Energy, with violations of the Clean Water Act.

At the same time the defendant corporations consented to transfer of jurisdiction of the cases from Middle District and from Western District over to the Eastern District pursuant to what is called Rule 20 of the Federal Rules of Criminal Procedure. Therefore all three of these cases, one from the Middle District, one from the Western District and the original one in the Eastern District, are now before this Court for

disposition.

After these matters were transferred, they were assigned to me in the normal and regular method of case assignment within our district. We're going to now proceed with the arraignment in these matters during the course of today.

I'll begin this morning by inviting counsel to present themselves and whomever they desire to present, beginning with the United States Government, Ms. Rangarajan.

MS. RANGARAJAN: Thank you, Your Honor. Banu Rangarajan on behalf of the United States from the Eastern District of North Carolina. Seated with me at counsel table, sir, is Lana Pettus with the Department of Justice Environmental Crimes Section. From the Western District of North Carolina, Your Honor, Steve Kaufman.

MR. KAUFMAN: Good morning, Your Honor.

MS. RANGARAJAN: Also with the Eastern District of North Carolina we have Jodi Mazer, who is a Special Assistant; Seth Wood, who is an Assistant United States Attorney; and Erin Blondel, Assistant United States Attorney.

From the Middle District of North Carolina, Your Honor, we have JoAnna McFadden, A.U.S.A.

MS. McFADDEN: Good morning, Your Honor.

MS. RANGARAJAN: And Deputy Chief Stephen Inman, sir.

And seated behind counsel are all of the Special

Agents that have been working on the case with us. We have Scott Faircloth, Diane Taggart, Bennett Strickland, Cecil Cherry, Mike Woods, Jerry Polk, Judy Billings, Maureen O'Mara, and at counsel table, Kevin LaPointe.

Your Honor, we also have with us today U.S. Attorneys Jill Rose and Thomas Walker from the Western and Eastern Districts of North Carolina.

THE COURT: You are outstanding with your recollection of names.

MS. RANGARAJAN: Thank you, Your Honor.

THE COURT: Mr. Cooney, on behalf of the defendants?

MR. COONEY: I'm going to have to check my driver's license for mine after that performance, Your Honor.

THE COURT: Yes, sir.

MR. COONEY: I'm Jim Cooney with Womble Carlyle and I'm assisted at counsel table by Karen Popp with Sidley and Austin in Washington, D.C., by Claire Rauscher of Womble Carlyle, and by Dave Buente of Sidley and Austin again of Washington, D.C.

THE COURT: Very good. Thank you, Mr. Cooney.

All right. We will begin the arraignment process of these three different corporations, and I'm going to inquire of Mr. Cooney: Who will be representing the companies today?

MR. COONEY: Ms. Julia Janson, Your Honor.

THE COURT: All right. Ms. Janson, will you please

stand, ma'am, for a moment.

Madam Clerk, will you administer an oath to Ms. Janson.

THE CLERK: Place your left hand on the bible and raise your right hand. Please state your name.

MS. JANSON: Julia Janson.

THE COURT: Do you swear that the answers you will make to the Court will be the truth to the best of your knowledge and understanding, so help you God?

MS. JANSON: I do.

THE CLERK: Thank you.

THE COURT: All right. There's going to be a whole series of questions for you, Ms. Janson, as the representative of your companies. I would like you to remain standing for a few minutes and we'll get some of this out of the way, but then it will be too long for you to have to stand and so I'll permit you to be seated later on.

MS. JANSON: I appreciate that.

THE COURT: Let me begin by asking you, now that you have been sworn, for the record, please state your full name.

MS. JANSON: My full name is Julia Smoot Janson.

THE COURT: And what is your position with the defendant Duke Energy Progress?

MS. JANSON: My position with Duke Energy Progress is I am a Director of the company as well as Executive

Vice President, Chief Legal Officer and Corporate Secretary.

THE COURT: And what is your position with the defendant Duke Energy Business Services?

MS. JANSON: My positions with Duke Energy Business Services are as President and Chief Legal Officer.

THE COURT: And what are your positions with the entity Duke Energy Carolinas?

MS. JANSON: Executive Vice President, Chief Legal Officer and Corporate Secretary.

THE COURT: Ms. Janson, are you 18 years of age or older?

MS. JANSON: I am.

THE COURT: Thank you. How far did you go in school?

MS. JANSON: I have a J.D.

THE COURT: Are you currently or have you recently been treated for any issues of a medical nature, other than routine matters?

MS. JANSON: No, sir.

THE COURT: The real top question we have to ask routine defendants, have you been treated for any mental illness in recent months, and I forego that with you.

In the past 24 hours have you taken any medicine of any kind or any other matters that might impair your ability to understand these proceedings?

MS. JANSON: No, Your Honor.

THE COURT: Do you understand what is going on today?

MS. JANSON: I do.

THE COURT: Mr. Cooney, do you have any reason to doubt Ms. Janson's competency or her ability to understand what is happening in court today?

MR. COONEY: I have none, Your Honor.

THE COURT: Ms. Rangarajan, does the Government have any reason to doubt Ms. Janson's competency or her ability to understand these proceedings?

MS. RANGARAJAN: No, Your Honor.

THE COURT: The Court finds as a fact that Ms. Julia Janson is competent to appear, understand the nature of these proceedings and to assist the Court in these matters.

Now you may be seated for a moment, Ms. Janson and Mr. Cooney.

If at any time, Ms. Janson, you do not understand a question, or even you, Mr. Cooney, that I ask, do not try to answer it, just tell me you don't understand and I'll try to rephrase, and if at any time you want to talk to each other, you may do so.

Now, Counsel, Mr. Cooney, do we have a corporate resolution authorizing Ms. Janson to enter pleas on behalf of Duke Energy Progress?

MR. COONEY: We do, Your Honor. We have a resolution in connection with the Memorandum of Plea Agreement and another

resolution specifically authorizing Ms. Janson to enter pleas today before the Court.

THE COURT: First as to Duke Energy Progress, has every member of the Board of Directors of Duke Energy Progress affixed his or her signature to this resolution before the Court authorizing Ms. Janson to enter a plea on behalf of the corporation?

MR. COONEY: They have, Your Honor.

THE COURT: Are you satisfied that the corporate charter and bylaws of Duke Energy Progress empower the Board of Directors to authorize this person to enter a plea of guilty to a criminal charge against the corporation?

MR. COONEY: I am, Your Honor.

THE COURT: And are you satisfied that Ms. Janson has the authority on behalf of Duke Energy Progress to enter pleas today?

MR. COONEY: Yes, I am, and she does.

THE COURT: The same questions as to Duke Energy Carolinas, and I know that's repetitive, but, see, we have to make a record of all these matters. Has every member or manager of Duke Energy Carolinas affixed his or her signature to the resolution authorizing Ms. Janson to enter pleas on behalf of that entity?

MR. COONEY: They have, Your Honor.

THE COURT: And are you satisfied that the

organizational and governing documents of Duke Energy Carolinas empower the members or managers to authorize a person to enter a guilty plea to criminal charges against that business entity?

MR. COONEY: I am, Your Honor.

THE COURT: And finally, are you satisfied Ms. Janson has the authority to act on behalf of Duke Energy Carolinas in entering pleas today?

MR. COONEY: I am, Your Honor, and she does.

THE COURT: And finally on this issue as to Duke Energy Business Services, has every member or manager of Duke Energy Services affixed his or her signature onto this resolution before the Court authorizing Ms. Janson to enter pleas on behalf of that entity?

MR. COONEY: It has, Your Honor, and if I can explain that, Duke Energy Business Services is a sole member LLC, the sole member of that LLC is in turn a corporation, that corporation has authorized Duke Energy Business Services, LLC to enter and in addition that corporation has authorized Ms. Janson to enter a plea on behalf of Duke Energy Business Services, LLC.

THE COURT: And you're satisfied that the organization and governing documents of Business Services empower those spokespersons to authorize Ms. Janson to enter a guilty plea to the charges against that business entity?

MR. COONEY: I am, Your Honor.

THE COURT: And finally, are you satisfied Ms. Janson does in fact have the authority to act on behalf of Duke Energy Business Services in entering pleas today?

MR. COONEY: I am, Your Honor, and she does.

THE COURT: Counsel for the Government, do you have any reason to doubt that Ms. Janson is competent and has the proper authority to act on behalf of each of the three defendant corporations that are before the Court today?

MS. RANGARAJAN: Your Honor, the Government has no reason to doubt her ability and competency to enter the pleas in the plea agreements.

THE COURT: All right. The Court finds as a fact that Julia Janson has the authority of the defendant corporations, Duke Energy Progress, Duke Energy Carolinas and Duke Energy Business, to act on their behalf and enter pleas today.

Mr. Cooney, you may present the clerk, Madam Clerk, your documents.

MR. COONEY: Thank you, Your Honor.

THE COURT: Right now in the routine business of the Court I must summarize the charges in these matters, and I begin with Duke Energy Progress and I'll be asking questions of you, Ms. Janson, under the authority previously explained.

You may continue to be seated and you might need the microphone in front of you.

Have you been furnished with a copy of all the charges, all of which are misdemeanors in the Federal Court System, contained in these criminal informations against the defendant Duke Energy Progress?

MS. JANSON: I have.

THE COURT: Now, I have to summarize the charge that's before the Court from the Eastern District of North Carolina as to Duke Energy Progress, and that is just a one count charge that there was negligent discharge of pollutants from a point source or aiding and abetting between the time frame of October 1, 2010 and December 30, 2014 in violation of the Clean Water Act.

Second, as to the charges in the Middle District of North Carolina that are before the Court, that's docket 5:15-CR-67, Counts 5 and 6 are against Duke Energy Progress, and Count 5 charges failure to maintain treatment system equipment and related appurtenances and aiding and abetting between the time period January 1, 2012 and January 24, 2014, in violation of the Clean Water Act statutes.

And finally in the Middle District case as to Duke Energy Progress, Count number 6, failure to maintain treatment system equipment and related appurtenances and/or aiding and abetting between the same dates in violation of the Clean Water Act.

And finally as to the Western District of

North Carolina, criminal information, count number 2 as to Duke Energy Progress, negligent discharge of pollutants from a point source or aiding and abetting between May 31, 2011 and December 30, 2014.

Now, each of these offenses carries the following penalty: Not more than five years probation; the greater of: Not less than $2500 nor more than $25,000 per day of violation; $200,000; or twice the gross gain or loss; a $125 special assessment as to each count; and restitution, if applicable.

Ms. Janson, do you understand the charges against the defendant corporation, this is Duke Energy Progress, and do you understand the maximum punishments that could apply to this particular corporation?

MS. JANSON: I do.

THE COURT: If imposed by the Court, is the defendant corporation, Duke Energy Progress, financially able to pay a substantial fine and make full restitution to any victim of the offenses in these cases?

MS. JANSON: It is, Your Honor.

THE COURT: All right. Now, as to Duke Energy Carolinas, Limited Liability Corporation, have you been furnished a copy of all of the charges, all of which again are misdemeanors, contained in the criminal information against Duke Energy Carolinas?

MS. JANSON: I have.

THE COURT: I summarize by saying in the Middle District of North Carolina there are four counts as to Duke Energy Carolinas: Negligent discharge of pollutants from a point source or aiding and abetting, February 2, 2014 to February 8, 2014; failure to maintain treatment systems and equipment and related appurtenances or aiding and abetting through the dates January 1, 2012, February 2, 2014; third count, negligent discharge of pollutants again, for a different date and time, that is January 1, 2012 to February 21, 2014; and finally Count 4 in the Middle District as to Carolinas Corporation, failure to maintain treatment systems and related appurtenances on the dates January 1, 2012 to February 6, 2014. Correction, that's Middle District of North Carolina. That's the summary of the charges.

And finally as to the Western District of North Carolina, one count as to this particular defendant, Duke Energy Carolinas, negligent discharge of pollutants from a point source and aiding and abetting between November 8, 2012 and December 30, 2014.

Now, each of these offenses, as I've said before, carry not more than five years probation; the greater of not less than $2500 or more than $25,000 per day of violation; $200,000; or twice the gross gain or loss; and a $125 special assessment.

Do you understand the charges against the defendant business entity Duke Energy Carolinas and the maximum punishments that I've just stated?

MS. JANSON: I do, Your Honor.

THE COURT: If imposed by the Court, is the defendant corporation Duke Energy Carolinas financially able to pay a substantial fine and make full restitution to any victim of the offenses in that case?

MS. JANSON: It is.

THE COURT: Now finally, in the third case, Duke Energy Business Services, have you been furnished a copy of the charges, all of which are misdemeanors, as relates to Duke Energy Business Services?

MS. JANSON: I have, Your Honor.

THE COURT: And as to the case in the Eastern District of North Carolina there is one count, negligent discharge of pollutants from a point source or aiding and abetting, between the times of October 1, 2010 and December 30, 2014, in violation of the Clean Water Act.

As to the Middle District of North Carolina there are six charges as it relates to Duke Energy Business Services, and I have -- I'll try to summarize them as quickly as possible. Count 1 is negligent discharge during the period February 2, 2014 to February 8, 2014; failure to maintain treatment system equipment and related appurtenances, January 1, 2012 to

February 2, 2014; negligent discharge from a point source in Count 3, January 1, 2012 to February 21, 2014; count number 4 in the Middle District, failure to maintain treatment system equipment and related appurtenances between January 1, 2012 and February 6, 2014; in Count 5 failure to maintain treatment and related appurtenances between January 1, 2012 and January 24, 2014; and finally Count 6 in the Middle District, failure to maintain treatment system equipment and related appurtenances between January 1, 2012 and January 24, 2014.

Mr. Court Reporter, can you keep up with me?

COURT REPORTER: Yes.

THE COURT: Thank you.

And finally as to the charges in the Western District as relates to Business Services, two counts, the negligent discharge of pollutants from a point source or aiding and abetting between November 8, 2012 and December 30, 2014; and count number 2 in the Western District, negligent discharge of pollutants from a point source, aiding and abetting, between May 31, 2011 and December 30 in 2014.

Each offense carries the same penalties that I previously stated for the other two corporations, probation of not more than five years; the greater fine of 2500 but not more than 25,000 per day; 200,000; or twice the gross gain or loss; and a $125 special assessment.

Ms. Janson, do you understand the charges against the

entity Duke Energy Business Services?

MS. JANSON: I do, Your Honor.

THE COURT: And if imposed by the Court is Duke Energy Business Services financially able to pay a substantial fine and make full restitution to any victims of the offense?

MS. JANSON: It is.

THE COURT: Thank you, ma'am.

I'd point out that the Eastern District of North Carolina is comprised of the 44 counties basically from Wake County going straight up to the Virginia line and from Wake County going down through Harnett County, Cumberland County, Robeson County, everything back to the coast. That has comprised the Eastern District of North Carolina for more than 75 years. The Middle District of North Carolina is comprised of the counties from Durham to Winston Salem basically. And the Western District of North Carolina is comprised of the counties again basically from Charlotte up through the mountains all the way to the Tennessee line. So there are three Federal Court districts in the State of North Carolina.

There are 94 Federal Court districts in the United States Court System, that includes 89 Federal Districts among the 50 states and then there are five Federal Court districts including the District of Puerto Rico, the District of Guam, the District of the Virgin Islands, the District of the Mariana Islands and the District of Columbia, and that's

how our Federal Court system -- for those of you who are not attorneys and don't know about this. So our issues today just involve these three districts.

Now, I'm going to take up the Rule 44 colloquy.

Ms. Janson, as you know, each of the three defendant corporations or business entities in this matter are represented by the same attorneys. Now, I'm required by law to advise you as the representative of these corporations that the United States Constitution gives every defendant, even a corporation, the right to effective assistance of a counsel. When one lawyer represents two or more defendants in a case, the lawyer may have trouble representing all the defendants with the same fairness. This is a conflict of interest that denies the defendant the right to effective assistance of counsel. Such conflicts are always a potential problem because different defendants may have different degrees of involvement, and each defendant, according to our Constitution and the interpretations thereof, has the right to a lawyer who represents only it.

Ms. Janson, did you receive a document as to each defendant's -- each defendant which lists some of the various ways in which dual representation might work to a defendant's disadvantage?

MS. JANSON: I did, Your Honor.

THE COURT: And have you had a chance to review those

documents?

MS. JANSON: I have.

THE COURT: Have you had a chance to discuss the potential disadvantages with the attorneys who represent the defendants in these cases?

MS. JANSON: I have, Your Honor.

THE COURT: And do you want me to read out loud these disadvantages or have you read and understand them?

MS. JANSON: I have read and understand them.

THE COURT: Do you have any questions of me regarding these potential issues?

MS. JANSON: I do not, Your Honor.

THE COURT: Do you wish to speak with any other independent lawyer about the wisdom of waiving the right to separate counsel?

MS. JANSON: I do not, Your Honor.

THE COURT: Mr. Cooney, please advise the Court regarding your ability and your colleagues' to effectively represent all three defendants before the Court today, and do you have any reason to believe that a conflict in these matters will prevent you from providing effective assistance of counsel or causes prejudice to any of the defendants?

MR. COONEY: Your Honor, we've discussed this thoroughly with each other and also with our clients. We believe very strongly it's to the clients' advantage to be

represented by single counsel, and I have no question about our ability to render Constitutionally effective assistance for each of these defendants in these cases.

THE COURT: Ms. Karen Popp, do you agree with the statements made by Mr. Cooney?

MS. POPP: Yes, Your Honor.

THE COURT: Ms. Claire Rauscher?

MS. RAUSCHER: I do, Your Honor.

THE COURT: And finally David Buente, do you agree with Cooney?

MR. BUENTE: Of course I agree with Mr. Cooney, Your Honor.

THE COURT: Ms. Janson, having been advised of each defendant's right to effective representation and having assured the Court that you, one, understand the potential conflict of interest; second, understand the potential perils of dual representations; and third, having discussed this matter with the attorneys for the defendants, do not wish to discuss this matter with separate independent counsel; on behalf of Duke Energy Progress, do you hereby voluntarily waive the Sixth Amendment right of protection of separate counsel?

MS. JANSON: I do, Your Honor.

THE COURT: And have you also signed the waiver indicating the same?

MS. JANSON: I have.

THE COURT: And on behalf of Duke Energy Carolinas, do you hereby voluntarily waive the Sixth Amendment protection of separate counsel and have you signed the waiver form?

MS. JANSON: I do and I have.

THE COURT: And finally as to Duke Energy Business, do you hereby voluntarily waive the Sixth Amendment protection of counsel and have you signed that waiver?

MS. JANSON: I do and I have, Your Honor.

THE COURT: All right. Mr. Cooney, do we have those waivers or have you already handed them up?

MR. COONEY: Your Honor, I have them here and I'll be happy to hand them up to the Clerk.

THE COURT: Let's go ahead and do that. Folks need a little break from me.

All right. The charges. I'm going to now advise the defendants of certain rights afforded them, and this recitation will be intended for the benefit of the representative of these defendants, to wit Ms. Janson.

When I ask you, Ms. Janson, whether you understand these rights, an affirmative answer shall indicate to me that you on behalf of each Duke Energy -- strike that. Duke Energy Progress, number two, Duke Energy Carolinas, and Duke Energy Business Services, understand these rights, so I won't have to repeat it three times.

So I begin by saying: Do you understand and agree to

proceed in this way? When you answer yes or no to one, it's as to all three. Correct?

MS. JANSON: I agree, Your Honor.

THE COURT: All right. Do you and all of your respective corporate officers and directors or members and managers understand that the defendants have a right to plead not guilty to the charges presented?

MS. JANSON: We do.

THE COURT: And do you and all of your respective corporation officers and directors and members and managers understand that the corporation or business entity has a right to a trial by jury and the assistance of counsel at such trial?

MS. JANSON: We do, Your Honor.

THE COURT: And do you and these same persons understand that you have a right to confront and cross-examine witnesses at such a trial?

MS. JANSON: We do.

THE COURT: And do you understand, and on behalf of these other folks, that the defendant corporations would not have to prove that they are innocent and that the corporation or business entity would be presumed to be innocent at such a trial?

MS. JANSON: We do, Your Honor.

THE COURT: And do you understand, and the corporate officers and directors and members and managers, that at such a

trial the Government would have to prove that the corporation or business entity is guilty beyond a reasonable doubt?

MS. JANSON: We understand, Your Honor.

THE COURT: And do you understand that these same folks have the right -- you would have the right to testify through its directors, officers, members, managers, agents, employees or otherwise at such a trial?

MS. JANSON: We do.

THE COURT: And finally -- not quite finally, but we're getting there -- do you on behalf of the corporation officers and directors and members understand that if I accept a plea or pleas of guilty today, the corporation or business entity will have forfeited its right to a trial and the other rights I've just described?

MS. JANSON: We understand, Your Honor.

THE COURT: Do you and all these folks understand that today I will proceed ultimately to enter judgment of guilty and sentence the corporations or business entity on the basis of these guilty pleas?

MS. JANSON: We do.

THE COURT: And finally, do you and your respective corporation officers, directors, members and managers understand that the Court may order the corporation or business entity to make restitution to victims of the offenses?

MS. JANSON: We do, Your Honor.

THE COURT: Okay. Plea agreements.

Before me are three plea agreements that have been filed in this court. I've obviously seen them before, but these are the original and official ones, and I'm going to begin with the plea agreement between the Government and the defendant Duke Energy Progress.

Now, the Duke Energy Progress plea agreement has 51 pages and appears to be signed by you, Ms. Janson, on behalf of the Duke Energy Corporation as well as your counsel and many of the Government counsel. Did you in fact sign this plea agreement on behalf of Duke Energy Progress, Ms. Janson?

MS. JANSON: I did, Your Honor.

THE COURT: Did you have an opportunity to read and to discuss this plea agreement with your corporate attorneys and did you in fact do so before you signed it on behalf of Duke Energy Progress?

MS. JANSON: I did.

THE COURT: And does the plea agreement represent in its entirety any and all agreements Duke Energy Progress has with the United States and the United States Attorney?

MS. JANSON: Yes, Your Honor.

THE COURT: Do you understand the terms, the language, the words, the sentences, even any legal phrases that are used in the plea agreement?

MS. JANSON: I do.

THE COURT: And it's my understanding that you in fact are a lawyer.

MS. JANSON: I am.

THE COURT: Did you discuss with counsel the appeal waiver contained in paragraph 3(e) on page 10 and do you understand that by entering into this plea agreement and entering a plea of guilty on behalf of Duke Energy Progress you may be giving up the corporation's right to appeal or collaterally attack all or any part of any conviction or sentence imposed in this case?

MS. JANSON: I did discuss and I do understand.

THE COURT: Do you have any questions about the plea agreement in Duke Energy Progress?

MS. JANSON: I do not, Your Honor.

THE COURT: Other than what's in this plea agreement, has anyone made any other or different promises to you or to the corporation in order to get Duke Energy Progress to plead guilty?

MS. JANSON: No, sir.

THE COURT: Has anyone threatened the corporation in any way in order to persuade Duke Energy Progress to either accept the plea agreement or to plead guilty?

MS. JANSON: They have not, Your Honor.

THE COURT: Is Duke Energy pleading guilty of its own free will because it is in fact guilty?

MS. JANSON: It is.

THE COURT: And do you understand that if I accept the corporation's plea of guilty today Duke Energy Progress can't come back later and ask for a trial?

MS. JANSON: I do.

THE COURT: Have you answered all of my questions truthfully?

MS. JANSON: I have.

THE COURT: Do you need any more time to think about the plea or discuss the plea with counsel before entering a plea on behalf of Duke Energy Progress?

MS. JANSON: I do not, Your Honor.

THE COURT: Now Duke Energy Carolinas.

This plea agreement has 54 pages and appears to be signed by you on behalf of Duke Energy Carolinas, by your attorneys and by some eight other lawyers on behalf of the prosecution by the Government. Did you in fact sign this on behalf of Duke Energy Carolinas?

MS. JANSON: I did, Your Honor.

THE COURT: Did you have an opportunity to read and discuss this plea agreement with your attorney before you signed it?

MS. JANSON: I did.

THE COURT: Does the plea agreement represent in its entirety all agreements between Duke Energy and the

United States and the U.S. Attorneys?

MS. JANSON: It does.

THE COURT: Did you understand the terms, the words, the sentences, before you signed it?

MS. JANSON: I did, Your Honor.

THE COURT: Did you discuss with counsel the appeal waiver contained in paragraph 3(e) on page 11 of this plea agreement?

MS. JANSON: I did.

THE COURT: And did you have any questions about the plea agreement?

MS. JANSON: No, sir.

THE COURT: And do you understand that that plea agreement may prevent you or the corporation from raising any appeal or any collateral attack?

MS. JANSON: I understand, Your Honor.

THE COURT: Other than what's in the plea agreement, has anyone made any other or different promises to get Duke Energy Carolinas to plead guilty?

MS. JANSON: They have not.

THE COURT: Has anyone threatened the business entity in any way to persuade Duke Energy Carolinas to either accept the plea agreement or to plead guilty?

MS. JANSON: No, sir.

THE COURT: Is in fact Duke Energy Carolinas pleading

guilty of its own free will because it is in fact guilty?

MS. JANSON: It is.

THE COURT: Do you understand that if I accept this entity's plea today, Duke Energy can't come back later -- Duke Energy Carolinas can't come back later and ask for a trial?

MS. JANSON: I understand.

THE COURT: Have you answered all these questions truthfully?

MS. JANSON: I have.

THE COURT: Do you need any more time to think about the plea or discuss it further with counsel?

MS. JANSON: I do not, Your Honor.

THE COURT: Finally Duke Energy Business Services.

This plea agreement is 45 pages long and appears to be signed by you on behalf of Duke Energy Business Services and by your attorney and by eight lawyers or more on behalf of the prosecuting office of the U.S. Government. Did you in fact sign the Duke Energy Business Services plea agreement?

MS. JANSON: I did, Your Honor.

THE COURT: Did you have an opportunity to read and discuss it with your lawyer?

MS. JANSON: I did.

THE COURT: Does it represent in its entirety all agreements between Duke Energy Business and the United States?

MS. JANSON: It does.
THE COURT: Did you understand the terms, the language, the words, the sentences, legal phrases in the plea agreement?
MS. JANSON: I do understand, Your Honor.
THE COURT: Did you discuss with counsel the appeal waiver contained on page 5, paragraph 3D, and do you understand that this may prevent the corporation from any appeal or collateral attack on any part of the conviction?
MS. JANSON: I did discuss and I do understand.
THE COURT: Do you have any questions about the Duke Business Service plea agreement?
MS. JANSON: I do not.
THE COURT: Has anyone threatened you or the business entity in any way to persuade Duke Energy Business to either accept the plea or plead guilty?
MS. JANSON: They have not.
THE COURT: Is Duke Energy pleading guilty of its own free will because it is in fact guilty?
MS. JANSON: It is.
THE COURT: Do you understand that if I accept the plea of Duke Energy Business today you can't come back later for a trial?
MS. JANSON: I understand.
THE COURT: Have you answered all of my questions in

this case truthfully?

MS. JANSON: I have.

THE COURT: Do you need any more time to think about the plea or discuss the plea with your counsel?

MS. JANSON: I do not.

THE COURT: All right. The Court is satisfied -- does the United States have any objection to the Court approving these plea agreements?

MS. RANGARAJAN: No objection from the Government, Your Honor.

THE COURT: Let the record reflect the Court has executed the approval of the plea agreements in the three cases before the Court, Duke Energy Business, Duke Energy Progress and Duke Energy Carolinas.

All right. I'm now going to ask for the entry of plea and I'm going to begin -- this would be for each of the three different criminal informations in the three districts, and I'll begin with Case Number 5:15-CR-62, which is the Eastern District of North Carolina's charge.

All right. Ms. Janson, I'm going to ask you to stand now.

How does Duke Energy Progress plead to Count 1 of the criminal information in the Eastern District of North Carolina, that's Case Number 62?

MS. JANSON: Guilty.

THE COURT: And how does Duke Energy Business Services, LLC plead to Count 1 of the criminal information in the Eastern District?

MS. JANSON: Guilty, Your Honor.

THE COURT: Did Duke Energy Progress and Duke Energy Business Services, as charged in Count 1, by and through their employees acting within the scope of their employment, negligently discharge pollutants from a point source into a water of the United States in violation of certain aspects of the Clean Water Act? Did they do that?

MS. JANSON: Yes, sir.

THE COURT: And did they by and through their employees fail to exercise the degree of care that someone of ordinary prudence would have exercised in the same circumstance with respect to the discharge of coal ash and coal ash wastewater from an unpermitted drainage ditch at the Lee Steam Electric Plant in Goldsboro, North Carolina into the Neuse River? Did they do that?

MS. JANSON: Yes, Your Honor.

THE COURT: All right. Now, in the Middle District of North Carolina there are six counts, so this is going to take a little bit longer.

How does Duke Energy Business Corporation -- strike that.

How does Duke Energy Business Service Corporation

plead to Count 1 of the Middle District's Case Number, 67?

MS. JANSON: Guilty.

THE COURT: And how does Duke Energy Carolinas plead to Count 1 of the Middle District case?

MS. JANSON: Guilty, Your Honor.

THE COURT: All right. Did in fact in Count 1 Duke Energy Business and Duke Energy Carolinas, by and through their employees acting within the scope of their employment, negligently discharge pollutants from a point source into a water of the United States without a permit?

MS. JANSON: Yes.

THE COURT: And did Duke Energy Business Services and Duke Energy Carolinas by and through its employees fail to exercise the degree of care that someone of ordinary prudence would have exercised in the same circumstance with respect to the discharge of coal ash and coal ash wastewater through a 48-inch storm pipe running beneath the primary ash basin at the Dan River Steam Station in Eden, North Carolina into the Dan River? Did they do that?

MS. JANSON: Yes, sir.

THE COURT: All right. That's Count 1. Now Count 2.

Count 2 also has Duke Energy Business Service and Duke Energy Carolinas. How does Duke Energy Business Service plead to Count 2 in the Middle District?

MS. JANSON: Guilty.

THE COURT: And how does Duke Energy Carolinas plead to Count 2 in the Middle District?

MS. JANSON: Guilty, Your Honor.

THE COURT: And did both of these entities, by and through their employees acting within the scope of their employment, negligently violate a condition of its permit in that they failed to exercise the due care that someone of ordinary prudence would have exercised with respect to the maintenance and inspection of the 48-inch storm pipe running beneath the primary ash basin in Dan River in violation of Part II, Standard Conditions for NDPES permits? Did they do that?

MS. JANSON: Yes, Your Honor.

THE COURT: All right. That's Count 2. Now Count 3.

Count 3 charges Business Services and Energy Carolinas. How does Duke Energy Business Services plead to Count 3, negligent discharge of pollutants from a point source, in the Middle District?

MS. JANSON: Guilty, Your Honor.

THE COURT: And how does Duke Business Services plead to Count 3?

MS. JANSON: Guilty.

THE COURT: Strike that. I'm still on Count 3, or am I on Count 4? Business Services twice. I'm still on Count 3, it charges Business Services and Duke Energy Carolinas, and as

to both -- as to Business Services, you've already -- you said -- how do you plead?

MR. COONEY: Guilty, Your Honor.

THE COURT: As to Energy Carolinas how do you plead?

MS. JANSON: Guilty.

THE COURT: And did they negligently discharge pollutants from a point source or aiding and abetting in Count 3?

MS. JANSON: Yes, sir.

THE COURT: All right. Now we're going to Count 4, failure to maintain treatment systems, and that charges Duke Energy and Business and Corporate -- and Carolinas, Count 4.

How does Business Services plead to Count 4?

MS. JANSON: Guilty, Your Honor.

THE COURT: And how does Energy Carolinas plead to Count 4?

MS. JANSON: Guilty.

THE COURT: And did they, as charged in Count 4, fail to maintain treatment systems and related appurtenances, as set out in the bill between January 1st, 2012 and February 21, 2014?

MS. JANSON: Yes.

THE COURT: Count 5, failure to maintain treatment systems and related appurtenances, it charges Business Services and Energy Progress this time.

Now, how do you plead on Count 5 as to Duke Energy Business Services?

MS. JANSON: Guilty, Your Honor.

THE COURT: And how do you plead on Count 5 as to Duke Energy Progress?

MS. JANSON: Guilty.

THE COURT: And did Duke Energy Progress and Duke Energy Business Services, as charged in Count 5, between January 1, 2012 and January 24, 2014, in the Middle District of North Carolina, by and through its employees, fail to exercise the degree of care that someone with ordinary prudence would have exercised in the same circumstance with respect to the inspection of the risers within the 1978 coal ash basin at Cape Fear Electric Station in Moncure, North Carolina?

MS. JANSON: Guilty.

THE COURT: And finally Count 6. We're getting there. Just bear with us.

How does Duke Energy Business Services plead to Count 6, failure to maintain treatment system equipment?

MS. JANSON: Guilty.

THE COURT: All right. How does Duke Energy Progress plead to Count Number 6 in Case Number 67 in the Middle District?

MS. JANSON: Guilty, Your Honor.

THE COURT: And did these corporations, acting within

the -- through their employees, acting within the scope of their employment, negligently violate a condition of its permit with respect to the maintenance and inspection of the riser within the 1985 coal ash basin at Cape Fear Electric Steam Station in Moncure, North Carolina? Did it do that?

MS. JANSON: Yes, sir.

THE COURT: All right. That takes care of the Middle District. Now we're down to the last bill of information, which is the Western District of North Carolina, and it carries just two counts, Count 1, criminally negligent discharge of pollutants, charges Duke Energy Business and Duke Energy Carolinas. How do they plead to Count 1 of the charges from the Western District of North Carolina, Business Services, Ms. Janson?

MS. JANSON: Guilty, Your Honor.

THE COURT: And how does Duke Energy Carolinas plead to Count 1 of the Western District charge?

MS. JANSON: Guilty.

THE COURT: And did they as charged in Count 1 between November 8, 2012 and December 30, 2014, in Gaston County, within the Western District of North Carolina, fail to exercise the degree of care that someone of ordinary prudence would have exercised as relates to coal ash and coal ash wastewater from an unpermitted and engineered drain from a coal ash basin at the Riverbend Steam Station in Catawba County?

Did they do that?

MS. JANSON: Yes, sir.

THE COURT: That's Count 1. And then Count 2 in the Western District charges Duke Energy Business Services and Duke Energy Progress, and that has to do with the Buncombe County issue of criminally negligent discharge of pollutants. How does Business Services plead to Count 2 of the 68 criminal information?

MS. JANSON: Guilty, Your Honor.

THE COURT: And how does Duke Energy Progress plead to Count 2 of the Western District's criminal information, the Buncombe County issue?

MS. JANSON: Guilty.

THE COURT: Now, did in fact Business Services and Duke Energy Progress, by and through their employees acting within the scope of their employment, fail to exercise the degree of care that someone of ordinary prudence would have exercised as relates to the unpermitted and engineered outfall from a coal ash basin at the Asheville Steam Electric Generating Plant through an unpermitted and engineered toe drain into the French Broad River, in violation of the National Pollutant Discharge Elimination System? Did in fact those employees do that?

MS. JANSON: Yes.

THE COURT: All right. You may be seated.

MS. JANSON: Thank you.

THE COURT: That concludes the receipt of the pleas in these cases. At this time the Court will receive the presentation of a factual basis from the Government, but before they do that -- I've got to receive the factual basis and then I'll see if Mr. Cooney has any objection, and after that I will be asking are there any victims, but I want to take a ten minute recess for the convenience of everybody.

Marshal, we're going to be in recess for let's say 15 minutes and then we'll come back.

- - - - -

(Recess at 10:54 a.m. until 11:09 a.m.)

- - - - -

THE COURT: Now, at this time the Court will receive the presentation by the United States of a factual basis so I might have an independent factual basis for accepting the pleas of the corporations.

Let the record reflect the parties have filed a joint factual statement which is attached as an exhibit to each of the defendants' plea agreements in each of the three files. The Court hereby accepts that factual statement and incorporates it into the record as support for the factual basis for the defendants' pleas.

The Government may now provide a synopsis of all the salient facts it desires to present regarding what the

Government believes it could prove at a trial beyond a reasonable doubt as it relates to these charges that have been pled to.

Ms. Rangarajan, will you be presenting on behalf of the Government?

MS. RANGARAJAN: Thank you, Your Honor. Actually it will be myself and Ms. Pettus that will be presenting on behalf of the Government. We are splitting the charges, Your Honor.

THE COURT: I'll hear you in whatever order you desire.

MS. RANGARAJAN: Thank you, sir.

Your Honor, by way of summary, with respect to Counts 1 through 4 of Case Number 5:15-CR-67, which are the four charges arising under the Clean Water Act against Defendants Duke Energy Carolinas and Duke Energy Business Services in the Middle District for the negligent discharge of pollutants from two stormwater pipes running underneath the primary coal ash basin at the Dan River Steam Station and the negligent failure to maintain those stormwater pipes, the evidence at trial would show as follows: That on February 2nd, 2014, a portion of the 48-inch stormwater pipe running underneath the primary ash basin at the Dan River Steam Station near Eden, North Carolina, in the Middle District of North Carolina, failed, resulting in the unpermitted discharge of approximately 27 million gallons of coal ash wastewater and

between 30,000 and 39,000 tons of coal ash into that Dan River.

The coal ash, sir, traveled more than 62 miles downriver from the Middle District of North Carolina through the Western District of Virginia and into the Kerr Reservoir, both in the Eastern Districts of North Carolina and Virginia.

Shortly after the spill, video camera inspections were conducted of the second pipe, the 36-inch stormwater pipe. That video camera inspection revealed that the second pipe had also deteriorated and was allowing coal ash wastewater to leak and be discharged into the Dan River.

So how did this happen? This happened through the failure of Duke Energy Carolinas and Duke Energy Business Services to exercise reasonable care in preventing the negligent discharge and maintaining that equipment.

By way of background, sir, Duke Energy Carolinas is a energy utility company that owns and operates several facilities in North Carolina, including the Dan River facility. Duke Energy Business Services is a subsidiary of Duke Energy Corporation and it is in essence a human resources company, it provides shared services to all of the utilities of Duke Energy Corporation nationwide. Some of those services include engineering services and environmental services.

The Dan River facility itself began operations in 1949 and ceased operations in terms of coal combustion in 2012. As with all of Duke Energy coal combustion plants in

North Carolina, the Dan River facility has large earthen basins to store and treat the byproducts of coal combustion, such as fly ash and bottom ash. The Dan River itself has two such coal ash basins known as the primary ash basin and the Secondary Ash Basin. In 2013 the basins contained a combined total of roughly 232 million tons -- or million gallons of coal ash.

Underneath that primary ash basin were two stormwater pipes, the 48-inch stormwater pipe and the 36-inch stormwater pipe. The 48-inch stormwater pipe when originally installed was made of corrugated metal. In 1967, 1968, the primary ash basin was expanded and with it the stormwater pipe was expanded. During the time of that expansion the second portion of the 48-inch pipe was reinforced concrete. With respect to the 36-inch pipe, it was reinforced concrete pipe.

As set forth in more detail in the joint factual statement, as of 1979, engineers working for Duke Energy Carolinas, what was formally Duke Power Company, discovered and repaired major leaks in the 36-inch pipe and leaks in the 48-inch, and over time Duke Energy Carolinas and its -- and Duke Power Company, which it's formerly known as, continued to receive warnings of potential failures or problems that could arise with these pipes, and those come in the form of independent consultant reports and other annual inspections performed internally by Duke Energy itself.

Pursuant to North Carolina law, Duke Energy Carolinas

hired consultants to perform five year inspections of its basin. The first inspection in 1981 cautioned that, quote, the culverts which pass beneath the primary basin may become potential problems, particularly as they age, and that report recommended that the flow of water through the pipes be quantitatively monitored to determine if there were leaks.

In the second inspection in 1986 the consultant noted that part of the 48-inch stormwater pipe was, quote, constructed of corrugated metal pipe, which would be expected to have less longevity of satisfactory service than the reinforced concrete pipes, and again recommended quantitative flow monitoring.

In 1991 -- in the 1991 inspection report, quantitative flow monitoring was again recommended for the stormwater pipes; however, at that time the independent consultant erroneously identified the entire length of that 48-inch pipe as being reinforced concrete pipe, as opposed to it being part metal, part concrete.

During the review process, however, engineers with Duke Energy Carolinas/Duke Power Company did not correct the error. The error was repeated again in the 1998 independent consultant report, the 2001 independent consultant report and the 2007 consultant report, and it was not corrected in each of those reports by Duke Energy Carolinas or Duke Power Company employees. Some of those same engineers also failed to perform

the required annual inspections from the period of 2001 to 2007 at those basins.

Now, despite the erroneous identification of the 48-inch stormwater pipe as being reinforced concrete in these independent consultant reports, each of the Duke Energy Carolinas employees responsible for monitoring the flow from the stormwater pipes from 1999 to December, 2012, was aware that the 48-inch stormwater pipe was composed of corrugated metal. Some of those same employees though failed to perform monthly inspections for months or years at a time for various reasons as described in the joint factual statement.

As of February, 2014, sir, the record keeping and information sharing practices at Duke Energy Carolinas and Duke Energy Business Services did not ensure that critical information such as the fact that the 48-inch stormwater pipe was part metal and part concrete was communicated from employees with knowledge to engineers and employees making budget decisions. In addition, the engineers responsible for the Dan River facility had not sufficiently reviewed the records available to them, including original schematics and historical inspection reports, and therefore continued to operate under the erroneous belief that the 48-inch pipe was all reinforced concrete.

In May, 2011 a senior engineer and a program engineer, so two individuals at Duke Energy Business Services

assigned to work specifically on coal ash issues at the Dan River facility, recommended that in the upcoming budget, for the facility to include camera inspections of the four pipes in or near the coal ash basins. There are actually four pipes that run throughout the two basins, two underneath the primary basin, one that connects the primary to the secondary basin and then a pipe that goes from the secondary basin to the Dan River, the discharge pipe, and that is a permanent outfall, sir.

The estimated cost of the camera inspection for all four pipes was $20,000, roughly $5,000 per pipe. Duke Energy Carolinas did not provide the funding. When Duke Energy Carolinas did not provide the funding, the Dan River station manager called the Vice President in charge of approving the Dan River budget and told the Vice President three things: One, the Dan River facility needed the camera inspections; two, the facility did not know the conditions of the pipes; and three, if one of the pipes failed, there would be environmental harm. The Vice President did not change his mind. The camera inspections were not funded.

In May, 2012 the same two engineers again recommended camera inspections of the pipes because of -- and the reason they advanced was aging of the pipe systems. Duke Energy Carolinas again did not provide funding for the camera inspections. Had they done so, the actual composition of the

48-inch pipe would have been made known and the leaks would have been seen in the 36-inch pipe.

Ultimately, on February 2nd, 2014, a date well beyond the reasonable service life of corrugated metal pipe under similar conditions, a five foot long corrugated metal elbow joint within the 60-year-old corrugated metal section of the stormwater pipe, that 48-inch pipe, failed, resulting in the release of coal ash and coal ash wastewater into the Dan River. The combination of corrosion in the elbow joint and the weight of the coal ash basin over the elbow joint caused it to buckle, fail and be pushed through the end of the 48-inch stormwater pipe into the Dan River. The elbow joint was recovered from the Dan River itself later. The discharge continued until the outfall was plugged on February 8th, 2014.

The discharge from the 36-inch pipe caused by infiltration of wastewater, some spraying into the pipe in pressurized jets through the joints between sections of pipe and lengthwise cracks in some pipe sections, was stopped on February 21st, 2014. The evidence indicates that the discharge -- the evidence would indicate at trial that the discharge from the 36-inch pipe began at least as early as January 1st, 2012. The Dan River facility, sir, did not have a permit or authorization to discharge wastewater or coal ash from the primary ash basin through either the 48-inch or the 36-inch stormwater pipe, and that would be some of the evidence

that the Government would be prepared to present at trial with respect to Counts 1 through 4 in Docket Number 5:15-CR-67, sir.

THE COURT: All right. Thank you, Ms. Rangarajan.

Ms. Pettus, I look forward to hearing from you, ma'am.

MS. PETTUS: Yes, Your Honor. Thank you.

With respect to Counts 5 and 6 --

THE COURT: Remind us of where you -- I know that Ms. Rangarajan is an Assistant U.S. Attorney in the Eastern District, and for the record state where you are employed.

MS. PETTUS: Of course, Your Honor. I'm a senior trial attorney with the Environmental Crimes Section of the Environment and Natural Resources of the U.S. Department of Justice, and I am located generally in Washington, D.C.

THE COURT: Thank you, ma'am. You may proceed.

MS. PETTUS: Thank you.

I will pick up starting with Counts 5 and 6 in the Middle District criminal information, Case Number 5:15-CR-67. Those counts charge violations of the Clean Water Act by Defendants Duke Energy Business Services and Duke Energy Progress for negligent failure to maintain equipment at coal ash basins at the Cape Fear Steam Electric Plant.

The evidence with respect to those counts would show as follows: The Cape Fear Steam Electric Plant is located near Moncure, North Carolina in the Middle District of

North Carolina. It is owned by Duke Energy Progress, which was formerly known as Progress Energy Carolinas. It is also a public utility company.

The Cape Fear plant has a total of five coal ash basins. The charges in this case are based on two of those coal ash basins, one which was constructed in or about 1978 and the other that was constructed in or about 1985. The 1978 coal ash basin had a storage capacity of nearly 287 million gallons and the 1985 coal ash basin had a storage capacity of nearly 575 million gallons.

Duke Energy Progress stopped electric power generation at the Cape Fear plant in December, 2011. Essentially the plant was retired. At that point coal ash and wastewater simply remained in the 1985 and the 1978 coal ash basins. Each basin contained a structure known as a riser, that's essentially a vertical pipe that sits in the coal ash basin and allows the discharge of water from the basin under normal operation. So essentially as material settles out of the wastewater that has accumulated in the basin and the water level itself rises, it eventually overtops the top of the riser and trickles down and it's discharged in accordance with the permit for the facility.

From no later than January 1st, 2012 to January 24th, 2014, Duke Energy Progress and Duke Energy Business Services failed to properly maintain those risers in the 1985 and 1978

coal ash basins.

As required by State law, Duke Energy Progress conducted and hired other companies to conduct annual inspections of the coal ash basins and also hired consultants to perform five year independent consultant inspections of the coal ash basins at the Cape Fear plant.

In 2008 the annual report recommended inspecting the risers in both coal ash basins using a boat, because at that time the condition of the risers was marginal and the risers were considered likely to develop problems within the next two to five years. The recommendation was repeated in inspection reports through the year 2013, but Duke Energy Progress never performed an inspection of the risers by boat.

The 2012 independent consultant inspection also documented that the skimmer on top of the riser, essentially a circular piece of metal preventing trash from floating into the riser, was also in disrepair on the 1978 basin.

In addition to the inspection reports, in 2011 employees of Duke Energy Progress visited the Cape Fear plant and determined that the risers in both the 1978 and 1985 coal ash basins were in fact leaking based on the flow of wastewater to the discharge pipes. They informed their management that repairs were needed and were further supported by the 2013 annual inspection that also documented leakage from the riser. Nevertheless, no additional inspection or monitoring of the

risers was undertaken by Duke Energy Progress until March of 2014.

On or about January 24th, 2014, Duke Energy Progress through Duke Energy Business Services entered into a contract with an underwater pipe repair contractor for, among other things, repair work on those risers in the two coal ash basins. The repair work was to occur at some time between January 27, 2014 and December 21st, 2014, but no start date was specifically identified. That repair work was ultimately not conducted until on or about March 19th and 20th of 2014.

With respect to Count Number 1 in Case Number 5:15-CR-62 in the Eastern District of North Carolina, that charges a violation of the Clean Water Act by Defendants Duke Energy Business Services and Duke Energy Progress for negligent unpermitted discharge of coal ash or coal ash wastewater from a coal ash basin at the H.F. Lee Steam Electric Plant.

The evidence for that count would show as follows: That the H.F. Lee Steam Electric Plant is located in Goldsboro, North Carolina in the Eastern District of North Carolina and is owned by Duke Energy Progress. The plant contains a number of previously used coal ash basins, only one of which is active and continues to contain water and coal ash.

Duke Energy Progress had a NPDES permit, which is a type of permit under the Clean Water Act, that was issued in 2009 for that particular coal ash facility. The NPDES permit

authorized three discharge points or outfalls for the plant, one was for the active coal ash basin, one was for a cooling water pond and one was for a separate electricity generation facility that was natural gas powered that's also on the site but not related to the coal ash facility.

The Lee plant had a number of seeps. Seeps occur in earthen dams and impoundments when water that often carries dissolved chemical constituents moves through poor soil and emerges at the surface of the ground. Duke Energy Progress and Duke Energy Carolinas have documented nearly 200 of these seeps at their coal ash basins in North Carolina. Seeps are discharges for the purposes of the Clean Water Act when they reach a water of the United States. Now, there may be some dispute over the legal niceties of exactly what circumstances account for that purpose, but in general parlance.

One of the seeps at the Lee plant identified in October, 2010 flowed into a drainage ditch outside the coal ash basin which led to the Neuse River. That seep was repaired in May, 2011. At least four additional seeps have been identified that flow into the same drainage ditch. That drainage ditch was not an outfall permitted under the plant's NPDES permit. Wastewater from the ditch was sampled and analyzed in February, 2013 and again in March of 2014. Testing showed that that wastewater did contain pollutants such as chloride, arsenic, boron, barium, iron and manganese. Unpermitted discharges

occurred from the drainage ditch from at least October 1, 2010 to December 30th, 2014.

Moving on to the criminal information from the Western District of North Carolina, with respect to Count 1 in Case Number 5:15-CR-68, which charges a violation of the Clean Water Act for the Defendants Duke Energy Business Services and Duke Energy Carolinas for negligent unpermitted discharge of coal ash and coal ash wastewater from a coal ash basin at the Riverbend Steam Station, that evidence would show that the Riverbend Steam Station is located in Gaston County, North Carolina in the Western District of North Carolina and is owned by Duke Energy Carolinas. The Riverbend Station has two coal ash basins adjacent to Mountain Island Lake which store approximately 2,730,000 tons of coal ash.

Duke Energy Carolinas held a NPDES permit for the Riverbend Station. The NPDES permit authorized three outfalls to the facility. On some date unknown but prior to December, 2012, one or more individuals at Riverbend employed by Duke Energy Carolinas allowed a seep to flow into an unpermitted channel that allowed contaminated water from the coal ash basin to be discharged into an engineered channel that led to the Catawba River. The unpermitted seep contained elevated levels of arsenic, chromium, cobalt, boron, barium, nickel, strontium, sulphate, iron, manganese and zinc. Unpermitted discharges occurred from at least November --

THE COURT: Slow down now. He's got to get all these things. Tell what those bad things were again.

MS. PETTUS: The pollutants included elevated levels of arsenic, chromium, cobalt, boron, barium, nickel, strontium, sulphate, iron, manganese and zinc. Those are all considered pollutants under the Clean Water Act.

The unpermitted discharges from the ditch at Riverbend occurred from at least November 8th, 2012 to December 30th, 2014.

With respect to Count 2 in Case Number 5:15-CR-68, which charges a violation of the Clean Water Act for defendants Duke Energy Business Services and Duke Energy Progress for negligent unpermitted discharge of coal ash and coal ash wastewater from a coal ash basin at the Asheville Steam Electric Generating Plant, the evidence would show that the Asheville Steam Electric Generating Plant is located in Buncombe County, North Carolina in the Western District of North Carolina and is owned by Duke Energy Progress.

The Asheville plant also has two coal ash basins, one constructed in 1964, the other constructed in 1982, and they hold approximately 3 million tons of coal ash.

Duke Energy Progress held a NPDES permit for the Asheville plant identifying permitted outfalls for that plant. At least two seeps flowed into engineered toe drains at the base of the 1964 coal ash basin and ultimately discharged into

the French Broad River. This discharge was unpermitted and occurred from at least May 31st, 2011 to December 30th, 2014.

THE COURT: Thank you, Ms. Pettus.

Does that conclude the statement of what you believe could be proved at a trial, Ms. Pettus?

MS. PETTUS: That does, Your Honor.

THE COURT: Ms. Rangarajan?

MS. RANGARAJAN: Yes, sir.

THE COURT: Anything further?

MS. RANGARAJAN: Nothing further, Your Honor.

THE COURT: All right. Mr. Cooney, on behalf of the defendants, do you have any objection to the contentions by the United States?

MR. COONEY: Your Honor, we have stipulated to the existence of a factual basis for these pleas. There are two corrections I would like to make based on the joint factual statement.

First, Ms. Rangarajan indicated that the 48-inch pipe underneath the Dan River was well beyond its useful life. That is not what is in the joint factual statement. The joint factual statement states specifically it was at the end of its useful life. This was installed roughly in 1954, it's got roughly a 60 year useful life, so it was right there in 2014. That's what the parties agreed to as part of the joint factual stipulation, and that's what the Government stipulated to.

Second, Ms. Pettus indicated that though the repair contract was signed in January of 2014 -- and by the way, the earlier stipulation is paragraph 182 of the joint factual statement.

Ms. Pettus indicated that while the repair contract from Cape Fear was signed in January of 2014, the repairs were not undertaken until March of 2014. Paragraph 120 of the joint factual statement indicates the reason for that is that the water level needed to be lowered in the ponds in order to permit divers to safely work on the risers, and that's because of a phenomenon known as differential pressure. If something happens while the divers are underwater to those risers, it could kill the divers, and so the delay was caused by the fact that the water level needed to be lowered as set forth in paragraph 120 of the joint factual statement.

Other than that I have no objections.

THE COURT: All right. I'm satisfied. All I inquired or asked was for them to give what they believed they could prove, it would have been up to a jury, and I find that just the choice of words "well beyond" versus "at the end of" is close enough, but your objection and concern is noted and will be a part of the record, and as to the issue of the repair, I understand the contentions and we'll go from there.

All right. The Court hereby approves and accepts the memoranda of plea agreements in these cases as previously

stated. The Court is satisfied with the responses given during this immediate session of this hearing and makes the following finding on the record.

Madam U.S. Attorney, under the Rules I'm required to inquire pursuant to 18 U.S. Code 3717(a)(4), are there any victims present at the arraignment who desire to be heard, so far as you know?

MS. RANGARAJAN: Your Honor, there are no victims that have made themselves known to the Government to be heard today. The Government did, as the Court knows, make effort to identify victims, including poling the gallery as folks entered this morning. Nobody has presented themselves and requested a right to allocute, so there are no victims as defined under the Crime Victims Rights Act for the Court to hear from this morning.

THE COURT: All right. The Court inquires of the audience, is there anyone here who perceives themselves as a victim who wishes to be heard?

There being no such response, we will continue.

All right. It's time for the entry of the general judgment in this matter and I do so. It is the finding of the Court in each of the cases presented, those are the file numbers of 5:15-CR-62 from the Eastern District of North Carolina, File Number 5:15-CR-67 from the Middle District of North Carolina, and File Number 5:15-CR-68 from the Western

District of North Carolina, the Court finds that Ms. Janson is fully competent and capable of entering informed pleas on behalf of each defendant, Duke Energy Carolinas, Duke Energy Business Services and Duke Energy Progress, and that the pleas of guilty are knowingly and voluntarily made, supported by an independent factual basis containing each of the elements of the offense. The pleas are therefore accepted. The defendant Duke Energy Business Services, LLC is hereby adjudged guilty of Count 1 of the criminal information in the Eastern District of North Carolina; it is adjudged guilty of Counts 1, 2, 3, 4, 5 and 6 of the criminal information in File 15-CR-67 in the Middle District of North Carolina; and finally Duke Energy Business Service is adjudged guilty of Counts 1 and 2 of the criminal information in File Number 5:15-CR-68 from the Western District of North Carolina.

Defendant Duke Energy Progress, Incorporated is hereby adjudged guilty of Count 1 of the criminal information in File 5:15-CR-62 from the Eastern District of North Carolina; Duke Energy Progress, Inc. is found guilty of Counts 5 and 6 of the criminal information in File Number 5:15-CR-67 from the Middle District of North Carolina; and Duke Energy Progress, Inc. is found guilty of Count 2 of the criminal information in File Number 5:15-CR-68 from the Western District of North Carolina.

Now, as to the Defendant Duke Energy Carolinas, LLC,

it is hereby adjudged and found that Energy Carolinas is found guilty of Counts 1, 2, 3 and 4 of the criminal information in File 5:15-CR-67 from the Middle District of North Carolina and guilty of Count 1 of the criminal information in file 5:15-CR-68. The Court hereby approves and accepts each memoranda of plea agreement. Because the plea agreements in these cases were executed pursuant to Rule 11(c)(1)(C), each defendant is hereby informed that the agreed dispositions will be included in their respective judgments.

The Court intends to proceed to sentencing without the preparation of a presentence report, as the parties have waived a presentence report by the United States Probation Office. The Court has had as its assistance during the preparation for accepting these pleas and passing judgment in this case -- had the assistance of two Senior United States Probation Officers, Mr. John Wasco, please stand, and Mr. Dwayne Benfield, please stand, who are the assigned probation officers to this case as we came to it today and as it goes forward from here.

The next step in this matter is the sentencing of the three defendants. I'm going to have to have another fairly, well, short recess of about an hour, and when I come back I will hear from the defendants through counsel as to what they want as far as an allocution or what they would like for me to hear, and then if there's anything further from the

United States, I'll hear that, and then I will proceed to sentence the three entities today.

The hour is now 11:40 something, I'm going to recess Court until 1:00 p.m. and we'll come back, and I would anticipate that we could get all the sentencings accomplished within approximately an hour to an hour and a half.

Anything further from the United States before we recess for midday, Ms. Rangarajan?

MS. RANGARAJAN: No, sir.

THE COURT: Mr. Cooney?

MR. COONEY: None, Your Honor.

THE COURT: All right. Marshal, court will be in recess until 1:00 p.m.

- - - - -

(Recess at 11:41 a.m. until 12:58 p.m.)

- - - - -

THE COURT: Good afternoon, ladies and gentlemen.

As we are aware, we've completed all the preliminaries in these arraignment proceedings and we're now prepared to go forward. This is the appropriate time to hear before judgment is finally passed certain matters or any matters that the defense desires to bring to my attention.

First off, Madam U.S. Attorney, is the Government ready to proceed this afternoon?

MS. RANGARAJAN: We are, Your Honor. Thank you.

THE COURT: Mr. Cooney, are the defendants ready to proceed?

MR. COONEY: Yes, we are, Your Honor.

THE COURT: All right. I'm ready to hear from you, sir, or your team, however you want to do it.

MR. COONEY: Thank you, Your Honor. You'll be hearing from myself, from Ms. Popp, Ms. Rausher, and then finally from Ms. Janson. We'll not trifle with the Court's patience. We'll recall the admonition that you gave me yesterday that no one remembers who spoke before Lincoln at the Gettysburg Address.

THE COURT: You'll also remember that the Ten Commandments contain 297 words and the Bill of Rights 463. Recently a Federal directive that came out of the city where some of these people come from, a directive to regulate the price of cabbage contained 28,911 words. I look forward to hearing whatever you want to tell me this afternoon.

MR. COONEY: I will be longer than the Bill of Rights but shorter than cabbage, I can promise that.

Your Honor, before I begin, as an officer of the court, I want to bring to the Court's attention the professionalism and integrity of the United States Attorney's Offices and the Department of Justice. We have appreciated the high ethical standards they've held and the professionalism with which they've approached this matter, and I can assure the

Court and the public that the United States has been zealously represented in this. This was a long, hard investigation, we've reached a complex agreement that we're going to urge the Court to enter, but I wanted to thank the prosecutors in this case for their professionalism throughout this.

THE COURT: Thank you. I know they appreciate it.

MR. COONEY: Your Honor, as you know, I represent three companies, two of which have been in existence in this state in one form or another for 110 years. Duke Energy Progress is the old Carolina Power and Light, Duke Energy Carolinas is the old Duke Power, and these companies together were the first companies to bring electricity to North Carolina.

When the first farmers went in and turned on their lights or people listened to the radio, it was likely on power that was brought to them by these companies, and these companies helped transform this state from a rural agricultural state into a manufacturing state and now into a high tech research economy, and throughout that time they provided a lot of jobs to a lot of people.

Right now we have 13,000 employees and 8,000 retirees who depend on these companies, and these are good jobs, these are the kind of jobs that you can build dreams on, and for 110 years no one ever accused these companies of committing a crime, and certainly these companies were never convicted of

committing a crime, and all of that changed at 11:40 a.m. when Your Honor adjudged them guilty of crimes.

The reason the companies are here and the reason they entered into these plea agreements goes back to something Lynn Good, the Chief Executive Officer, did in the days immediately following Dan River. She told that community and she told this State and she told this company we were going to make it right and we were going to take responsibility, and that's what we've done today and that's what these companies have done today.

I want to talk for a second about the kinds of crimes that the company has acknowledged and pleaded guilty to. These are crimes of negligence. These are negligence-based crimes. There is no charge and the company has not pleaded guilty to anything that says the company willfully committed a crime or intentionally committed a crime or knowingly committed a crime. There's no allegation that the company had a business plan to avoid the environmental laws or a business plan or any kind of a plan that told them that they were not to try to do the best they could for the environment. These are negligence-based crimes that quite frankly the company, when it took a look at its own conduct in the days and weeks following Dan River, concluded that it was obligated to do better, that it should have done better, and that is the essence of negligence, which is why the companies were willing to plead guilty to these

negligence-based crimes.

What I'd like to do, Your Honor, is talk very briefly about kind of the three baskets of things we're dealing with, which are Dan River, Cape Fear and then what we call the seeps in general, and I'll be very brief, but I want to begin with Dan River.

In the days following the Dan River spill -- let me get this on. There we go.

In the days following the Dan River spill, in addition to committing tremendous resources that you'll hear about to try to correct the spill, to stop what was going on, the company also began an in-depth inquiry into what happened at Dan River, what caused this, and within a few weeks and months and as a result of this what the company learned was that its employees had made a series of independent errors and other errors had occurred over a long period of time, nearly 60 years, that had coalesced leading to the Dan River spill.

As Ms. Rangarajan pointed out in the joint factual statement, the employees had not consistently inspected the ash basins, had not inspected them in a consistent manner, that there was confusion about what the stormwater pipe was made out of, and I'll get into that a little later, that the engineers had recommended a video camera inspection and that recommendation had been turned down because the thought was the pipe was going to be removed soon and hadn't exhibited any

problems. So there were a number of errors that were made, certainly that decision was one of them, and in hindsight the company certainly believes that that video camera inspection should have occurred and would have given it valuable information.

So Ms. Rangarajan was right in her factual summary about all of these, and in fact when the company discovered all of this we had a meeting on June 22nd, 2014 with the U.S. Attorney's office and we did a presentation for them and brought them the e-mails and the documents that showed that and acknowledged that right from the beginning. As I told Ms. Rangarajan, as far as Dan River goes, we ought to be able to agree on the facts, and we were able to do so, I think, to a dramatic extent.

Now, let me explain a little bit about what's going on at Dan River, because these ash basins are all kind of different. That's an overhead view of the two basins at Dan River. Now, in the media the basins are portrayed sometimes as you dig a hole and you throw stuff in it and you leave it there, and that's just not correct. These are permitted wastewater treatment systems, they're permitted by the Government, they're regulated by EPA and by DENR and by various divisions of DENR, and the way these work is on basic engineering principles, they work on the same engineering principles that municipal wastewater systems work on and

industrial wastewater systems work on. These are principles of settling. These are settling ponds.

So at Dan River, as Ms. Rangarajan mentioned, we have a primary ash pond, and what would happen is coal byproducts, what was left over from the burning of coal, would come into the primary ash basin, they would mix it with water so that it could be handled and wouldn't fly all over the place, it would then settle. The solids would settle out and the cleaner water on the top would eventually be pumped into the secondary ash basin, where more settling would occur, and in fact there's kind of a wetlands associated with that secondary ash basin, and then once enough settling occurred, the water at the top that had been fully treated at that point would be discharged through the permitted outfall into the Dan River, and that's the permit that the company had.

Now, the stormwater pipe -- and there's roughly where the permitted ash outfall is. Now, the stormwater pipe that we're talking about ran under the primary ash basin and it ran from a wetlands area on the left to the Dan River. That stormwater pipe had nothing to do with the operation of the coal ash basin, it was just simply a pipe that was built so that stormwater from one part of the property could get to another part of the property underneath the ash basin. It was first installed in 1954 and then was expanded later in the 1960s.

So at the time of the Dan River spill, that stormwater pipe ran roughly 1,000 feet, so it was a lengthy pipe, and as Ms. Rangarajan pointed out, when the ash basin was expanded and that pipe was expanded, it had reinforced concrete on either end with a middle section of corrugated metal. That X marks roughly the spot where the pipe failed.

After the pipe failed, a video camera inspection was done of the entire pipe and the entire pipe was intact and showed no major problems except for a five foot section of pipe, it's a bend section, and that's a picture of the pipe that we pulled out of the Dan River in April of 2014 that the company was able to locate and bring out and the representatives of the Government were with us.

What we discovered when we pulled it out is there had been extensive corrosion, we think due in part to a manufacturing defect that had occurred 60 years earlier in terms of where asphalt paving was placed, and we think that in part may have been responsible for the way in which the pipe failed, but the problem was the pipe failed all at once, and it failed on the bottom, and because it failed on the bottom there was no leaking on the top to give us any warning there was a problem with the pipe, it just simply corroded and then the weight caused it to collapse.

Now, Ms. Rangarajan talked a little bit about the composition of the pipe. This was an unusual pipe because you

had corrugated metal and then you had extensions on either end, and part of the problem was the company had not clearly labeled the fact that you really had a pipe with two different kinds of materials in it, and pursuant to a North Carolina Utilities Commission order, every five years the company had an independent inspector come out and do an independent inspection of the basins to examine what was wrong and make some recommendations. In 1991 -- they would do drawings with each of these reports, and in the 1991 report the drawing showed the pipe as being RCP, you see that 48-inch RCP, that stands for reinforced concrete, and Ms. Rangarajan is right, the company didn't catch that in 1991 and that error was repeated every five years literally up through 2014, and what happened of course is as a new engineer would come in who had responsibility for the coal ash basins, they would logically go to the last inspection report, because you want to know what were the basins like at the last inspection, are there any issues I need to deal with, and they might go to the report before that, and so by 2014 there was literally 23 years of documents that tended to label this thing as reinforced concrete, and so the independent engineers kept missing it and frankly the Duke engineers missed it because of that, an error, an independent error, it was certainly not intentional on anyone, but that complicated the ability to deal with this pipe.

In addition, Ms. Rangarajan talked about a series of recommendations for quantitative inflow and outflow monitoring, how much water is going in the stormwater pipe, how much water is going out. Those recommendations were actually abandoned in the early '90s because we developed a new technology with fiberoptics, you could put video cameras in these, and so the new recommendations were always you need to examine the water coming out of the pipe and see if it's cloudy, and if it's cloudy then you need to do a video camera inspection, and the theory on that was a basic engineering principle, that the pipe will leak before it fails. Pipes tend not to fail all at once, they tend to show signs of it, but the problem here, as Ms. Rangarajan pointed out, is usually you expect a pipe to corrode at the top where all the weight is, but this one corroded at the bottom, and because it corroded at the bottom there wasn't a lot of leakage going on and so that lulled everyone into a false sense of security that in fact this pipe is in pretty good shape, and that was, frankly, what was going on when the recommendation was made to do a video camera inspection.

Now, let me set the context for that, because Ms. Rangarajan is right, engineers within the company said it might be a good idea to do a video camera inspection of these pipes, they're old, we're not sure what kind of condition they're in, and you're closing down the coal ash steam station.

The coal ash part of Dan River was closed down in 2012, it doesn't burn any more coal, this basin is not receiving any more coal ash, so they said why don't we look at the stormwater pipe with a video camera. The response, quite frankly, was, well, here is the problem, we're going to remove that pipe, and what I've got up on the screen is actually a schematic drawing of a plan that was presented to DENR in October of 2013 in which the coal ash basin would be dewatered, ash dried out and then moved away from the river, and then as you can see, both the 48-inch and the 36-inch pipes were going to be removed.

So the person who makes the final decision was under the belief that these pipes are going to be removed soon. We've never had a problem with them. Does it make sense to spend money to do a video camera inspection? Obviously in retrospect the answer is yes, the company needed to do that, and frankly the company should have done it at that time, but the belief was the pipes would no longer be there very much longer and you don't need to do that.

The problem is the company didn't appreciate there was corrosion at the bottom, they weren't going to get any signs of it, and quite frankly they ran out of time, the pipe failed before they could remove it.

I'd like to talk, if I can for a second, about the response to Dan River. This spill occurred on February 2nd and

at Dan River the area in which the spill occurred didn't have any power going out to the basins, there were no lights, there's no electricity out there, you need a lot of heavy equipment to move in all of a sudden, and just to kind of give you a sense of it, remember where the break is, it's kind of deep into the ash basin itself, so what the company did is it sent literally hundreds of people out there within a few days and formed two teams to try to deal with this.

One team tried to plug it from the river, which required the construction of a barge to see if you could approach it from the river. Remember, we're talking about a place without power to begin with.

Another team tried to approach it from the ash basin itself. Of course the ash basin is not a stable environment, so the company went to a rock quarry 20 miles away and brought in 10,000 tons of new rock to build a stable platform so they could try to get to that leak where it occurred.

So you had these two massive teams, one trying to work from the river, another trying to build a platform in the ash basin so they could get to that pipe, and that week in particular, Your Honor, there was wind, there was snow, all the temperatures were freezing, and this was all being done essentially from an abandoned building near these coal ash basins, and the company did it, they did it in a timely fashion and they did it without injuring anyone and in a safe manner.

They were able to plug this pipe within six days and that took a herculean engineering effort.

But the company's response didn't just stop there. The company was also worried and was ordered to do testing, so this is a chart of what the arsenic levels were at the Danville Water Plant during this period of time, because Danville is the first community that's downstream from the Dan River Steam Station. Arsenic is one of the elements that can be in coal ash and it's an element that people worry about.

So on this chart with the red line, you see it at 10, is the level for -- safe level for human consumption. You get above 10, you've got a real problem. You want to keep everything below 10. The blue line are the actual arsenic measurements at the Danville Water Treatment Plant.

Fortunately there was never a problem in terms of these kinds of chemicals in the Danville water system. The Danville water treatment system was able to handle it and there were no threats from that, and in fact the Environmental Protection Agency itself has said that. This is a screen shot from the Environmental Protection Agency's own website in which they say there have been no human health screening levels exceeded in either the surface water or in sediments for contaminants associated with coal ash and that EPA's drinking water samples have shown no impacts to the local water, and in fact by July of 2014, we think in part due to Duke's

response, the EPA said that Dan River was back to its pre-coal ash spill quality.

Now, this was a significant event to the environment, no one is trying to diminish that, but it appears to have been a limited event as well and human health was not threatened at any time during this.

In addition, to achieve this the company spent $7.3 million to repair that pipe, to try to get it blocked. They spent more than $5 million to remediate the river, to remove the coal ash deposits in the river that they've been directed to remove. They spent -- they just paid the Virginia Department of Environmental Quality two and a half million dollars to remediate the issues in the Eastern and Western Districts of Virginia. They spent an additional $348,000 in lab analysis alone and tested everywhere from the Dan River up into the Kerr Lake Reservoir to make sure there were no risks to humans. They spent 3.15 million for sediment removal, 700,000 in just resource assessments, how are the fisheries doing, how are the mollusks doing, what does the riparian environment look like. They spent an additional -- close to $1 million for additional labor over six days, and the total forecast costs associated with this are around $20 million, but that's just the response to this pipe. The company did more than that.

This has been a transformative event. Companies are

a little bit like human beings, things can happen to them in their lives that change them forever, and whatever Duke Energy was prior to February 2nd, 2014, it is different now after February 2nd, 2014, and you can see that in some of the responses, because they went immediately beyond just saying we need to fix Dan River and they went immediately beyond in telling everyone our customers are not going to pay for that, we're going to pay for it.

We started saying do we have any other Dan Rivers in the system, what do we need to do to make sure our other coal ash basins don't have pipes that we don't -- that we don't realize are either corroding or may not be built the way we think they're built. So it spread out over 32 coal ash basins across the State of North Carolina and immediately began conducting video inspections of every riser and horizontal pipe associated with a coal ash basin. That came out to nearly three miles of linear feet of pipe that were inspected. A mile and a half of corrugated metal piping was inspected. Nearly a mile of reinforced concrete piping was inspected. They inspected almost a mile of other linear feet of piping, and they reinspected every dam to make sure there were no problems anywhere else.

As a result of those inspections they also took some additional safety measures, and I'm putting some of those in there, but essentially sealing up corrugated metal pipes and

installing slip lining and plugging risers and permanently retiring risers and a number of other things that they believe are going to make these coal ash basins more safe while they're retired and can avoid another Dan River.

So we have a response, the immediate response to Dan River, then we have a company-wide response to their operations, but I told you it's a changed company and let me tell you and show you how else it's changed, and it's done that through permanent organizational changes.

One of the problems with Dan River that the company uncovered that we presented to the Government and that Ms. Rangarajan had talked about was the fact that we had people at the ash basin who knew things that the engineers didn't. Duke operates under a system where a major piece of infrastructure like a turbine or a coal ash basin has an equipment owner and that person is responsible for maintaining that piece of equipment. For the coal ash basins, the equipment owner often was not an engineer, but the people who actually had to do the engineering obviously were engineers but they were in a different place, and so what the company realized is we were dividing knowledge, which is exactly what Ms. Rangarajan talked about, and so rather than having a division of knowledge, what they have done is they have tried to streamline the organization and put a higher level of expertise managing these coal ash basins.

Now, to do that, what they did is they first formed something called ABSAT, and that's referenced in the plea agreement, it stands for the Ash Basin Strategic Action Task Force, and that was a group put together within three days of Dan River, it's led by a retired admiral from the Nuclear Navy and he was in charge of making sure the coal ash basins are safe, that we do the inspections, and then how do we need to restructure, and more importantly how are we going to close these things, how are we going to act in an environmentally responsible manner, make sure these things are functioning until they're closed.

In addition the company has formed something called a CCP or a Coal Combustion Products organization. That organization is dedicated solely to coal combustion products, how to store them, what to do with them, how to recycle them, how to manage them. They then went out and formed something called a National Ash Management Advisory Board, and these are all referred to in the plea, and what the company did is it gathered experts from all over the country and put them on an advisory board to help us deal with this problem, help us design engineering techniques, design approaches to closure, design approaches to maintenance that will make sure not only that we do what we're supposed to do but that the company sets a new level for the engineering and for the maintenance of these ash basins.

So now what happens, Your Honor, is engineers are directly responsible for these ash basins, they are the equipment owners, they have several engineering degrees, so that we can put that knowledge together in one place.

In addition, ABSAT is working on formulating closure strategies and evaluations, how are we going to close these ponds, dry up this ash and either keep it in place in a safe manner or move it in a safe manner while the CCP organization is managing these ash basins on a day-to-day basis, and a person in that CCP portion is actually going to be our Chief Compliance Officer, interfacing with Probation and the Court during the term of probation.

Finally, the leadership of the environmental health and safety organization has been replaced, they are no longer in those positions and there is brand new leadership to create this new standard that the company wants to create. This was done to centralize control in management which had been diffused before, this was done to bring more engineering expertise and this was done to have direct accountability, and those were some of the lessons this company learned from Dan River.

Now I want to spend a couple minutes talking about Cape Fear. Cape Fear is a little bit different than Dan River, because in Cape Fear you don't have a primary pond and a secondary pond, you actually have two separate settling ponds.

So again, what happens with Cape Fear is the coal ash slurries would go into these ponds and they would settle and then the treated water on the top, as Ms. Pettus described, would go into the top of the risers and then go through a channel into a permitted outfall and eventually into the river, and that was what the permit provided for and the way these basins functioned.

We talked a lot about risers. I want to show you a picture of one. That structure there that's standing up in the water is a riser. This a huge structure, it's basically a series of concrete cylinders that are grouted and cemented on top of each other, and this is old infrastructure, this plant has been operating or was operating since the 1940s, it closed down about four years ago, doesn't produce electricity anymore, but over time the grouting in the risers deteriorated and that permitted the treated water to leak in through the side rather than through the top, which meant that the water was going into the discharge system in a way that was different than described in the permit, and of course the permit requires us to maintain these risers so they don't leak, and those were the bases for those pleas.

Now, the only other thing I really want to add about Cape Fear is these pleas have nothing to do with a dispute that arose between the company and DENR over whether the company was authorized to repair the risers or authorized to repair the

risers in the way in which the company believed they needed to be repaired. I think it's fair to say there is a dispute even with the Government about those issues. These pleas have nothing to do with that and don't address that. Those are separate issues that are being fought out through an NOV process with DENR in State Court.

Now, what I'd like to do is just spend a few minutes talking about seeps and toe drains, and you've heard some of that today from Ms. Pettus. Essentially a seep is something that occurs with an earthen impoundment, and I've got a picture up there, and you can see in the foreground -- you'll see that rock, and then in the foreground you'll see some wet areas. That's actually a picture of one of the ash basins, and the wet areas in the foreground are a seep.

Now, seeps are really a natural aspect of earthen impoundments, they occur naturally, you know, they can either come from groundwater themselves, because these are close to rivers, or they can come from the ash basins, and in fact the U.S. Army Corps of Engineers 30 years ago recognized that all earth and rock-filled dams are subject to seepage, and DENR ten years ago said all earth dams have seepage resulting from water percolating slowly through the dam and its foundation.

In 2009, after the TVA coal ash spill, EPA went out throughout the country and inspected every coal ash basin in the country, there are close to 1,000 of them, and these are

all earthen impoundments, they're typically maintained either by industries or by utilities that burn coal, and what EPA found is that there were seeps at all of the earthen impoundments. I mean, the fact that you have an earthen impoundment that seeps is no secret, the EPA knew about that, DENR knew about that, the dam safety people knew about that.

I think it's fair to say Ms. Rangarajan -- I mean Ms. Pettus talked about some of the legal nuances of seeps, because it's fair to say there is a disagreement among us about whether a seep by itself that simply percolates up and may reach a water of the United States is a violation of the law. The Government takes the position it is. That issue is not resolved in this plea. What the company did in this plea is it acknowledged it should not have had specific engineering structures that take seeps, pull them together and then put them into a water of the United States, unless it was part of the permit.

So the pleas here deal with specific engineered features, not with every seep, because as you'll see from the joint factual statement, we have close to 200 seeps, and obviously there were only pleas to six, so we believe that was a fair compromise with the Government. The Government's position is different than ours on seeps in general, and frankly that's still being worked out as the Government deals with other entities and we go through a permitting process.

The thing about seeps is that the easiest way to control a seep is to let us dry out the coal ash and move it and close those basins. We can't -- the plea agreement requires this company to comply with the Coal Ash Management Act to remove ash from four high priority sites. We can't move an ounce of coal ash until the company receives the permits it needs to receive.

The company wants to close these basins down. The Government wants to see them closed down. We agree that's the environmentally responsible thing to do, but we can't do anything until we can move water out of them and then get permits to do something with the ash, and so a lot of that is dependent on a permitting process that we certainly don't control and the Government doesn't control but we will be reporting on regularly to the Court.

Finally, I'd like to mention something that wasn't mentioned in the factual statement because there's been no accusation of wrongdoing, but it is contained in both the plea agreement and the factual statement, and that's bromide. Bromide is not toxic to human beings. There are no real levels for bromide.

What happened in 2002, North Carolina in a very progressive move passed the Clean Smokestacks Act, which basically required companies like Duke that were burning coal to put scrubbers on top of coal fired facilities. The

scrubbers have taken out hundreds of thousands of tons of emissions from the air. They've been a huge success. They've reduced this company's emissions in some areas by 80 to 90 percent.

Now, a byproduct of the scrubbers is -- it includes gypsum, for example, and the company actually manufactures wallboard from that, but also bromide, and no one knew that bromide was really going to be a byproduct of these scrubbers until they got installed and started running full time.

Now, putting bromide into a river is not a violation of the permit, it didn't violate anything, Duke hasn't been accused of doing anything wrong by doing that, and bromide by itself is not going to cause a problem. The problem arose specifically with Belews Creek in Eden because Eden was using an older chlorine-based water treatment system and the flows were not as great as it had been in the past, and what happens when bromide comes into contact in sufficient amounts with a chlorine-based treatment system is it generates an element called TTHMs, which can cause human health problems, and you saw that referred to in the joint factual statement. So the company began working with Eden and also the Town of Madison to try to upgrade their water systems, and we're in the process of doing that today.

This is where I think the Government asked for something appropriate and then was very creative in working

with us, because they knew we were working with Eden and Madison, we have scrubbers at Cliffside and other places, we're not aware of any other town that may have a problem with it, but since we are going to have a Court-appointed monitor in place anyway, what the Government suggests and what we agreed to do and what we created was a claims process for those towns that see a TTHM increase, believe that they're downstream from a scrub plant, believe it's being caused by bromide, to come in and present their claim to the Court-appointed monitor, we'll present whatever evidence we may have, the Court-appointed monitor will make a decision and then we have a right of appeal or the town would have a right of appeal with the Court for a final decision, but that is a clean, simplified way to take care of an environmental problem that frankly was an unintended consequence that no one knew was going to happen when scrubbers were put on coal fired plants, and I think that's one of the creative aspects of this plea agreement that I appreciate the Government being willing to consider and, frankly, that started with the Government's suggestions.

Your Honor, I'm getting ready to turn this over for a second, but the Court noted that these pleas were filed on February 20th, 2015. That morning, and I don't know if you remember that day, but it was bitterly cold, we set a lot of weather records that day, and that day, just before the sun rose, the people in North Carolina asked for more power than

these companies had ever generated before in their history and the companies met that demand, so even as the companies were filing this criminal plea to accept responsibility and to make things right, they were still focused on their primary mission, they were keeping people warm, they were keeping the lights on, and that's what they intend to do throughout this period of probation and I urge the Court to go ahead and accept this plea agreement, and I'd like to let Ms. Popp address the Court.

THE COURT: Thank you. Thank you very kindly, Counsel.

Ms. Popp, I'll be glad to hear you, ma'am.

MS. POPP: Your Honor, thank you.

Judge, in addition to the remediation steps that Duke Energy has taken, we also wanted to bring to your attention that the company has fully cooperated in an exemplary way with the Government's investigation throughout. That cooperation has been immediate, it was thorough and it was continuous.

From day one, the company's response to the Dan River spill, the company has done the right thing. It was management's instructions from the very beginning that the company would cooperate with the Government to help them to be transparent. Duke has been guided by that commitment, a commitment to go where the facts take them, regardless of the impact that it would have on business, and the speed at which the company has worked in cooperation has been extraordinary,

especially given the magnitude of the issues that this case presents.

We appreciate that the Government has moved quickly, that the Government wanted to resolve the issues quickly, and we have responded by moving expeditiously in doing so. We respect the thoroughness with which the Government has investigated this case, and Duke Energy has not held back in its cooperation along the way. Indeed, we spent an enormous number of hours, a lot of work, and we've engaged in frank and open communications throughout the investigation, we have facilitated access to evidence and we've produced an enormous amount of evidence, and on this slide I just want to give you a few statistics in that regard.

We've produced documents to the Government 51 times totaling over 1.6 million pages. We helped make available and schedule interviews for 50 Duke employees, some of whom went into the grand jury. We made presentations to the Government, some of which you've heard about today, and we've made presentations on evidence that we discovered that were unfavorable. We wanted to bring that to the Government's attention immediately and to make sure that they understood it, that they had access to it.

The Government asked for expedited production of documents in addition to the ones that we were giving them on a rolling basis, on a weekly basis, and we did that, Judge,

22 times, and we've disclosed documents that we weren't required to disclose. We went beyond the search terms that the Government had asked us to use, and when we found documents, we turned them over to the Government, brought them to their attention and explained them to them.

Judge, in sum, not only has this company engaged in extraordinary, exemplary remediation, we've engaged in full disclosure. We've been in full cooperation mode, helpful mode, including resolving this matter expeditiously, and it's in the spirit that Duke has responded to the Dan River spill, with that spirit to be fully cooperative, Judge. Thank you.

THE COURT: Thank you, Ms. Popp.

Yes. Ms. Claire.

MS. RAUSCHER: Thank you, Your Honor.

Your Honor, I have the privilege of talking to you just a little bit about the company. Duke Energy, as you heard, has been in existence for over 100 years. It has a very proud history in this state of providing power, employment and service to the citizens of this state.

Not only does it provide power, but the service that it provides is very significant here. For example, 6 million customers are provided with power by the company. That includes individuals, that includes families and that includes businesses. So throughout the state almost everybody in the state gets their power from the company.

There are 13,200 employees employed by the company, there are 8700 retirees, and there are thousands of contractors who work for the company. So once again, the company is providing jobs and benefits to the citizens of this great state.

Not only are there jobs, but the tax base that's provided by this company is significant. You know, here on this slide, for example, just the tax base to the local governments is in excess of $122 million last year. That's just to local governments.

Economic development. The company is a huge driver of economic development in this state. For example, in the last -- in 2013 and 2014 Duke Energy helped -- their activities resulted in $1.87 billion in capital investment as well as the creation of 9400 new jobs in this state, and just as an example, Your Honor, Gildan Textiles, one of the companies that came into the state, Clearwater Paper, TransCarolina Products, and I remember several years ago Google built a data center in the western part of the state and it was a huge economic boon, and Duke Energy was one of the major drivers of them relocating or having that farm here.

Not only do we have the economic development, but you have to look at the charitable contributions and contributions of the employees. In 2012 through 2014, three years, in hours and in dollars, Duke Energy employees have provided

$138 million in charitable contributions and volunteer hours, and that's to groups like United Way, the arts, museums, and going out in the community and doing community service.

So as you can see, Your Honor, the company has an amazingly positive impact on the state and it's important to the state.

Now, you heard my colleagues say earlier that the Dan River spill was a transformative event for this company, and it was. From day one Lynne Good, the CEO of the company, said not only are we going to make this right, but we're going to do what it takes to make that right, and they continue to fulfill that promise today.

It's clear that the company will continue to monitor the coal ash basins and will close the coal ash basins at some point, and that's their goal and that's what they want to do, but I think it's important for Your Honor to understand that they're going to not only continue to do that during the five years of probation, but they're going to continue to do that beyond, because they're committed to providing a safe environment, to providing safe operations and also to ensure the environment is sustained in this community.

Now, at this time, Your Honor, I'd like to recognize Julia Janson. As you know, she's the Executive Vice President, Chief Legal Officer of Duke Energy, but throughout her career she's had rising and various increased responsibilities in the

company, including Senior Vice President of Ethics and Compliance. She calls North Carolina her home with her family and she is a proud member of the senior management team at the company and she would like to address the Court on behalf of the company.

THE COURT: I'll be glad to hear you, Ms. Janson.

MS. JANSON: Thank you, Your Honor.

So you've heard a lot today about our company and the actions we took in the wake of the Dan River spill. I have to tell you, I started with this company about a week after I took the Bar Exam and I will disclaim that that was over a quarter of a century ago.

I find this to be an extraordinary company made up of 28,000 caring men and women who get up every day to strive to serve our customers, and that's our mission, that's what we do. Safety is our highest priority, and that includes the safety of our customers, our contractors, the environment and the communities that we serve, and so on behalf of everyone at Duke Energy we want to again apologize for the incident at Dan River. We quickly took accountability, we moved swiftly to fix the issue, and we've reformed our operations in ways we could have never dreamed possible. We stand ready to move ash and will do so as quickly as the State process will allow us to do that.

We've got really high expectations of ourselves and

the Dan River incident didn't meet those expectations, but I hope that our actions demonstrate how much we've learned. We're a new, different and better company, our operations have been strengthened and we look forward to working with the Government throughout this process.

Just as importantly and maybe more importantly, we've been working hard to restore the trust and confidence of the communities that we serve and our customers and will continue to do that, and I really want to thank you for the opportunity to address the Court.

THE COURT: Thank you, Ms. Janson.

Any further?

MR. COONEY: Nothing further at this time, Your Honor.

THE COURT: All right. Thank you.

Madam U.S. Attorney.

MS. RANGARAJAN: Thank you, Your Honor.

Your Honor, again, Lana and I will split the argument on behalf of the Government. I will start, sir.

While the defendants have undertaken corporate restructuring to address the problems that they have had in systemic failures within the communication between engineers and employees, it took the third largest coal ash spill in the nation's history to bring about that change and to motivate that change. And yes, they've cooperated in the Federal

criminal investigation, they have taken remedial action, they are a large company, they employ a lot of people; all of those factors were taken into consideration in the plea negotiations, in resolving the case going forward, but we're here today, Your Honor, to ask you to accept those terms of the plea agreements and impose those terms for a reason. It is the offense conduct in this case, the history in this case, the negligence in this case that warrant the terms set forth in that plea.

Now, I don't have a PowerPoint presentation for the Court, but I do have one slide, but we'll have to switch -- and we do have the supporting documentation for the Court, but in the interest of brevity I just want to focus on the history that was set forth in the joint factual statement, because while this company has been around for 100 plus years, for 30 years, Your Honor, they have had failures in this company, they have failed to listen to their own engineers, they have failed to listen to recommendations, and they have failed to do inspections that they were required to do.

This started with Dan River in the '70s. In '79 they knew there were problems. You move into the '80s and their engineers are paying attention. Some of those engineers that went on the inspections in '84, '85 and '86 did inspections in 2008 and are still with the company today, so they had engineers with knowledge about what is at Dan River, what's in

the basin, throughout this timeframe, but in the '80s they were recommending -- their own engineers recommended that they install notches, basically measuring/sampling systems in the 48-inch pipe, in the 36-inch pipe. They didn't do it, and then over time, as is set forth in the plea agreement, in the joint factual statement, there were other failures.

Their own engineers -- this wasn't the erroneous error in 1991 by an independent consultant. The consultants did fail and made that erroneous classification, but Duke itself, its employees failed to take action as well. So it's a cumulative negligence, Your Honor, and it is that negligence, it's that offense conduct in allowing the negligent discharge of coal ash and coal ash wastewater into the waters of the United States, it's the failing to maintain equipment at Dan River and Cape Fear, it is the seeps and discharges that they allowed to be channelized through ditches and engineered conveyances, all of that conduct that warrants in this case the terms of that plea agreement, which because of the systemic historical problems with the company, there needs to be five years of solid oversight and supervision by this Court.

Now, the defendant -- defense counsel mentioned that they didn't do the camera inspections because they thought the basins were going to close. We note in 2011 the camera inspection wasn't funded and in 2012 the camera inspection wasn't funded.

During that 2012 discussion between the engineers and the equipment owners about whether or not this camera inspection should be funded, they specifically discussed basin closure, and the folks on the ground responded, we don't think it's going to close in 2013, we don't know when it's going to close, in essence, and the timeline suggests that Dan River is not closing until 2016. So in 2012 they're willing to take the $5,000 gamble and not do the video camera inspections because eventually it's going to close down. But you know what one of the equipment owners said to them? In light of the basin closing, don't you think we should know what we have? And they didn't follow up, they still denied the camera inspection, and so that is why we are here. We are here to make sure that going forward the company is on a strong environmental compliance plan but that there is also independent oversight by this Court and a Court-appointed monitor.

It is the defendants' failure to listen to their employees and to rely on those employees' expertise, it is the historic systemic problems within the company that brought them here, but it is also, Your Honor, the breach of the public's trust. The public trusted Duke Energy for the last 30 plus years to manage its coal ash basins reasonably and with ordinary care, and they failed. They pled guilty to negligently handling its coal ash basins, the equipment there, and for allowing seeps and discharges into the waters of the

United States. For those reasons, Your Honor, the terms of the plea are appropriate here and should be vigorously pursued by the Court over the next five years, and that is the Government's response with respect to Dan River.

THE COURT: Thank you. Ms. Pettus.

MS. PETTUS: Thank you, Your Honor.

I want to start just by touching also on the question of harm a little bit. It was referenced in the defendants' presentation in terms of the drinking water system and so forth.

The defendants correctly noted that the levels of arsenic and other contaminants in the water column and the sediment in the Dan River were found by EPA to have returned to normal by July of 2014. Also water treatment facilities managed to adequately treat the water for drinking purposes in the aftermath of the spill, and of course the implication of that is that the harm from the spill is limited.

In some respects that's true, and we're all really fortunate for that. No one wants that spill to have been any worse than it was. And while there were no harms like documented fish kills or human injuries, we do need to clarify, so that you understand the basis of the plea, that that's not the entire story on harm. In fact, there was a piece of an article that was shown in the defendants' presentation that was from July 15th of 2014, the Danville Register & Bee. If you

read down further in the article, it cites the EPA's representative explaining that even though the EPA has finished its monitoring and is moving on, the State Department of Environmental Quality and Inland Game and Fisheries for the State of Virginia is going to be there continuing to take tests over time.

The reason for that is that the full extent of the ecological harm, longterm sense, is still being determined. That's because full assessments of that kind of harm from spills like this one can take a significant amount of time to determine. In some cases biologists need to observe and monitor populations of flora and fauna over several years to fully understand the effects of certain kinds of exposures.

In the case of the Dan River spill there is a natural resource damage assessment and restoration process underway that is being led by Natural Resource trustees from North Carolina, Virginia and the U.S. Department of Interiors Fish and Wildlife Service. That process exists to assess the impacts of the coal ash release on natural resources. They focus on injuries to habitat, surface water, sediment, aquatic species, migratory birds and the human uses of those resources. They also determine ways to restore those. That is generally funded by the responsible party, such as the defendants, and the defendants are participating in that process, but it is not yet complete. The plea agreement specifically avoids

interfering in that process and makes no representations about the possible outcome of that process. Nonetheless, we believe that the significant fine in this case captures how seriously we view the ecological and possible ecological effects of this spill.

In addition to any ecological harm, there is of course the readily calculable harm of the cost of responding to the spill. The defendants touched on that in their presentation and it's also discussed in the joint factual statement. That is the direct basis for the fine amount for Count 1 in the Middle District charges in this case.

Then there are the nearly impossible to quantify costs of the alarm, stress, concern and worry of the people in the communities along the Dan River who woke up the morning after the Super Bowl in 2014 to an ash gray river. That is another reason why the significant fines imposed by the terms of this plea agreement are appropriate.

To touch briefly on some of the other charges, in the case of the risers at Cape Fear, similar to the situation at the Dan River facility, Duke Energy Progress had received warnings in inspections from 2008 to 2013 that they needed to more closely inspect their risers because the condition was marginal and they were expected to develop problems in the next two to five years.

There was no follow-through on the recommendations.

Fortunately, unlike the Dan River spill, there was no catastrophic results, but in 2011 Duke Energy Progress' own employees notified management that the risers had in fact begun to leak and needed repair. Again, there was no action, no follow-through and no accountability for nearly three years. The defendants have admitted to that in pleading guilty.

In the case of the seeps and discharges at the Lee, Riverbend and Asheville facilities, the Eastern and Western District charges, the defendants, like all of the entities they cite, were well aware that earthen dams have seeps. We totally agree that is common knowledge. The Government and the defendants may disagree on whether some subcategories of seeps are illegal or not, but there is clearly no dispute that you are not supposed to channel seeps directly into a river without a permit. That's true whether it's a small amount, whatever the constituents are and whether or not it has a measurable effect on water quality on its own, because if we are going to preserve the quality of our water, the cumulative effect of pollution from all sources matters.

The fact that the defendants were aware that their earthen coal ash basins would inevitably have seeps and did not take precautions to ensure that those seeps were not being channeled through ditches and other conveyances constructed by its employees to nearby rivers, which was in fact allowed to occur for a period of years at each of those facilities, is

again indicative of a need for change in the culture of the defendants and their management of the coal ash basins. That culture and poor management had a deleterious effect cumulatively on the watersheds and wetlands throughout North Carolina, which the community service payment and wetlands mitigation payment in the plea agreement are designed to address.

The terms and conditions of the plea agreement coupled with the five year term of probation with the Court-appointed monitor are designed to ensure lasting and meaningful changes, that the defendants continue on their professed new path, and to prevent this type of neglect from happening in the future, and for that we urge the Court again to accept the terms of the plea agreement and hope that that will be successfully adhered to over the next five years.

THE COURT: All right. Thank you very much.

The Court now arrives at the time to pass its judgment in the case. It's been an hour. It's going to take me at least 45 minutes, I think, to sentence the three defendants, so I'm going to take just a ten minute recess, Marshal.

- - - - -

(Recess at 1:59 p.m. until 2:09 p.m.)

- - - - -

THE COURT: The time has arrived to pass judgment in

this matter. I've made up my mind in the various cases.

I'm going to sentence the defendants in the order of Duke Energy Carolinas first, Duke Energy Progress second and Duke Energy Business Services third.

The Court finds, based on a thorough review of the joint factual statement of the parties, the plea agreement, the sentencing memoranda and the hearing today, that it has sufficient information in the record to meaningfully exercise its sentencing authority pursuant to United States sentencing laws and to impose sentence in this case; therefore the preparation of a presentence report is waived.

I have to state the fine calculations under Chapter 8 and note that they do not apply in this case because these charges are brought under the Clean Water Act. Nevertheless, in the Duke Energy Carolinas case, as to Count 1 and through 4, the penalty is up to five years probation, that's in the 67 case, the Middle District case, and the fine range for Count 1 is $17,500 to $38,455,000. In Count 2 the fine range is 1.910 -- it's $1,910,000 to $19,100,000. In Count 3 it's $1,957,500 to $19,575,000. Finally, in Count 4 of the Middle District case it's the same, $1,957,500 to $19,575,000. Finally, as to the 68 case, the Western District case, as to Count 1 the penalty is up to five years probation, fine range of $1,957,500 to $19,575,000.

Now, the Court has considered all of the factors set

forth in 18 U.S. Code Section 3553(a) and 3572. Pursuant to the Sentencing Reform Act of 1984 and in accord with the Supreme Court decision in United States v. Booker, it is the judgment of the Court that the defendant Duke Energy Carolinas is hereby placed on probation for a term of five years. This term consists of five years on Counts 1 through 4 of docket ending with 67 and five years on Count 1 of docket ending with 68, all to run concurrently.

While on probation the defendant shall not commit another Federal, State or local crime. If the defendant learns of any violation committed by any of its agents or employees within the scope of their employment during the term of probation, the defendant shall have five business days to notify the U.S. Probation Office of the violation.

The defendant shall comply with all Federal, State and other regulations relating to coal ash during the period of the probation. The defendant shall not have any new notices of violation, notices of deficiencies or other criminal or civil or administrative enforcement actions with respect to coal ash while on probation. It shall be considered to be a violation of probation if the defendant receives any new notices of violation, notices of deficiencies or other criminal or civil or administrative enforcement actions with respect to coal ash based on its conduct, including the failure to act, occurring after entry of this judgment, in which a final assessment,

after the conclusion of any appeal is more than $5,000. Any conduct or condition resulting in a final assessment of more than $15,000 shall be presumed to be material and in violation of this probation. The Court will not consider there to be a violation of the conditions of probation if the defendant complies with Federal environmental laws when they are in direct conflict between State and Federal environment laws. The Court also will not deem it to be a violation of probation if the enforcement action is based upon information disclosed by the defendant in its 2004 Topographical Map and Discharge Assessment or in its 2014 National Pollution Discharge Elimination System permit renewal application.

Further, the defendant shall comply with the following additional conditions, and they number now number 1 through 17. I ask you to pay attention.

The defendant shall cooperate fully with the United States Probation Office during the period of supervision, including truthfully answering any inquiries by our probation office. The defendant shall provide the probation office with the following: Full access to any of the defendant's operating locations; ten days prior notice of any intended change in principal business or mailing addresses; notice of any material change in the defendant's economic circumstance that might affect the defendant's ability to pay fines or meet other financial obligations set forth in this

judgment.

The defendant and its co-defendants, Progress and Business Services, shall pay for Court-appointed monitoring as set forth in Paragraphs 2A through 2I of Exhibit A of this judgment. Exhibit A has been provided to the parties and they have agreed generally to the conditions contained therein.

The defendant shall develop, adopt and implement and fund a comprehensive nationwide environmental compliance plan and a comprehensive statewide environmental compliance plan as set forth in Paragraphs 3A and 3I of Exhibit A. Exhibit A has been provided to the parties as previously stated.

The defendant shall adopt, implement and enforce a comprehensive environmental training program for all domestic employees as set forth in Paragraph 4A of Exhibit A.

The defendant shall cooperate with the Bromide claims remediation process as detailed in the plea agreement.

The defendant shall identify or establish a position as a compliance officer at the Vice President level or higher who will liaison with the CAM and the United States Probation Office as set forth in paragraphs of Exhibit A.

The defendant shall ensure that any new, expanded or reopened coal ash or coal ash wastewater impoundments at any facilities own by the defendant are lined. At such impoundments the defendant shall ensure there are no unpermitted discharges of coal cash or coal ash wastewater from

any engineered, channelized or naturally occurring seeps. Coal ash and wastewater impoundments will be subject to inspection by the Court-Appointed Administrator and/or the United States Probation Officers at any time.

The defendant shall record appropriate reserves on a financial statement for the purpose of recognizing the projected obligation to retire its coal ash impoundments in North Carolina. At the time of the signing of the plea agreement the obligation was currently estimated at a total of $2 billion. Each year during the term of probation, beginning on the date of this judgment, and occurring by March 31 of each year thereafter, the defendant shall cause the Chief Financial Officer of Duke Energy Corporation to certify to the Court, the United States Probation Office and the CAM and the United States that the defendant and Duke Energy have sufficient assets reserved to meet the obligations imposed by law or regulation or as may otherwise be necessary to fulfill the defendant's obligation with respect to its coal ash impoundments within the State of North Carolina. If the Court-Appointed Administrator has any concerns regarding the assets available to meet obligations imposed by the judgment, the CAM shall immediately notify the Court and/or the U.S. Probation Officer and the parties.

The defendant shall cause its parent holding company, Duke Energy Corporation, to record appropriate reserves on its

consolidated financial statements for the purpose of recognizing the projected obligation to retire all coal ash impoundments, including those in North Carolina. This obligation is currently estimated at a total of $3.4 billion on Duke Energy's balance sheet for all coal ash impoundments. Each year during the term of probation, beginning on the date of judgment, and occurring by March 31 of each year, the defendant shall cause the Chief Financial Officer of Duke Energy Corporation, in accordance with the Guaranty Agreement between the parties, to certify to the Court, the U.S. Probation Officer, the Court-Appointed Administrator and the United States that the defendant and Duke Energy have sufficient assets reserved to meet the obligations imposed by law or regulations or as may otherwise be necessary to fulfill the obligation with respect to its coal ash impoundments within the State of North Carolina.

The defendant shall, throughout the entire probation, maintain unused borrowing capacity in the amount of $250 million under the Master Credit Facility as a security to meet its obligation to close or remediate any coal ash impoundments.

The defendant shall make, as set forth in the plea agreement, a community service payment totaling $13.5 million to the National Fish and Wildlife Foundation, a nonprofit organization established pursuant to Federal law, 16 U.S. Code

Section 3701-10. This payment is to be made within 60 days of today and proof of such payment is to be provided to the United States Probation Office.

The defendant shall pay, as set forth in the plea agreement, $5 million to an unauthorized -- strike that, to an authorized wetlands mitigation bank or conservation trust for the purchase of riparian/wetland, riparian land, or restoration equivalent property located in the Broad River Basin, French Broad River Basin, Cape Fear River Basin, Catawba River Basin, Dan River Basin, Yadkin-Pee Dee River Basin, Neuse River Basin, Lumber River Basin, and Roanoke River Basin as set forth in Paragraph 12A of Exhibit A of this judgment. Exhibit A has been provided to the parties, and they have agreed to the conditions contained therein. The mitigation payment is in addition to and does not replace Duke Energy Corporation's public commitment to fund its $10 million Water Resources Fund for environmental and other philanthropic projects along lakes and rivers in the Southeast, or the required $5 million payment by Duke Energy Progress in a related case.

The defendant shall within five business days of this judgment place a full-page (132 column inches) public apology in at least two national newspapers and a major newspaper in each of the cities of Raleigh, Greensboro and Charlotte, North Carolina. The language of the public apology has been

agreed upon by the parties and is contained in Exhibit C of the plea agreement. Proof of such public apology shall be provided to the United States Probation Office within seven days of being placed in the respective paper.

The defendant shall not seek or take credit for any fine, restitution, community service payment, mitigation payment, or funding of the environmental compliance plan, including the costs associated with the hiring or payment of staff or consultants needed to assist the Court-Appointed Administrator, in any related civil or administrative proceedings, including but not limited to the Natural Resources Damages Assessment process.

The defendant shall not capitalize into inventory or basis or take any tax deductions in the United States or elsewhere on any portion of the monetary payments (fines, restitution, community service, mitigation or funding of the environmental compliance plans) imposed as a part of this judgment; provided, however, that nothing in the judgment shall bar or prevent the defendant from appropriately capitalizing or seeking an appropriate tax deduction for restitution in connection with the remediation of bromide claims.

The defendant shall not reference the burden of or the costs associated with compliance with the criminal fines, restitution related to counts of conviction, community service payments, the mitigation obligation, cost of cleanup in

response to the February 2, 2014 release at Dan River Steam Station and funding of the environmental compliance plan in any request or application for a rate increase on its customers.

The defendant shall exercise its best efforts to comply with each and all of the obligations under both the National Environmental Plan and the North Carolina Environmental Plan. Any attempted reliance on the force majeure clause to excuse performance or timely performance of any condition should be exercised by the defendant in accordance with the provisions of the plea agreement.

The special conditions of probation shall hereafter be subject to review by the Court upon petition or motion by the United States Probation Office, the Court-Appointed Monitor, either of the parties, or on its own motion.

Now, it is further ordered that Duke Energy Carolinas shall pay to the United States a special assessment of $625, which is due and payable immediately.

It is further ordered that the defendant make restitution to the following victims in the following amounts. This is as to Duke Energy Carolinas now.

To the City of Virginia Beach for coal ash spill, $63,309.45.

To the City of Chesapeake, Virginia, the amount of $125,069.75.

To the Army Corps of Engineers in Wilmington, North Carolina, $31,491.11.

Any payment made by this defendant shall be divided among the victims named in proportion to their compensable damage.

Payments of restitution shall be made to the Clerk of the Eastern District of North Carolina at its Raleigh headquarters.

It is further ordered that the defendant in this case, Duke Energy Carolinas, shall pay to the United States of America a total fine in the amount of $53,600, which amount shall bear interest at the lawfully prescribed rate until paid. These fines totaling $53,600,000 are allocated as $38 million on Count 1 of Docket 67, $2 million on Count 2 of Docket 67, $9.5 million on Count 3 of Docket 67, and $2.1 million on Count 1 of Docket 68.

I'm reminded a moment ago when I said the total amount of the fines to Duke Energy Carolinas was 53,000, it totals $53,600,000.

Now, payment of the total fine, the numbers I've just stated, shall be made to the Clerk of Court for the Eastern District of North Carolina at 310 New Bern Avenue, Raleigh, NC by 1:00 p.m. tomorrow, Friday, May 15, 2015.

That concludes the statement of the sentence in the case of United States versus Duke Energy Carolinas.

Mr. Probation Officer, do you know of any required changes to further comply with the sentencing law?

MR. WASCO: No, Your Honor. Thank you.

THE COURT: Mr. Cooney, on behalf of the defendant Duke Energy Carolinas, are there any objections to the sentence as just stated by the Court?

MR. COONEY: We have no objection, Your Honor. There is one clarification. Your Honor had a reference about the ability of the company to capitalize into inventory costs that would be incurred regardless of the compliance plan and also to seek rate recovery for costs that would be incurred regardless of the compliance plan here, that's provided for specifically in the plea, and I just wanted to put that in the record.

THE COURT: It's going to be exactly the way it was in the plea.

MR. COONEY: Thank you, Your Honor.

THE COURT: Any objection by the United States to the judgment as stated?

MS. RANGARAJAN: No, Your Honor.

THE COURT: Then by virtue of the authority duly invested in me, I hereby impose upon Duke Energy Carolinas, Inc. the conditions and fines and other matters as just stated by the Court.

Now, I'm required to remind the defendant that if you believe the underlying guilty pleas were somehow involuntary or

if there was other fundamental defects in the proceeding, then you may have a right to appeal. If you believe the judgment as to the probation is unlawful or improper, you may have a right to appeal. If there's a basis for appeal, the appeal must be filed with the Clerk of this Court within 14 days of today.

Mr. Cooney, I request you advise your client of this obligation.

MR. COONEY: I will do, Your Honor. Thank you.

THE COURT: All right. I will now go to the defendant Duke Energy Progress, Inc.

The Court finds based on a thorough review of the joint factual statements of the parties, the plea agreement, the sentencing memoranda, it has sufficient information in the record to meaningfully exercise its sentencing authority in this case; therefore, the preparation of a presentence report is waived after reviewing the joint factual statement and other pertinent information, considering the matters presented here today, and the Court accepts the plea agreement as binding upon the Court.

In this case, Duke Energy Progress, the maximum penalties authorized by law for each of the counts, so that's one count in the 62 case, two counts in the 67 case and one count in the 68 case, the maximum fine in the 62 case is 3 million -- strike that. The fine range, minimum to maximum, is $3,880,000 to $38,800,000 as to Count 1, as to Count 5 and 6

in the 67 case the fine range is $1,887,500 to $18,875,000, and the same as to Count Number 6 in Case 67. In Case 68 the fine range -- that's the Western District, the fine range is from $3,275,000 to $32,750,000. These fine ranges are based on days of violation and so forth.

Now, the Court has considered all of the factors set forth in the various sentencing laws. Now, pursuant to the Sentencing Reform Act of '84 and in accordance with the Supreme Court decision in United States v. Booker, it is the judgment of the Court that the defendant, Duke Energy Progress, Inc., is hereby placed on probation for a term of five years. This term consists of five years on each of the counts in each of the three criminal informations, all such terms to run concurrently. While on probation, the defendant shall not commit another Federal, State or local crime. If the defendant learns of any such violations committed by its agents or employees within the scope of their employment during the term of probation, the defendant shall within five business days notify the United States Probation Office of the violations.

The defendant, Duke Energy Progress, Inc., shall comply with all Federal, State and other regulations regarding coal ash during the period of probation. The defendant shall not have any new notices of violation, notices of deficiency or other criminal or civil or administrative actions with respect to coal ash while on probation. It shall be considered to be a

violation of probation if the defendant receives any new notices of violation, notices of deficiency or other criminal or civil or administrative enforcement actions with respect to coal ash based on conduct, including the failure to act, occurring after the entry of this judgment in which a final assessment, after the conclusions of appeals, is more than $5,000. Any conduct resulting in a final assessment of more than 15 would be presumed to be a material violation.

The Court will not consider it to be a violation of the conditions of probation if the defendant complies with Federal environmental laws when there is a direct conflict between State and Federal environmental laws. The Court will also not deem it a violation of probation if the enforcement action is based upon information disclosed by the defendant in the 2014 Topographical Map and Discharge Assessment and/or its 2014 National Pollutant Discharge Elimination System permit renewal application.

The defendant shall comply with the following additional conditions, and they're very similar to what I previously stated in the Carolinas case, but I'll have to go through them again for the record.

The defendant shall fully cooperate with the United States Probation Office during the period of supervision, including truthfully answering any inquiries by the probation office. The defendant shall provide the

probation office with full access to any of the defendant's operating locations; 10 days notice, prior notice, of any intended change in principal business or mailing address; a notice of material change in the defendant's economic circumstance that may affect the defendant's ability to pay fines or meet financial obligations as set forth in the judgment.

The defendant and its two co-defendants, Duke Energy Carolinas and Duke Energy Business, shall pay for a Court-Appointed Monitor as set forth in Exhibit A of this judgment.

The defendant shall develop, adopt, implement and fund a comprehensive nationwide environmental compliance plan and a comprehensive statewide environmental compliance plan as set out in Exhibit A of the judgment.

The defendant shall adopt, implement and enforce a comprehensive environmental training program for all domestic employees as set forth in Exhibit A of this judgment.

The defendant shall cooperate with the Bromide claims remediation process as detailed in the plea agreement.

The defendant shall identify or establish a position as a compliance officer at the Vice President level or higher within Duke Energy Progress who will liaison with the CAM and the United States Probation Officer as set forth in Exhibit A of the judgment.

The defendant shall ensure that any new, expanded or reopened coal ash or coal ash wastewater impoundment at any facility observed by the defendant are lined.

The defendant shall record appropriate reserves on financial statements for the purpose of recognizing the projected obligation to retire its coal ash impoundments in North Carolina. At the time of the signing of the plea agreement, the obligation as to this defendant was currently estimated at a total of $1.4 billion. Each year during the term of probation, beginning on the date of judgment, and occurring by March 31 of each year thereafter, the defendant shall cause the Chief Financial Officer of Duke Energy Corporation to certify to the Court, the United States Probation Officer or the CAM, and the United States, that the defendant and Duke Energy have sufficient assets reserved to meet the obligation imposed by law or regulation or as may otherwise be necessary to fulfill the defendant's obligation with respect to its coal ash impoundments within the State of North Carolina.

The defendant shall cause its parent holding company, Duke Energy, to record appropriate reserves on its consolidated financial statements for the purpose of recognizing the projected obligation to retire all coal ash impoundments, including those in North Carolina. This obligation is currently estimated at $3.4 billion on Duke Energy's balance

sheet.

The defendant shall, throughout the term of probation, maintain unused borrowing capacity in the amount of $250 million under the Master Credit Facility as security to meet its obligation to close or remediate any coal ash impoundments. The defendant shall certify this capacity to the CAM on an annual basis or more often if required.

The defendant shall make, as set forth in the plea agreement, a community service payment totaling $10.5 million to the National Fish and Wildlife Foundation, a nonprofit organization organized under Federal law. This payment is to be made within 60 days of this judgment.

This is a different one. This is Progress. There was another one under Carolinas a moment ago.

Now, this defendant, Progress, shall also set forth -- as set forth in the plea agreement, pay 5 million to an authorized wetlands mitigation bank or conservation trust for the purchase of riparian/wetland, riparian land, or restoration equivalent located in the Broad River Basin, the French Broad River Basin, Cape Fear River Basin, Catawba River Basin, Dan River Basin, Yadkin-Pee Dee River Basin, Neuse River Basin, Lumber River Basin, Roanoke River Basin, as set forth in Exhibit A of the judgment. This mitigation payment is in addition to and does not replace Duke Energy's commitment to fund its $10 million Water Resources Fund for environmental and

philanthropic projects along lakes and rivers in the Southeast, or the required $5 million payment by Duke Energy Carolinas in the related case.

This defendant also will have five business days after entry of this judgment to place a full-page (132 column inches) public apology in at least two national newspapers and a major newspaper in each of the Raleigh, Greensboro and Charlotte, North Carolina papers. The language of the public apology has been agreed upon by the parties and is contained in Exhibit C of the plea agreement. Proof of such apology shall be provided to the United States Probation Officer within seven days of being placed.

The defendant shall not seek or take credit for any fine, restitution, community service payment, mitigation payment, or funding of environmental compliance plans, including the costs associated with the hiring or payment of staff or consultants to the CAM, in any related civil or administrative proceedings, including but not limited to the National Resource Damage Assessment process.

The defendant shall not capitalize into inventory or basis or take as a tax deduction in the United States or elsewhere any portion of the monetary payments, including fine, restitution, community service, mitigation, or funding of the environmental compliance plans, imposed as a part of this judgment; provided, however, that nothing in this judgment

shall bar or prevent the defendant from appropriately capitalizing or seeking an appropriate tax deduction for restitution in connection with the remediation of bromide and for costs which would have been incurred by the defendant regardless of the environmental compliance and the like.

The defendant shall not reference the burden of, or the cost associated with, compliance with the criminal fines, restitution, community service payments, mitigation, costs of cleanup, and funding of the environmental compliance plans, in any request or application for a rate increase on its customers; provided, however, that nothing in the judgment shall bar or prevent the defendant from seeking appropriate recovery for restitution in connection with the remediation of bromide claims as set forth.

The defendant shall exercise its best efforts to comply with each and all of the obligations under the North Carolina and the national environmental plan. Any attempted reliance on the force majeure clause to excuse performance or timely performance of any condition shall be -- should be exercised by the defendant in accordance with the provisions of the plea agreement.

The special conditions of probation shall hereafter be subject to review by the Court upon petition or motion by any of the parties.

It is ordered that the defendant shall pay the

special assessment in this case, Energy Progress, of $500. That will be in four counts of $125 each.

Although provisions of the Victim and Witness Protection Plan are applicable, as there are no identifiable victims as relates to these particular issues outstanding, it is ordered that the defendant shall pay to -- now, it is further ordered that the defendant, Duke Energy Progress, shall pay to the United States a total fine of $14,400,000, which amount shall bear interest at the lawful prescribed rate. These fines are imposed in Docket 62, Count 1 at $3,900,000 and Docket 67 at Count 5 and Count 6 each at $3.5 million, and in Docket 68 on Count 2 at $3.5 million, for a total of, as just stated, $14,400,000 to Duke Energy Progress.

The Court notes for the record the fine imposed on each count as sought by the Government and agreed to by the defendant is within the fine range established by the statute in each count.

Payment of this fine shall be made to the Clerk of the Eastern District of North Carolina at its Raleigh headquarters by 1:00 p.m. on Friday, May 15, that is tomorrow.

That concludes the statement of the sentence as to Duke Energy Progress.

Mr. Probation Officer, do you know of any required changes to further comply with the sentencing laws?

MR. WASCO: No, Your Honor. Thank you.

THE COURT: Mr. Cooney, any objections?

MR. COONEY: No, just the same issue I noted for Duke Energy Carolinas, and it's going to be in compliance with the plea agreement, on the rate increases.

THE COURT: Correct.

Madam U.S. Attorney, any objections?

MS. RANGARAJAN: No objections, Your Honor.

THE COURT: All right. We've got one more.

I look over to you folks, that's always where my jury sits and that's who I try to talk to. I don't care about the rest of you people. So if I look over there, then look at y'all, I say, well, that isn't my jury. Our jury here comes from the Outer Banks and Halifax County and fishermen down from Carteret County, and you guys don't look like fishermen from Carteret County.

Appellate rights, Duke Energy Progress. The judgment I've just passed, I am required to state for the record that if the defendant Duke Energy Progress believes that the underlying guilty plea was somehow involuntary or if there was some other fundamental defect in the proceeding, they may have a right to appeal. If they believe the fine range and the probation terms as stated by the Court and issued by the Court are incorrect, they may have the right to appeal. In any extent, you have 14 days from today to file your notice of appeal with the Clerk of this Court. Mr. Cooney, do you understand?

MR. COONEY: I do, Your Honor, and will discuss that with my client.

THE COURT: Okay. Now, finally, Duke Energy Business Services.

The Court finds based on a thorough review of the joint factual statement, the plea agreements, the sentencing memoranda, that it has sufficient information in the record to exercise its sentencing authority and to impose sentence in this case without a presentence report.

The Court has considered all of the factors set forth in 18 U.S. Code Section 3553 and 3572, and pursuant to the Sentencing Act of 1984 and in accordance with the Supreme Court decision in United States v. Booker, it is the judgment of the Court that the defendant Duke Energy Business Services, LLC is hereby placed on probation for a term of five years. This term consists of five years on Count 1 of Docket 62, five years on Count 1 through 6 of Docket 67 and five years on Counts 1 and 2 of Docket 68, all to run concurrently for a total probation term of five years. While on probation the defendant shall not commit another Federal, State or local crime. If the defendant learns of any such violations committed by its agents or employees within the scope of employment, it shall notify the probation office within five business days.

The defendant shall comply with all Federal, State and local regulations relating to coal ash during the period of

probation. The defendant shall not have any new notices of violation. It shall be considered a violation of probation if the defendant receives any new notice or notices of deficiency or other criminal or civil or administrative enforcement actions with respect to coal ash based on conduct, including the failure to act, occurring after entry of this judgment in which the final assessment after the conclusion of appeals of more than $5,000. Any conduct resulting in a final assessment of more than 15 shall be presumed to be a material violation.

The Court will not consider there to be a violation of probation if the defendant complies with Federal environmental laws. The Court will not deem it a violation of probation if the enforcement action is based upon information already disclosed in some of the filings.

The defendant shall cooperate fully with U.S. probation during the period of supervision, including truthfully answering any inquiries. The defendant shall provide the probation officer with the following: Full access to any of the defendant's operating locations; 10 days notice of changes of address; any notice of material change in the defendant's economic circumstance that might affect the defendant's ability to pay fines or meet financial obligations.

The defendant and its co-defendants, Carolinas and Progress, shall pay for a Court-Appointed Monitor as set forth in Exhibit A of this judgment. Exhibit A has been provided to

the parties and they have agreed to the conditions contained therein.

The defendant shall develop, adopt and fund a comprehensive nationwide environmental compliance plan and a comprehensive statewide environmental compliance plan as set forth in Exhibit A.

The defendant shall adopt, implement and enforce a comprehensive environmental training program for all domestic employees as set forth in Exhibit A.

The defendant shall cooperate with the Bromide claim remediation process as detailed in the plea agreement.

The defendant shall identify or establish a position as a compliance officer at the Vice President level of this corporation, Business Services, who will liaison with the CAM and the United States Probation Office as required in Exhibit A.

The defendant shall ensure that any new, expanded, or reopened coal ash or coal ash wastewater impoundments at any facilities owned by the defendants are lined. At such impoundments the defendant shall ensure there are no unpermitted discharges of coal ash or coal ash wastewater from any engineered, channelized or naturally occurring seeps. Coal ash and wastewater impoundments will be subject to inspection by the CAM and/or United States Probation Officers at any time.

The defendant shall along with the other defendants place a newspaper ad in Raleigh, Greensboro and Charlotte and notify the Probation Office within seven days of the ad.

The defendant shall not seek or take credit for any fine, restitution, community service and so forth in any related civil or administrative proceeding, including but not limited to the National Resources Damage Assessment Process.

The defendant shall not capitalize into inventory or basis or take as a tax deduction in the United States or elsewhere any portion of the monetary payments (fines, restitution, community service, mitigation, or funding of the environmental compliance plans) imposed as a part of this judgment; provided, however, that nothing in the judgment shall bar or prevent the defendant from appropriately capitalizing or seeking an appropriate tax deduction for restitution in connection with the remediation of bromide or for costs which would have been incurred by the defendant regardless of environment compliance.

The defendant shall not reference the burden or the costs associated with compliance with the criminal fines, restitution related to counts of conviction, community service payments, the mitigation, cost of cleanup in response to the Dan River issue, and funding of the environmental compliance plan in requests or applications for a rate increase to its customers; provided, however, nothing in this judgment shall

bar or prevent the defendant from seeking appropriate recovery for restitution in connection with the remediation of bromide.

The defendant shall exercise its best efforts to comply with all its obligations under both the North Carolina and the national environmental plans. Any attempted reliance on force majeure, acts of God, clause to excuse performance or timely performance of any condition of the national or North Carolina environment plan should be exercised by the defendant in accordance with the provisions in the plea agreement.

The special conditions of probation shall hereafter be subject to review by the Court upon petition or motion by the United States, the CAM or either of the parties on its own motion.

The special assessment, that's the $125 per count, is assessed against Duke Energy Business Services in the amount of $1,125.

The Court finds that in light of the total criminal penalties of $68 million being paid by its co-defendants, Duke Energy Progress, Inc. and Duke Energy Carolinas, and the overall corporate structure as it relates to this defendant, no further fine is necessary as to Duke Energy Business Services, Inc., therefore there is no fine set forth against Duke Energy Business Services, Inc.

That concludes the statement of the sentences.

Mr. Probation Officer, do you know of any required change to further comply with the United States sentencing standards?

MR. WASCO: Your Honor, just for the record, if the Court would consider making the appropriate statements as to the fine ranges per count.

THE COURT: For the record, the range, the fine range for Business Energy Services, Business Services, on the 62 case, the Eastern District case, all three, they're changed in all three of them, Eastern, Middle and West, the probation term in every count is up to five years, and then the fine range in the Eastern District, that's 62, it will be $3,880,000 to $38,800,000. The fine range in 67 would have been, Count 1, $17,500 to $38,455,850. Count 2, $1,910,000 to $19,100,000. Count 3, $1,957,500 to $19,575,000. The same for Count 4. And then Count 5 and 6 are each $1,887,500 to $18,875,500. And then in the Western District, Count 1 was $1,957,500 to $19,575,000, and Count 2 was $3,275,000 to $32,750,000.

Does that satisfy you, Mr. Probation Officer?

MR. WASCO: Yes, sir. Thank you.

THE COURT: All right. Now, there is no fine to Duke Energy after the fines -- to Business, the fines are to the two others, the major.

That concludes the -- okay. I now have to ask.

MR. COONEY: No objections, Your Honor.

THE COURT: Do you have any objection to the sentence as stated for Duke Business Services?

MR. COONEY: No, Your Honor.

THE COURT: Madam U.S. Attorney?

MS. RANGARAJAN: No, Your Honor.

THE COURT: Then by virtue of the authority duly invested in me, I impose upon Duke Energy Business Services the judgment that I have just stated, and that same statement would be applicable to all two of the others, and that concludes the sentencing part.

MR. COONEY: Your Honor, for the record, I will advise my client of their appellate rights as well.

THE COURT: I got a lot of help here this afternoon. I guess I need it.

Anyway, we will get the judgments, the official judgments done, because I know Duke wants the judgment before you pay the fine tomorrow, don't you?

You will get them done this afternoon, and probably within the next hour; is that right, Lisa?

THE CLERK: Maybe within the next couple. It will be done today.

THE COURT: It will be done today.

Now, I do want to echo what both counsel said. Mr. Cooney made a very beautiful statement about how cooperative and helpful the United States and how honorable

they had been, the attorneys have been with him, and Ms. Rangarajan said the same thing back to him, and I want to say that I've been as the Court dealing with this matter now for, I don't know, 60 days or so, it's taken about half my time, I don't know what it's going to be like for the next five years, but I do want to acknowledge that no one could have been more cooperative than -- well, starting with the Government team, Ms. Rangarajan, Ms. Pettus, Ms. Blondel right here; and then Mr. Cooney and Claire Rauscher and David Buente and Karen Popp, you've all been very cooperative and helpful and very professional.

It would have been exceedingly different -- I've been sitting here 28 years and I've had some very, very fine lawyers, but I don't know that I've had any more fine than the seven or eight of you, and I've had a whole lot of sorry ones, but I'm not going to -- you all are certainly well past that, but I want to thank you for your cooperation.

I also -- we discussed yesterday afternoon amongst counsel and the Court that there were no remaining documents to remain sealed after today. Is that still the position of the United States?

MS. RANGARAJAN: Your Honor, the Government had moved to unseal. It's my understanding that the defendants no longer object.

THE COURT: No longer object.

MS. RANGARAJAN: That is correct.

THE COURT: Okay. You're just trying to make the record clear, you've been wanting to do this for a while, haven't you?

MS. RANGARAJAN: Yes, sir.

THE COURT: And the old Judge just wouldn't cooperate with you.

Here is the order, Madam Clerk. Everything is unsealed in this case.

Now if we can go back to my speech, this is a complex case and it will take some effort. I'm impressed with the statements made by the lawyers, but I'm particularly impressed with Ms. Janson's statement. I believe that Duke does want to help and cooperate, and I know you're -- I think you want to, and I believe you, but you're going to have to because they're going to force you to, and that's their responsibility, and then I've got to supervise it all, but we will try to work together and go from there.

I checked the other day. So far as I can ascertain, in the history of our Court, certainly in the Eastern District, I think for the entire state, this is the largest criminal fine that has ever been imposed, and we've had a Federal District Court in the State of North Carolina since sometime -- I think it was March of 1790. That's 225 years.

Finally, I am not a judge that routinely lectures the

defendants and I don't plan to begin that today. I tried to do my job in this case. That completes this matter.

Is there anything else in this matter for today that the United States desires to be addressed? Ms. Rangarajan?

MS. RANGARAJAN: No, Your Honor. Thank you, sir.

THE COURT: Anything the defendants, any of the defendants, want to addresses today, Mr. Cooney?

MR. COONEY: No, Your Honor.

THE COURT: Thank you all.

Marshal, that concludes this hearing and the Court will be adjourned.

- - - - -

(Proceedings concluded at 3:01 p.m.)

- - - - -

C E R T I F I C A T E

This is to certify that the foregoing transcript of proceedings taken in a plea to criminal information and sentencing hearing in the United States District Court is a true and accurate transcript of the proceedings taken by me in machine shorthand and transcribed by computer under my supervision, this the 4th day of June, 2015.

/S/ DAVID J. COLLIER

DAVID J. COLLIER
OFFICIAL COURT REPORTER

Hart Exhibit 3
Docket No. E-7, Sub 1214

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA
WESTERN DIVISION
No. 5:15-CR-62-H
No. 5:15-CR-67-H
No. 5:15-CR-68-H

UNITED STATES OF AMERICA	)	
	)	
v.	)	JOINT FACTUAL STATEMENT
	)	
DUKE ENERGY BUSINESS SERVICES LLC	)	
DUKE ENERGY CAROLINAS, LLC	)	
DUKE ENERGY PROGRESS, INC.	)	

I. INTRODUCTION

Defendants Duke Energy Business Services LLC ("DUKE ENERGY BUSINESS SERVICES"), Duke Energy Carolinas, LLC ("DUKE ENERGY CAROLINAS"), and Duke Energy Progress, Inc. ("DUKE ENERGY PROGRESS"),(collectively referred to as "Defendants") and the United States of America, by and through the United States Attorneys for the Eastern District of North Carolina, the Middle District of North Carolina and the Western District of North Carolina and the Environmental Crimes Section of the United States Department of Justice (collectively referred to herein as "the United States" or "the government"), hereby agree that this Joint Factual Statement is a true and accurate statement of the Defendants' criminal conduct and that it provides a sufficient basis for the Defendants' pleas of guilty to the following charging documents and the terms of the Plea Agreements:

United States v. Duke Energy Business Services, LLC, and Duke Energy Progress, Inc., No. 5:15-CR-62-H;

United States v. Duke Energy Business Services, LLC, Duke Energy Carolinas, LLC, and Duke Energy Progress, Inc., No. 5:15-CR-67-H; and

United States v. Duke Energy Business Services, LLC, Duke Energy Carolinas, LLC, and Duke Energy Progress, Inc., No. 5:15-CR-68-H.

The charges from the Middle District of North Carolina and the Western District of North Carolina have been transferred to the Eastern District of North Carolina for purposes of plea pursuant to Fed. R. Crim. P. 20. The Defendants' guilty pleas are to be entered pursuant to the Plea Agreements signed and dated this same day.

II. OVERVIEW AND BACKGROUND

Dan River Steam Station - Middle District of North Carolina

1. From at least January 1, 2012, DUKE ENERGY CAROLINAS and DUKE ENERGY BUSINESS SERVICES failed to properly maintain and inspect the two stormwater pipes underneath the primary coal ash basin at the Dan River Steam Station in Eden, North Carolina. On February 2, 2014, one of those pipes failed, resulting in the discharge of approximately 27 million gallons of coal ash wastewater and between 30,000 and 39,000 tons of coal ash into the Dan River. The coal ash travelled more than 62 miles downriver to the Kerr Lake Reservoir on the border of

North Carolina and Virginia. Video camera inspections of the other pipe, conducted in the aftermath of the spill, revealed that the other pipe had also deteriorated, allowing coal ash wastewater to leak into the pipe, and that DUKE ENERGY CAROLINAS and DUKE ENERGY BUSINESS SERVICES had not taken appropriate action to prevent unauthorized discharges from the pipe.

Cape Fear Steam Electric Plant -
Middle District of North Carolina

2. DUKE ENERGY PROGRESS and DUKE ENERGY BUSINESS SERVICES also failed to maintain the riser structures in two of the coal ash basins at the Cape Fear Steam Electric Plant, resulting in the unauthorized discharges of leaking coal ash wastewater into the Cape Fear River.

Asheville, Riverbend, & Lee Steam Stations -
Eastern and Western Districts of North Carolina

3. Additionally, DUKE ENERGY CAROLINAS' and DUKE ENERGY PROGRESS's coal combustion facilities throughout North Carolina allowed unauthorized discharges of pollutants from coal ash basins via "seeps" into adjacent waters of the United States. Three of those facilities include the Asheville Steam Electric Generating Plant, the H.F. Lee Steam Electric Plant, and the Riverbend Steam Station. At those facilities, discharges from naturally occurring seeps were channeled by DUKE ENERGY CAROLINAS and DUKE ENERGY BUSINESS SERVICES to flow through

engineered drains and ditches into waters of the United States without obtaining or maintaining the necessary permits.

4. The Defendants' conduct violated the Federal Water Pollution Control Act (commonly referred to as the "Clean Water Act," or "CWA"). 33 U.S.C. §§ 1251 et seq. More specifically, the criminal investigation, conducted out of the Eastern District of North Carolina, revealed the following:

DEFENDANTS AND CORPORATE STRUCTURE

5. Duke Energy Corporation is an energy company headquartered in Charlotte, North Carolina.

6. Duke Energy Corporation is a holding company whose direct and indirect subsidiaries operate in the United States and Latin America. Duke Energy Corporation's wholly-owned subsidiaries include: DUKE ENERGY CAROLINAS; Progress Energy, Inc. ("Progress Energy"); DUKE ENERGY PROGRESS; and DUKE ENERGY BUSINESS SERVICES.

7. DUKE ENERGY CAROLINAS, a North Carolina limited liability company, is a regulated public utility primarily engaged in the generation, transmission, distribution and sale of electricity in portions of North Carolina and South Carolina.

8. Progress Energy, a North Carolina corporation headquartered in Raleigh, North Carolina, is a holding company which holds, among other entities, DUKE ENERGY PROGRESS.

9. DUKE ENERGY PROGRESS, a North Carolina corporation, is a regulated public utility primarily engaged in the generation, transmission, distribution and sale of electricity in portions of North Carolina and South Carolina. Prior to the July 2, 2012, merger between Duke Energy Corporation and Progress Energy, Inc., DUKE ENERGY PROGRESS was known as Carolina Power & Light, Inc., d/b/a Progress Energy Carolinas.

10. "Progress Energy Carolinas" will refer to DUKE ENERGY PROGRESS before the merger.

11. DUKE ENERGY BUSINESS SERVICES provides shared services to all of Duke Energy Corporation's operating utilities nationwide, including: Legal Counsel; Central Engineering & Services; Environmental, Health & Safety; Ethics and Compliance; and Coal Combustion Products.

12. During the time period relevant to the charges, within the State of North Carolina, the Defendants and/or their predecessors owned and operated the following facilities with coal ash basins:

FACILITY	OWNER/ OPERATOR	NUMBER OF COAL ASH BASINS	ADJACENT WATERS OF THE UNITED STATES	FEDERAL JUDICIAL DISTRICT
Allen Steam Station (Gaston County)	Duke Energy Carolinas	2	Lake Wylie & Catawba River	WDNC
Asheville Steam Electric Generating Plant (Buncombe County)	Duke Energy Progress	2	French Broad River	WDNC

Belews Creek Steam Station (Stokes County)	Duke Energy Carolinas	1	Belews Lake & Dan River	MDNC
Buck Steam Station (Rowan County)	Duke Energy Carolinas	3	Yadkin River & High Rock Lake	MDNC
Cape Fear Steam Electric Plant (Chatham County)	Duke Energy Progress	5	Cape Fear River	MDNC
Cliffside Steam Station (Rutherford & Cleveland Counties)	Duke Energy Carolinas	3	Broad River	WDNC
Dan River Steam Station (Rockingham County)	Duke Energy Carolinas	2	Dan River	MDNC
H.F. Lee Steam Electric Plant (Wayne County)	Duke Energy Progress	5	Neuse River	EDNC
L.V. Sutton Electric Plant (New Hanover County)	Duke Energy Progress	2	Cape Fear River & Sutton Lake[1]	EDNC
Marshall Steam Station (Catawba County)	Duke Energy Carolinas	1	Lake Norman	WDNC
Mayo Steam Electric Plant (Person County)	Duke Energy Progress	1	Mayo Lake	MDNC
Riverbend Steam Station (Gaston County)	Duke Energy Carolinas	2	Catawba River	WDNC
Roxboro Steam Electric Plant (Person County)	Duke Energy Progress	2	Hyco River	MDNC
Weatherspoon Steam Electric Plant (Robeson County)	Duke Energy Progress	1	Lumber River	EDNC

[1] While the parties agree that Sutton Lake receives wastewater from the L.V. Sutton Electric Plant, the status of Sutton Lake as a "water of the State" or "water of the United States" is part of ongoing federal civil litigation. See Cape Fear River Watch, Inc. v. Duke Energy Progress, Inc., 25 F.Supp.3d 798, 808-809 (2014). The Defendants do not concede that Sutton Lake is a jurisdictional water in this Joint Factual Statement.

COAL COMBUSTION PLANTS AND COAL ASH BASINS

13. Power plants that generate electricity through the combustion of coal create a number of waste byproducts. Among those waste byproducts are "coal combustion residuals" or "CCRs." CCRs include fly ash, bottom ash, coal slag, and flue gas desulfurized gypsum. Fly ash and bottom ash are both commonly referred to as "coal ash." Coal ash contains various heavy metals and potentially hazardous constituents, including arsenic, barium, cadmium, chromium, lead, manganese, mercury, nitrates, sulfates, selenium, and thallium. Coal ash has not been defined, itself, as a "hazardous substance" or "hazardous waste" under federal law, although some constituents of coal ash may be hazardous in sufficient quantities or concentrations.

14. Coal ash basins (also known as "coal ash ponds," "coal ash impoundments," or "ash dikes") may be part of the waste treatment system at coal-fired power plants. Historically, the Defendants' coal ash basins were unlined earthen impoundments and typically operated as follows: Coal ash was mixed with water to form slurry. The coal ash slurry was carried through sluice pipe lines to the coal ash basin. Settling occurred in the coal ash basin, in which particulate matter and free chemical components separated from the slurry and settled at the bottom of the basin. Less contaminated water remained at the surface of the basin, from which it could eventually be

discharged if authorized under relevant law and permits. In some instances, such as the Dan River Steam Station, water at the surface of the primary basin, flowed into a secondary basin, where further settling and treatment occurred before its discharge into a water of the United States.

15. Coal ash basins generally continued to store settled ash and particulate material for years or decades. From time to time, the Defendants dredged settled coal ash from the basins, storing the ash in dry stacks on plant property.

16. A total of approximately 108 million tons of coal ash are currently held in coal ash basins owned and operated by the Defendants in North Carolina. Duke Energy Corporation subsidiaries also operate facilities with coal ash basins in South Carolina (approximately 5.99 million tons of coal ash), Kentucky (approximately 1.5 million tons of coal ash), Indiana (approximately 35.6 million tons of coal ash), and Ohio (approximately 5.9 million tons of coal ash).

17. Each of the Defendants' facilities in North Carolina with coal ash basins sought and received permits to discharge treated coal ash wastewater through specified permitted outfalls into waters of the United States, including those listed in paragraph 12.

III. LEGAL AND REGULATORY BACKGROUND

CLEAN WATER ACT

18. The Clean Water Act is a federal law enacted to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a).

19. The Act prohibits the discharge of any pollutant into waters of the United States except in compliance with a permit issued pursuant to the CWA under the National Pollutant Discharge Elimination System ("NPDES") by the United States Environmental Protection Agency ("EPA") or by a state with an approved permit program. 33 U.S.C. §§ 1311(a) and 1342.

20. The Act defines "discharge of a pollutant" as "the addition of any pollutant to navigable waters from any point source." 33 U.S.C. § 1362(12). The term "pollutant" includes a wide range of materials, including solid waste and industrial waste. 33 U.S.C. § 1362(6). Coal ash and coal ash wastewater are pollutants.

21. A "point source" is a "confined and discrete conveyance, including . . . any pipe . . . from which pollutants are or may be discharged." 33 U.S.C. § 1362(14). Pipes and channelized ditches conveying stormwater or wastewater to surface waters are point sources.

22. "Navigable waters" are defined in the Act as "waters of the United States." 33 U.S.C. § 1362(7). "Waters of the United States" include rivers and streams "which would affect or could affect interstate or foreign commerce including any such waters . . . [w]hich are or could be used by interstate or foreign travelers for recreational or other purposes . . . [and the] [t]ributaries of [such] waters." 40 C.F.R. § 122.2. The following rivers are "waters of the United States": (1) Broad River; (2) French Broad River; (3) Cape Fear River; (4) Catawba River; (5) Dan River; (6) Yadkin-Pee Dee River; (7) Neuse River; (8) Lumber River; (9) Roanoke River; (10) Hyco River; (11) all tributaries of those rivers, including the South Fork of the Catawba River and Crutchfield Branch; and (12) all lakes and reservoirs exchanging water with those rivers, including, but not limited to, Belews Lake, Lake Norman, Mayo Lake, High Rock Lake, Sutton Lake,[2] and Kerr Reservoir.

23. Permits regulating discharges of pollutants (other than dredge and fill material) to waters of the United States are issued under the NPDES permit program. See 33 U.S.C. § 1342. Under the NPDES permit program, persons or entities who wish to discharge one or more pollutants must apply for an permit from the proper state or federal agency. See 40 C.F.R. § 122.21. A "permit" is "an authorization, license, or equivalent

[2] See note 1, supra.

control document issued by EPA or an 'approved State' to implement the requirements of [the CWA]." "Permit" does not include a "draft permit" or a "proposed permit" which has not yet been the subject of final agency action. 40 C.F.R. § 122.2 (emphasis added). Thus, an application for a permit does not provide the applicant with authority or permission to discharge under the Act.

24. States can seek approval from EPA to administer and enforce the CWA NPDES permit program. 33 U.S.C. § 1342(b). EPA's approval of a state program does not affect the United States' ability to enforce the Act's provisions. 33 U.S.C. § 1342(i).

25. On October 19, 1975, EPA approved the State of North Carolina's application to administer the NPDES Program. 40 Fed. Reg. 51493-05 (Nov. 5, 1975).

26. NPDES permits typically contain, among other things, effluent limitations; water quality standards; monitoring and reporting requirements; standard conditions applicable to all permits; and special conditions where appropriate. See 33 U.S.C. § 1342; 40 C.F.R. §§ 122.41-122.50.

27. All of DUKE ENERGY CAROLINAS' and DUKE ENERGY PROGRESS's facilities with coal ash basins in North Carolina are required to comply with the following Standard Conditions,

incorporated into their NPDES permit. See also 40 C.F.R. § 122.41.

a. The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit with a reasonable likelihood of adversely affecting human health or the environment. Standard Conditions, Section B(2) ("General Conditions").

b. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Standard Conditions, Section C(2) ("Operation and Maintenance of Pollution Controls").

IV. FACTUAL BASIS FOR PLEA AND RELEVANT CONDUCT

DAN RIVER STEAM STATION

28. DUKE ENERGY CAROLINAS owns and operates the Dan River Steam Station ("DAN RIVER"), located on the Dan River in the Roanoke River Basin near Eden, North Carolina. DAN RIVER began operating in 1949 as a coal combustion plant. The coal combustion unit at DAN RIVER was retired in 2012. DUKE ENERGY CAROLINAS now operates a combined cycle natural gas facility to generate steam and electricity at DAN RIVER.

29. In 1956, the first coal ash basin at DAN RIVER was constructed to store existing and future coal ash. This basin is commonly referred to as the "Primary Ash Basin."

30. Two stormwater pipes run under the Primary Ash Basin: a 48-inch stormwater pipe and a 36-inch stormwater pipe. Both

were designed to carry stormwater from the site to the Dan River.

31. The 48-inch stormwater pipe predates the Primary Ash Basin. As installed in 1954, the 48-inch stormwater pipe was composed of galvanized corrugated metal pipe ("CMP").

32. From 1968 to 1969, the Primary Ash Basin was expanded over the original outfall of the 48-inch stormwater pipe. When the Primary Ash Basin was expanded, the 48-inch stormwater pipe was extended using reinforced concrete. After the expansion, the 48-inch stormwater pipe was a total of 1130 feet in length, of which approximately 786 feet was corrugated metal pipe and approximately 344 feet was reinforced concrete pipe ("RCP").

33. The 36-inch stormwater pipe is composed of reinforced concrete pipe that is approximately 600 feet in length.

34. Between 1976 and 1977, the expanded Primary Ash Basin was divided to form a second basin, commonly referred to as the "Secondary Ash Basin."

35. The Primary Ash Basin has a surface area of approximately 27 acres and a total storage capacity of approximately 477 acre-feet (or 155,431,132 gallons). The Secondary Ash Basin has a surface area of approximately 12 acres and a total storage capacity of approximately 187 acre-feet (or 60,934,277 gallons). In 2013, the basins contained a total of

approximately 1,150,000 cubic yards (or 232,270,130 gallons) of coal ash.

36. In a 2009 EPA Dam Safety Assessment, it was noted that the Primary and Secondary coal ash basins were:

> Classified as a significant hazard potential structure due to the environmental damage that would be caused by misoperation or failure of the structure.

DAN RIVER STEAM STATION NPDES PERMIT

37. On January 31, 2013, the State of North Carolina, through its Department of Environment and Natural Resources ("DENR") - Division of Water Resources ("DWR"), issued a new NDPES permit to DUKE ENERGY CAROLINAS. Effective March 2013, NPDES Permit NC0003468 ("the Dan River Permit"), and authorized the discharge of wastewater from specified outfalls at DAN RIVER.

38. The Dan River Permit required, among other things, that the facility meet the dam design and dam safety requirements set forth in North Carolina regulations at 15A NCAC 2K.

39. Pursuant to 15A NCAC 2K.0301, dams such as the Primary Ash Basin at DAN RIVER are subject to annual safety inspections by state authorities.

40. In 2006, DUKE ENERGY CAROLINAS, with the assistance of DUKE ENERGY BUSINESS SERVICES, applied for a NDPES stormwater permit for the 48-inch and the 36-inch pipes. As of February 2, 2014, DENR had not issued DUKE ENERGY CAROLINAS an individual or general NDPES stormwater permit for either the 48-inch or 36-inch pipe.

41. A NPDES stormwater permit is different than the NPDES permit issued for the discharge of wastewater from a treatment system. Stormwater permits generally do not allow the discharge of wastewater or particulates from coal ash basins or other industrial processes.

42. Neither the 48-inch nor the 36-inch stormwater pipe was a permitted outfall under the Dan River permit for wastewater. Neither DUKE ENERGY CAROLINAS nor any predecessor received authorization pursuant to the CWA and NPDES program to discharge wastewater from the coal ash basins or coal ash stored in those basins from either the 48-inch or 36-inch stormwater pipe under the Primary Coal Ash Basin at DAN RIVER.

1979 DOCUMENTED PROBLEMS WITH STORMWATER PIPES

43. In 1979, DUKE ENERGY CAROLINAS (at that time called Duke Power Company) inspected the 48-inch stormwater pipe through its Design Engineering and Station Support group. Although no major leaks were identified, engineers noted water

leaking into the pipe. Repairs to the 48-inch stormwater pipe were undertaken in response to this inspection.

44. Also in 1979, the Design Engineering and Station Support group inspected the 36-inch stormwater pipe. Twenty-two joints in the 36-inch pipe were noted for major leaks. DUKE ENERGY CAROLINAS/Duke Power Company employees recommended that the company repair the leaks or reroute the drain lines, noting that the discharges could be violations of EPA regulations. Repairs to the 36-inch stormwater pipe were undertaken in response to this inspection.

INSPECTIONS OF DAN RIVER COAL ASH BASINS AND DUKE ENERGY'S RESPONSE TO RECOMMENDATIONS

45. Pursuant to the requirements of North Carolina's dam safety laws, from 1981 through 2007, DUKE ENERGY CAROLINAS/Duke Power Company hired consultants to perform inspections of the coal ash basins at DAN RIVER every five years. The consultants generated reports containing their observations and recommendations that were provided to and reviewed by DUKE ENERGY CAROLINAS/Duke Power Company. In the same time period and pursuant to the same laws, DUKE ENERGY CAROLINAS/Duke Power Company performed its own annual inspections of the coal ash basins. DUKE ENERGY CAROLINAS/Duke Power Company also performed less-detailed monthly inspections of the coal ash basins.

46. In 1981, Engineering Firm #1 conducted the first of five independent inspections of DAN RIVER's ash basins. The report clearly identified the 48-inch pipe as part CMP/part RCP and the 36-inch pipe as RCP. **(See Appendix, Diagram 1).**

47. The 1981 report made the following recommendation, among others:

> The culverts which pass beneath the primary basin may become potential sources of problems, particularly as they age. As noted previously, there seemed to be more water leaving the 52/36-inch culvert than entering it. It is recommended that within the next several months the flow rate at each of the culverts be established, then checked at 6-month intervals thereafter. If there is a significantly greater flow of water leaving the pipes than entering them, the pipes should be inspected for leakage, as was done in 1979, and any needed repairs implemented.

48. The original schematic drawings in the 1981 report were maintained on site at DAN RIVER.

49. A 1984 Annual Inspection report prepared by DUKE ENERGY CAROLINAS/Duke Power Company recommended that "[f]low in the culverts beneath the primary basin should continue to be monitored at six month intervals" and that "[t]he corrugated metal pipe at the west end of the basin should be monitored in future inspections for further damage from seepage flow."

50. A 1985 Annual Inspection report prepared by DUKE ENERGY CAROLINAS/Duke Power Company clearly identified the 48-inch stormwater pipe as CMP. At least one of the engineers who participated in the 1985 annual inspection continues to work for

DUKE ENERGY BUSINESS SERVICES, although currently in a different capacity, and, in fact, conducted two inspections of the Primary and Secondary Ash Basins in 2008.

51. In 1986, Engineering Firm #1 conducted the "Second Five-Year Independent Consultant Inspection of the Ash Dikes" at DAN RIVER. The report clearly identified the 48-inch pipe as part CMP/part RCP and the 36-inch pipe as RCP. Employees of DUKE ENERGY CAROLINAS/Duke Power Company accompanied the consultant during field inspections.

52. The 1986 report repeated the recommendation noted in 1981:

> The monitoring program appears adequate, except it would be desirable to quantitatively (rather than qualitatively) monitor the inflow and outflow at the 52/36-inch diameter culvert, as recommended in the 1981 inspection report, to check for joint leakage. It would also be desirable to do quantitative monitoring of inflow and outflow of the 48-inch diameter culvert that also passes beneath the ash basin; part of this culvert is constructed of corrugated metal pipe which would be expected to have less longevity of satisfactory service than the reinforced concrete pipes.
>
> . . .
>
> It is recommended that quantitative monitoring of inflow and outflow be done at the culverts which pass under the ash basin to check for potential leakage. It is recommended that this monitoring be done at 6-month intervals. If there is a significant difference between inflow and outflow, or whenever there is some cause to suspect leakage, the inside of the culverts should be inspected for leakage.

53. In the 1986 Annual Inspection report, engineers for DUKE ENERGY CAROLINAS/Duke Power Company asked the DAN RIVER personnel to perform the following tasks:

> Quantitatively monitor the inflow and outflow at the two culverts that pass under the ash basin. Instructions are provided on the attached form and tables. Monitoring should begin within thirty days after the installation of V-notched weirs at the inlets and continue at six-month intervals. Random tests at various depths of flow should be made using a bucket and stop watch to verify flow rates given in the attached tables before beginning the monitoring schedule. Results of these tests should be transmitted to Design Engineering.

54. DUKE ENERGY CAROLINAS did not install V-notched weirs at the inlets. Flow monitoring, while apparently performed between 1991 and 1998, was not reported on the requested forms.

55. In 1991, Engineering Firm #2 performed the Third Five-Year Independent Consultant Inspection of the ash basins at DAN RIVER. The report noted that the two stormwater pipes passed under the Primary Ash Basin, but incorrectly identified the entire length of the 48-inch pipe as RCP. During the review process and prior to submission to the North Carolina Utilities Commission, engineers for DUKE ENERGY CAROLINAS/Duke Power Company did not correct the error. This erroneous description of the 48-inch stormwater pipe was repeated in the 1998, 2001 and 2007 Five-Year Independent Consultant Inspection reports produced by Engineering Firms #1 and #3 and not corrected by DUKE ENERGY CAROLINAS/Duke Power Company.

56. The 1991 report repeated the prior monitoring recommendations:

> As was previously recommended, the inflow and outflow of the drainage pipes extending under the ash basins should be monitored for the quantity flowing in versus that flowing out and the turbidity of the discharge. If a disparity becomes evident or if there is evidence of turbidity, the pipes should be checked for leaks.

57. The 1998 Fourth Independent Consultant Inspection report prepared by Engineering Firm #1 made the following recommendation for monitoring of the stormwater pipes:

> The outflow of the drainage pipes extending under the primary ash basins to the river should be monitored for turbidity of the discharge, which would be indicative of soil entrance into the pipes through leaks under the basin. The appearance of turbidity would make it advisable to perform a TV camera inspection of the pipe to help determine if the leak or leaks are a threat.

58. The recommendation in the 1998 report was repeated in identical language in the 2001 and 2007 Five-Year Inspection reports prepared by Engineering Firm #1 and #3, respectively.

59. In the 2007 Sixth Five-Year Independent Consultant Inspection report, Engineering Firm #3 noted that DUKE ENERGY CAROLINAS engineers had not performed annual inspections since 2001, and also had not performed monthly inspections in 2003. The firm expressed concern over the qualifications of the DUKE ENERGY CAROLINAS employees assigned to perform monitoring. Engineering Firm #3 recommended "that Duke reinstitute more

clearly defined engineering responsibility for the receiving and plotting of data from the dikes at the individual stations."

60. After 2008, DUKE ENERGY CAROLINAS installed a metal platform over rip rap (large rocks) along the outer wall of the coal ash basin to better enable employees to access the river bank near the outfalls of the 48-inch and 36-inch stormwater pipes. However, DUKE ENERGY CAROLINAS employees were still unable to view the 36-inch stormwater pipe outfall.

61. A 2009 EPA Dam Safety Assessment, prepared for EPA by an engineering contractor, restated the recommendations of the Sixth Five-Year Independent Consultant Inspection report and recommended that DUKE ENERGY CAROLINAS complete the implementation of those recommendations as described in the Sixth Five-Year Independent Consultant Inspection Report. Based on information received from DUKE ENERGY CAROLINAS, the EPA Dam Safety Assessment reported that "[v]isual monitoring of the outflow from the drainage pipes that go under the Primary Basin is performed on a monthly basis." EPA's contractor observed that during its field inspection in May 2009, the outflow from the 48-inch and 36-inch pipes was clear.

62. The last monthly inspection of the stormwater pipes occurred on January 31, 2014. The form created by DUKE ENERGY CAROLINAS for recording observations during the monthly inspections did not provide any specific space for reporting

observations of the stormwater pipes and the DUKE ENERGY CAROLINAS employee who performed the inspection did not independently record any observations of the pipes on the form for the January 31, 2014, inspection. According to the DUKE ENERGY CAROLINAS employee who performed the January 31, 2014, she did not observe turbidity in the water flowing from the 48-inch stormwater pipe. She could not see the discharge from the 36-inch stormwater pipe due to the location of the outfall in relation to her observation point on the scaffolding.

63. Between 1999 and 2008, and again from January 2013 through January 31, 2014, DUKE ENERGY CAROLINAS employees did not perform any visual inspections of the 36-inch stormwater pipe.

64. Between 1999 and 2008, during the months from May to September, DUKE ENERGY CAROLINAS employees were generally not able to conduct visual inspections of the flow from the 48-inch pipe because it was too difficult to access the end of the pipe from land as the result of vegetative growth and the presence of snakes.

65. Each of the DUKE ENERGY CAROLINAS employees responsible for monitoring the flow from the stormwater pipes from 1991 to December 2012 was aware that the 48-inch stormwater pipe was composed of corrugated metal.

ADDITIONAL DUKE ENERGY DOCUMENTATION THAT THE 48-INCH STORMWATER PIPE WAS CMP

66. On or about January 22, 2014, Engineering Firm #4 finished a draft document titled "Design Report - DRAFT Ash Basin Closure - Conceptual Design for Dan River Steam Station." Appendix 4 of the Report identifies the 48-inch stormwater pipe as "CMP," although that information was not separately stated in the body of the report. In preparing the report, Engineering Firm #4 engineers relied on documentation provided by DUKE ENERGY CAROLINAS and DUKE ENERGY BUSINESS SERVICES, including a 2008 schematic of the Primary Ash Basin that correctly identified the 48-inch stormwater pipe as CMP. Engineers with DUKE ENERGY BUSINESS SERVICES' Central Engineering office worked with Engineering Firm #4 in the preparation of the conceptual design and reviewed the draft documents but did not notice the labeling of the 48-inch stormwater pipe in Appendix 4.

67. A 2009 schematic entitled "Rough Grading - Overall Grading Plan for Dan River Combined Cycle" provided to DUKE ENERGY CAROLINAS by one of its contractors also identified the 48-inch stormwater pipe as CMP.

68. As of the date of the Dan River spill, record-keeping and information-sharing practices at DUKE ENERGY CAROLINAS and DUKE ENERGY BUSINESS SERVICES did not ensure that information such as the actual composition of the 48-inch pipe was

communicated from employees with knowledge to engineers and employees making budget decisions. Additionally, engineers in DUKE ENERGY BUSINESS SERVICES, with responsibility for DAN RIVER, had not sufficiently reviewed the records available to them and, therefore, continued to operate under the erroneous belief that the 48-inch pipe was made entirely of RCP.

RECOMMENDATION FOR CAMERA INSPECTIONS BY DUKE ENERGY PROGRAM ENGINEERING

69. From at least 2011 through February 2014, DUKE ENERGY BUSINESS SERVICES had a group of engineers assigned to support fossil impoundment and dam inspections. The group was known as "Program Engineering."

70. In May 2011, a Senior Program Engineer and a Program Engineer with responsibilities covering DAN RIVER, recommended that the budget for DAN RIVER include camera inspections of the pipes within the Primary and Secondary Ash Basins. The estimated total cost for the camera inspection of four pipes, including the 48-inch stormwater pipe, within the Primary and Secondary Coal Ash Basins was $20,000.

71. DUKE ENERGY CAROLINAS did not provide funding for the camera inspection.

72. Upon learning that the camera inspection was not funded, the DAN RIVER Station Manager called the Vice-President

of Transitional Plants and Merger Integration, who was in charge of approving the budget at DAN RIVER and other facilities. The Station Manager told the Vice-President that DAN RIVER needed the camera inspections, that the station did not know the conditions of the pipes, and that if one of the pipes failed, there would be environmental harm. The request was still denied.

73. In May 2012, the Senior Program Engineer and the Program Engineer again recommended that the budget for DAN RIVER include camera inspections of the 48-inch and 36-inch stormwater pipes underneath the Primary Ash Basin, along with two additional pipes within the Primary and Secondary Ash Basins. The estimated total costs for the camera inspection was $20,000. The reason noted on the budget request form was "internal recommendation due to age of piping system."

74. By e-mail dated May 30, 2012, the Senior Program Engineer indicated his intention to eliminate the camera survey budget line item for stormwater pipes at DAN RIVER in light of the anticipated closure of the basins.

75. In response to the Senior Program Engineer's May 30, 2012, email, the DAN RIVER Equipment Owner, employed by DUKE ENERGY BUSINESS SERVICES and responsible for monitoring the Primary Ash Basin wrote, in part:

> I would think with the basin closing you would want to do the camera survey. I don't think the drains have ever been checked and since they go under the basin I would like to ensure that we are eliminating any risk before closing the basins.

76. In response to the Senior Program Engineer's May 30, 2012, email, another DUKE ENERGY BUSINESS SERVICES employee advised:

> I don't know if this changes your opinion, but [it] isn't likely that the ash basin will close in 2013. We have to submit a plan to the state at least one year prior to closure and we haven't even begun to prepare that.

77. On a date unknown but sometime between May 2012 and July 2012, at an in-person meeting, a DUKE ENERGY BUSINESS SERVICES Program Engineer asked the Vice-President of Transitional Plants and Merger Integration whether camera inspections of the stormwater pipes would be funded. The Vice-President said no.

78. In June 2012, preliminary engineering plans for closing the DAN RIVER coal ash basins called for the removal of both the 48-inch and 36-inch pipes. However, between 2012 and 2014, there was no set date for closing and no formal closure plan had been submitted to DENR. In December 2012, the DAN RIVER ash basin closure was not projected to be completed until 2016.

79. DUKE ENERGY CAROLINAS did not provide funding for the camera inspections of the stormwater pipes and no camera

inspections were performed prior to February 2, 2014. If a camera inspection had been performed as requested, the interior corrosion of the elbow joint in the 48-inch pipe would likely have been visible.

80. From at least January 1, 2012, through February 2, 2014, DUKE ENERGY CAROLINAS and DUKE ENERGY BUSINESS SERVICES failed to take reasonable steps to minimize or prevent discharge of coal ash to the Dan River that would adversely affect the environment and failed to properly operate and maintain the DAN RIVER coal ash basins and the related stormwater pipes located beneath the Primary Coal Ash Basin, thus, negligently violating the DAN RIVER NPDES permit.

FEBRUARY 2014 DISCHARGES INTO THE DAN RIVER

81. On February 2, 2014, a five-foot long elbow joint within the sixty-year-old corrugated metal section of the 48-inch pipe under the Primary Ash Basin at DAN RIVER failed, resulting in the release of coal ash wastewater and coal ash into the Dan River.

82. Later inspection of the elbow joint, after its retrieval from the Dan River, revealed extensive corrosion of the metal of the elbow joint initiating at the bottom center of the elbow. The parties disagree about some of the factors that contributed to the extensive corrosion. Nevertheless, the age of the pipe was at or beyond the reasonably expected serviceable

life for CMP under similar conditions. Ultimately, the combination of the corrosion and the weight of the coal ash basin over the elbow joint caused it to buckle, fail, and be pushed through the end of the 48-inch stormwater pipe into the Dan River.

83. Between approximately 1:30 p.m. and approximately 2:00 p.m. on February 2, 2014, a security guard at DAN RIVER noticed that the level of the wastewater in the Primary Ash Basin had dropped significantly.

84. The security guard immediately notified DUKE ENERGY CAROLINAS employees in the control room for the adjacent natural gas-powered combined cycle plant. The DUKE ENERGY CAROLINAS Shift Supervisor on duty went to the Primary Ash Basin and observed a large sinkhole. The Shift Supervisor saw only residual water and mud left in the basin. The Shift Supervisor alerted other DUKE ENERGY CAROLINAS and DUKE ENERGY BUSINESS SERVICES employees in order to begin response efforts.

85. After the initial discovery of the sinkhole in the Primary Ash Basin on February 2, 2014, an employee who responded to the site circulated photographs of the Primary Ash Basin to other DUKE ENERGY CAROLINAS and DUKE ENERGY BUSINESS SERVICES employees via e-mail at approximately 3:49 p.m.

86. Photographs attached to the 3:49 p.m. e-mail reflected the status of the basin. **(See Appendix, Photographs 1 - 4).**

87. From on or about February 2, 2014, through February 8, 2014, the unpermitted discharge of approximately 27 million gallons of coal ash wastewater and between 30,000 and 39,000 tons of coal ash into the Dan River occurred through the 48-inch pipe from the Primary Coal Ash Basin.

88. According to the U.S. Fish and Wildlife Service, coal ash from the release traveled more than 62 miles down the Dan River, from the Middle District of North Carolina, through the Western District of Virginia, and into the John H. Kerr Reservoir in the Eastern District of North Carolina and Eastern District of Virginia.

89. On or about February 8, 2014, DUKE ENERGY CAROLINAS sealed the outfall of the 48-inch pipe, halting the discharge of coal ash wastewater and coal ash into the Dan River.

DISCHARGES FROM THE 36-INCH STORMWATER PIPE

90. On February 6, 2014, an interior video inspection of the 36-inch stormwater pipe revealed: (1) infiltration of wastewater occurring through a number of joints; (2) water jets from pressurized infiltration at three joints; (3) separation in one joint near the outfall point; (4) cracks running lengthwise through several pipe segments; and (5) sections of ponding water indicating irregular vertical alignment.

91. Analysis of water samples from the 36-inch pipe revealed that the line was releasing wastewater that contained

elevated levels of arsenic. On February 14, 2014, the arsenic concentration in the effluent at the outfall of the 36-inch pipe was 140 ug/L. On February 17, 2014, the arsenic concentration in the effluent at the same point was 180 ug/L. The North Carolina water quality standard for the protection of human health for arsenic is 10 ug/L and the water quality standard for the protection of freshwater aquatic life is 50 ug/L.

92. Discharge of contaminated wastewater continued from the 36-inch pipe between February 6, 2014, and February 21, 2014. The nature of the wastewater infiltration into the 36-inch stormwater pipe and DUKE ENERGY CAROLINAS employees' visual and auditory confirmation of flow from the 36-inch pipe indicates that discharge from the 36-inch pipe began a significant period of time before February 6, 2014. The discharge began at least as early as January 1, 2012, continued until February 21, 2014, and was not authorized by a NPDES permit.

93. On February 21, 2014, DUKE ENERGY CAROLINAS sealed the 36-inch stormwater pipe.

RESPONSE COSTS FOR DAN RIVER RELEASE

94. Thus far, DUKE ENERGY CAROLINAS and federal, state, and local governments have spent over $19 million responding to the spill.

95. Drinking water intakes in the Dan River watershed, including those for the Cities of Danville, Virginia Beach, and Chesapeake and for the Halifax County Service Authority in Virginia were temporarily closed and were required to undertake additional monitoring for contamination. Monitoring results indicated that the water treatment plants along the Dan River were able to adequately treat and remove the coal ash and related contaminants from the spill.

96. The North Carolina Department of Health and Human Services issued an advisory against consuming fish from or recreational contact with the Dan River from the point of the spill to the North Carolina - Virginia border from February 12, 2014, to July 22, 2014.

97. DUKE ENERGY CAROLINAS has reimbursed many entities for their expenditures in the aftermath of the spill. Nonetheless, at least two localities and one federal agency have not yet been fully reimbursed. Those entities and their expenditures are: (1) Virginia Beach, $63,309.45; (2) Chesapeake, Virginia, $125,069.75; and (3) the United States Army Corps of Engineers, $31,491.11.

CAPE FEAR STEAM ELECTRIC PLANT

98. DUKE ENERGY PROGRESS (formerly "Progress Energy Carolinas") owns the Cape Fear Steam Electric Plant ("CAPE

FEAR"), located adjacent to the Cape Fear River, just south of the confluence of the Haw and Deep Rivers and approximately two miles southeast of Moncure, North Carolina.

99. CAPE FEAR has a total of five coal ash basins. Three of the basins, constructed in 1956, 1963, and 1970 have been inactive for many years. Two of the basins, constructed in 1978 and 1985 continued to receive coal ash slurry and other forms of wastewater through at least November 2011.

100. The 1978 ash basin had a storage capacity of 880 acre-feet (approximately 286,749,258 gallons), a surface area of 43 acres, and a maximum structural height of 27 feet. The 1978 ash basin included a "riser," also known as a "stand pipe," used under normal operation to allow the passive and permitted discharge of wastewater treated by settlement from the basin. The riser was constructed of vertically stacked 18-inch diameter concrete pipe sections.

101. The 1985 ash basin had a storage capacity of 1764 acre-feet (approximately 574,801,921 gallons), a surface area of 65 acres, and a maximum structural height of 28 feet. The 1985 ash basin included a riser constructed of vertically stacked 48-inch diameter concrete pipe sections.

102. In a 2009 EPA Dam Safety Assessment, both the 1978 and 1985 coal ash basins at CAPE FEAR were classified as having "significant hazard potential," as previously defined.

103. By December 2011, DUKE ENERGY PROGRESS/Progress Energy Carolinas ceased electric power generation at CAPE FEAR. As a result of the cessation of operation, coal ash slurry was no longer received by the 1978 or 1985 coal ash basin, although each basin continued to receive rainwater or stormwater.

INSPECTIONS OF CAPE FEAR ASH BASINS, MONITORING RECOMMENDATIONS, AND DETECTION OF LEAKING RISERS

104. DUKE ENERGY PROGRESS/Progress Energy Carolinas engaged outside firms to perform annual and five-year inspections of the coal ash basins at CAPE FEAR, as required by state law.

105. On or about May 1, 2008, Engineering Firm #3, hired by DUKE ENERGY PROGRESS/Progress Energy Carolinas, conducted an annual inspection of the CAPE FEAR coal ash basins and generated a report of its observations, conclusions, and recommendations. The report was submitted to DUKE ENERGY PROGRESS/Progress Energy Carolinas and reviewed by the plant manager and environmental coordinator for CAPE FEAR.

106. The 2008 annual inspection report described the condition of the risers in the 1978 and 1985 coal ash basins as "marginal" and estimated that the risers were "likely to develop problems" in two to five years from the date of the report. The report further recommended that DUKE ENERGY PROGRESS/Progress Energy Carolinas perform its own inspections of the risers in

the 1978 and 1985 ash basins by boat, in order to better assess the condition of the risers.

107. The recommendation to inspect the risers using a boat was repeated in annual reports produced by engineering firms and submitted to DUKE ENERGY PROGRESS/Progress Energy Carolinas in 2009 and 2010, and to DUKE ENERGY PROGRESS in 2012 and 2013.

108. At no time from May 1, 2008, until March 2014 did DUKE ENERGY PROGRESS/Progress Energy Carolinas perform inspections of the risers in the 1978 or 1985 ash basins by boat.

109. At some time during the summer of 2011, but on a date unknown, the DUKE ENERGY PROGRESS/Progress Energy Carolinas Environmental Coordinator and the NPDES Subject Matter Expert responsible for CAPE FEAR visited the site. During their visit, they became aware that the risers in the 1978 and 1985 coal ash basins were leaking. During the fall of 2011, but on a date unknown, they informed DUKE ENERGY PROGRESS/Progress Energy Carolinas management that repairs were needed on the risers. No additional inspection or monitoring of the risers was undertaken by DUKE ENERGY PROGRESS/Progress Energy Carolinas as a result of their observations prior to March 2014.

110. The 2012 Five-Year Independent Consultant Report, produced on January 26, 2012, by Engineering Firm #4, noted that the skimmer located at the top of the riser in the 1978 ash basin was corroded and tilted. The skimmer was designed to

prevent debris from being discharged from the basin or clogging the riser.

111. Photographs included with the 2012 Five-Year Independent Consultant Report show the skimmer on the riser in the 1978 coal ash basin sitting askew. **(See Appendix, Photographs 5 & 6).**

112. Photographs included with the 2012 Five-Year Independent Consultant Report show the skimmer on the riser in the 1985 coal ash basin. **(See Appendix, Photograph 7).**

113. Annual inspection reports for 2012 and 2013 also reported that the riser in the 1978 ash basin was damaged, deteriorated, and tilted. The annual reports recommended that DUKE ENERGY PROGRESS/Progress Energy Carolinas replace or repair the skimmer on the riser in the 1978 ash basin.

114. At no time from January 26, 2012, through March 2014 did DUKE ENERGY PROGRESS/Progress Energy Carolinas repair or replace the skimmer on the riser in the 1978 coal ash basin.

115. The annual inspection report produced on or about June 24, 2013, by Engineering Firm #4 and submitted to DUKE ENERGY PROGRESS noted that a "trickle of flow" was observed at the outfalls leading from the risers in the 1978 and 1985 ash basins which the report concluded indicated possible leakage.

DEWATERING OF THE ASH BASINS AND REPAIR OF RISERS

116. During the summer of 2013, on a date unknown, an employee of DUKE ENERGY BUSINESS SERVICES contacted a contractor specializing in diving and underwater pipe repair and mentioned the possible need for riser repair at CAPE FEAR. The contractor was not engaged at that time and no schedule for the potential work was discussed.

117. Also during the summer of 2013, DUKE ENERGY PROGRESS and DUKE ENERGY BUSINESS SERVICES were engaged in planning for the closure of the coal ash basins at CAPE FEAR. On or about July 11, 2013, consulting engineers assisting DUKE ENERGY PROGRESS and DUKE ENERGY BUSINESS SERVICES in planning for ash basin closure produced and provided to DUKE ENERGY PROGRESS and DUKE ENERGY BUSINESS SERVICES a "site investigation plan" that included plans for locating, inspecting, and determining the composition of risers and discharge pipes for each ash basin.

118. As part of the ongoing planning for ash basin closure, DUKE ENERGY PROGRESS and DUKE ENERGY BUSINESS SERVICES sought to eliminate the need for NPDES permits for CAPE FEAR, in keeping with its "Ash Basin Closure Strategy." This strategy would reduce continuing operation and maintenance costs at the plant while ash basin closure was pending. DUKE ENERGY PROGRESS and DUKE ENERGY BUSINESS SERVICES knew that in order to eliminate

the NPDES permits, the coal ash basins would have to be in a "no flow" state. To reach that state, DUKE ENERGY PROGRESS needed to eliminate the riser leaks at the 1978 and 1985 coal ash basins as well as lower the level of the contents of the ash basins to prevent water from overtopping the risers during a 25-year rain event. These requirements were discussed by a number of DUKE ENERGY PROGRESS and DUKE ENERGY BUSINESS SERVICES employees during the summer of 2013, including the DUKE ENERGY BUSINESS SERVICES NPDES Subject Matter Expert and the DUKE ENERGY BUSINESS SERVICES Director of Plant Demolition and Retirement.

119. Also as part of the ongoing planning for ash basin closure at CAPE FEAR, DUKE ENERGY PROGRESS and DUKE ENERGY BUSINESS SERVICES recognized that dewatering the ash basins was a necessary and time-consuming part of the process of closing an ash basin. DUKE ENERGY PROGRESS and DUKE ENERGY BUSINESS SERVICES further believed that dewatering the coal ash basins would "lessen hydrostatic pressure" and "over a relatively brief time reduce and/or eliminate seepage." At the time, seepage was the subject of threatened citizen law suits, a series of state-filed civil complaints, and significant public concern.

120. DUKE ENERGY PROGRESS and DUKE ENERGY BUSINESS SERVICES also believed that dewatering the 1978 and 1985 coal ash basins prior to repairing the risers would provide a safer environment

for contractors performing repair work. DUKE ENERGY PROGRESS and DUKE ENERGY BUSINESS SERVICES employees knew that the leaks in the risers were likely being caused by cracks or failures in the grout between the concrete pipe sections that were underwater. The employees did not know how far underwater the leaks or grout failures were or how many sections of the pipe would need repair. Because the risers were filled with air but surrounded by water, underwater repair of the risers could be hazardous to the divers due to a phenomenon known as "differential pressure." DUKE ENERGY PROGRESS and DUKE ENERGY BUSINESS SERVICES employees believed that removing the standing water from the 1978 and 1985 basins to at or below the level of the leaking portions of the risers would eliminate the risk from differential pressure.

121. Beginning on or about August 16, 2013, and continuing through on or about September 30, 2013, employees and contractors for DUKE ENERGY PROGRESS and DUKE ENERGY BUSINESS SERVICES began developing a work plan for pumping water from the 1985 ash basin at CAPE FEAR.

122. On or about September 30, 2013, DUKE ENERGY PROGRESS employees began pumping water from the 1985 ash basin at CAPE FEAR, using a Godwin pump and hoses.

123. On or about October 2, 2013, two days after pumping began at the 1985 ash basin, a DUKE ENERGY BUSINESS SERVICES

engineer assigned to the plant retirement program emailed a representative of a contracting company specializing in underwater pipe repair. In the email, the engineer indicated that there were "several potential opportunities at [the] Cape Fear plant that we would like you to look at." The engineer went on to describe one of the opportunities as:

> Ash pond riser repairs. Two ponds' risers leak. There is a slow trickle out of the discharge of the concrete riser pipes at two ash ponds. We may elect to stop the leak. Could you provide a ballpark for providing the investigation and repair services? Could you also describe what the process would be?

124. On or about October 22, 2013, the underwater pipe repair contractor submitted to DUKE ENERGY PROGRESS and DUKE ENERGY BUSINESS SERVICES a project estimate titled "Abandonment of Intakes and Leak Sealing" that included four tasks, including "Ash Pond Riser Repairs."

125. On or about January 13, 2014, DUKE ENERGY PROGRESS began dewatering operations at the 1978 coal ash basin at CAPE FEAR, using a Godwin pump and hoses similar to those used at the 1985 coal ash basin, as well as the same work plan.

126. On or about January 24, 2014, DUKE ENERGY PROGRESS signed a contract, through DUKE ENERGY BUSINESS SERVICES, acting as its agent, with the underwater pipe repair contractor for various projects at CAPE FEAR relating to plant decommissioning and coal ash basin closure, as addressed in the October 22,

2014, project estimate. One of the projects was repair work on the risers in the 1978 and 1985 coal ash basins. The contract specified that work under the contract would "start on or about January 27, 2014 and shall be completed no later than December 31, 2014." The contract did not identify specifically when the work would begin on the risers.

127. On or about March 11, 2014, DENR officials from both the DWR and the Division of Mineral and Land Resources visited CAPE FEAR to perform an inspection. The DENR officials were accompanied by several DUKE ENERGY PROGRESS and DUKE ENERGY BUSINESS SERVICES employees during their inspection. DENR observed the Godwin pumps at the 1985 and 1978 ash basins along with obvious signs of a significant drop in the water level in the coal ash basins and disturbances in the surface of the coal ash in the basins. **(See Appendix, Photographs 8 - 10).**

128. At the conclusion of the DENR inspection on March 11, 2014, a dispute arose between DENR officials and DUKE ENERGY PROGRESS and DUKE ENERGY BUSINESS SERVICES employees over whether DUKE ENERGY PROGRESS had been authorized by DENR-DWR to discharge water from the coal ash basins using Godwin pumps.

129. On or about March 19 and 20, 2014, an employee of the underwater pipe repair contractor performed video inspections of the risers in the 1978 and 1985 coal ash basins. The contractor observed that in the discharge pipe leading from the riser in

the 1985 coal ash basin, the visibility in one area was "next to nothing." The visibility was negatively impacted by turbidity and debris in the pipe. The contractor observed a "slow trickle" of water intruding into the riser in the 1978 coal ash basin. At the time of the camera inspections, the water level in both coal ash basins had already been lowered below the uppermost joints of the risers and, thus, below the level of some of the leaks.

130. No other camera inspections were conducted of the risers between 2008 and March 19, 2014.

131. On or about March 19 and 20, 2014, employees and agents of the underwater pipe repair contractor replaced and resealed the grout between the concrete pipe sections of the risers in the 1978 and 1985 coal ash basins. **(See Appendix, Photographs 11 through 14).**

132. Between at least January 1, 2012, and January 24, 2014, DUKE ENERGY PROGRESS and DUKE ENERGY BUSINESS SERVICES failed to properly maintain the risers in the 1978 and 1985 coal ash basins at CAPE FEAR in violation of the applicable NPDES permit.

HISTORICAL SEEPS AND DISCHARGES FROM COAL ASH BASINS

133. DUKE ENERGY CAROLINAS' and DUKE ENERGY PROGRESS's coal ash basins are comprised of earthen dams. Over time, "seeps" developed in the dam walls. "Seeps" occur when water, often

carrying dissolved chemical constituents, moves through porous soil and emerges at the surface. Seeps are common in earthen dams. The Defendants have identified nearly 200 distinct seeps at the Defendants' coal ash basins throughout North Carolina in permit modification applications filed in 2014. Not all seeps necessarily reach waters of the United States. However, some of the discharge from seeps is collected and moved through engineered drains or channels to waters of the United States. Other seeps are simply allowed to flow across land surfaces to waters of the United States. Each of the facilities listed in the table at paragraph 12 had seeps of some form.

134. Water from seeps may transport pollutants. Wastewater sampled from various seep locations at DUKE ENERGY CAROLINAS and DUKE ENERGY PROGRESS coal ash basins in 2014 was found to contain constituents including aluminum, arsenic, barium, boron, chloride, chromium, copper, fluoride, lead, manganese, nickel, selenium, thallium, and zinc, and was additionally found to be acidic.

135. On June 7, 2010, EPA issued interim guidance to assist NPDES permitting authorities with establishing appropriate permit requirements for wastewater discharges from coal ash basins at power plants. In the guidance, EPA advised with respect to point source discharges of seepage:

> If the seepage is directly discharged to waters of the United States, it is likely discharged via a discrete conveyance and thus is a point source discharge. Seepage discharges are expected to be relatively minor in volume compared to other discharges at the facility and could be inadvertently overlooked by permitting authorities. Although little data are available, seepage consists of [coal combustion residuals] including fly ash and bottom ash and fly ash transport water and [flue-gas desulfurization] wastewater. If seepage is discharged directly via a point source to a water of the U.S., the discharge must be addressed under the NPDES permit for the facility.

136. Since at least 2010, seepage from DUKE ENERGY CAROLINAS' and DUKE ENERGY PROGRESS's coal ash basins at certain of their 14 coal-fired power plants in North Carolina entered waters of the United States through discrete conveyances.

137. Wetlands may also suffer impacts from the operation of coal-fired plants. Coal ash basins were historically sited near rivers and are, therefore, often located in or near riparian wetlands and some coal ash basins have hydrologic connections to wetlands via groundwater or seeps.

138. Since 2010, as part of the NPDES permitting process in North Carolina, coal-fired plants are required to monitor groundwater to assure natural resources are protected in accordance with federal and state water quality standards. Monitoring of groundwater at coal ash basins owned by DUKE ENERGY CAROLINAS and DUKE ENERGY PROGRESS has shown exceedances of groundwater water quality standards for pollutants under and near the basins including arsenic, boron, cadmium, chromium,

iron, manganese, nickel, nitrate, selenium, sulfate, thallium, and total dissolved solids.

139. At various times between 2010 and 2014 the Defendants included general references to seeps in correspondence and permit applications with DENR and disclosed more detailed information concerning certain seeps, including engineered seeps (i.e., man-made channels). The Defendants did not begin gathering and providing detailed, specific, and comprehensive data concerning seeps, and particularly seeps discharging to waters of the United States, at each of the North Carolina coal ash basins to DENR until after the DAN RIVER spill in 2014.

140. After the coal ash spill at DAN RIVER in 2014, DUKE ENERGY CAROLINAS and DUKE ENERGY PROGRESS, with the assistance of DUKE ENERGY BUSINESS SERVICES, filed NPDES permit renewal and/or modification applications seeking authorization for certain seeps that discharged, via a point source, directly to a water of the United States. These applications are currently pending as DENR considers the impacts of the seeps and discharges on the receiving waters of the United States.

H.F. LEE STEAM ELECTRIC PLANT

141. DUKE ENERGY PROGRESS owns the H. F. Lee Steam Electric Plant ("LEE"), which is located in Goldsboro, North Carolina. LEE (formerly known as the "Goldsboro Plant") began operation

shortly after World War II and added additional coal-fired combustion units in 1952 and 1962. The plant retired the coal-fired units in September of 2012.

142. LEE used several coal ash basins in the past. Only one of the remaining coal ash basins still contains water and ash sluiced from LEE (the "active coal ash basin"). The active ash basin sits on the north side of the Neuse River. **(See Appendix, Photograph 15)**.

143. The active coal ash basin is triangle-shaped and includes a primary basin and a small secondary settling basin. The treatment system is designed so that water discharges from the primary basin into the secondary basin and from the secondary basin into the Neuse River.

144. The NPDES permit No. NC0003417 for LEE, effective November 1, 2009, authorized two discharges into the Neuse River – one from the active coal ash basin ("Outfall 001") and one from the cooling water pond ("Outfall 002"). A 2010 modification of the 2009 permit also authorized a third outfall ("Outfall 003") from a combined cycle generation facility. Water does not currently discharge from the active coal ash basin into the Neuse River via Outfall 001.

145. Beginning at a time unknown but no later than October 2010, DUKE ENERGY PROGRESS/Progress Energy Carolinas identified a seep on the eastern embankment of the active coal ash basin.

This seep was adjacent to an area of seepage that was identified and repaired in 2009 and 2010. This seep in 2010 collected and flowed to a "flowing ditch" outside of the active coal ash basin. This seep was repaired in May of 2011.

146. Additional seeps on the eastern side of the active coal ash basin also flowed into the same drainage ditch as the seep identified in October 2010. The drainage ditch discharged into the Neuse River at latitude 35.379183, longitude -78.067533. The drainage ditch was not an authorized outfall under the NPDES permit. In 2014, DUKE ENERGY PROGRESS identified the GPS coordinates of four seeps on the eastern side of the coal ash basin as: latitude 35.380510, longitude -78.068532; latitude 35.382767, longitude -78.069655; latitude 35.386968, longitude -78.071942; and latitude 35.379492, longitude -78.067718.

147. On February 20, 2013, DENR personnel sampled water in three locations from the drainage ditch. This sampling occurred after DENR personnel from the Land Quality Section observed a seep near the southeast corner of the ash pond dike. The seep collected in the unpermitted discharge ditch and flowed into the Neuse River. Water quality analysis of samples from the drainage ditch showed exceedances of state water quality standards for chloride, arsenic, boron, barium, iron, and manganese. This discharge of wastewater into the Neuse River

from the drainage ditch at LEE was not authorized under the NPDES permit.

148. On March 11, 2014, DENR personnel again sampled wastewater from the drainage ditch referenced previously. The ditch showed exceedances for iron and manganese.

149. Unpermitted discharges, in violation of the applicable NPDES permit, occurred at LEE from at least October 1, 2010, through December 30, 2014.

RIVERBEND STEAM STATION

150. DUKE ENERGY CAROLINAS owns and operates the Riverbend Steam Station ("RIVERBEND"), located in Gaston County, North Carolina, approximately 10 miles from the city of Charlotte and immediately-adjacent to Mountain Island Lake, on a bend in the Catawba River. Mountain Island Lake is the primary source of drinking water for residents of Gaston and Mecklenburg Counties.

151. RIVERBEND began commercial operation in 1929 and its combustion units were retired in April 2013, with plans to demolish it after 2016. It has two unlined coal ash basins along Mountain Island Lake, with dams reaching up to 80 feet in height. The RIVERBEND dams are designated in a 2009 EPA Dam Safety Assessment as "Significant Hazard Potential," as previously defined. RIVERBEND contains approximately 2,730,000 million tons of stored coal ash.

152. The RIVERBEND NPDES permit, No. NC0004961, was issued on March 3, 1976, and has been renewed subsequently, with the current NPDES Permit expiring on February 28, 2015. The RIVERBEND NPDES permit allows the facility to discharge wastewater to the Catawba River from three "permitted outfalls" in accordance with the effluent limitations and monitoring requirements regarding flow, suspended solids, oil and grease, fecal coliform, copper, iron, arsenic, selenium, mercury, phosphorus, nitrogen, pH, and chronic toxicity, as well as other conditions set forth therein. Wastewater from the coal ash basin was to be discharged, after treatment by settling, through one of the monitored and permitted outfalls.

153. On December 4 through December 6, 2012, DENR conducted inspections of RIVERBEND and discovered unpermitted discharges of wastewater from the coal ash basin into the Catawba River. Among the unpermitted discharges at RIVERBEND is a seep identified in a 2014 permit modification application as Seep 12, an engineered drain to discharge coal ash contaminated wastewater into the river. RIVERBEND Seep 12 is located at latitude 35.36796809, longitude -80.95935079. **(See Appendix, Photographs 16 through 18)**. At some time unknown, but prior to December 2012, one or more individuals at RIVERBEND created the unpermitted channel that allowed contaminated water from the coal ash basin to be discharged into the river.

154. The unpermitted seep resulted in documented unpermitted discharges from 2011 through 2013 containing elevated levels of arsenic, chromium, cobalt, boron, barium, nickel, strontium, sulfate, iron, manganese, and zinc into the Catawba River.

155. Unpermitted discharges, in violation of the applicable NPDES permit, occurred at RIVERBEND from at least November 8, 2012, through December 30, 2014.

ASHEVILLE STEAM ELECTRIC GENERATING PLANT

156. DUKE ENERGY PROGRESS owns and operates the Asheville Steam Electric Generating Plant ("ASHEVILLE"), in Buncombe County, North Carolina.

157. ASHEVILLE is a coal-powered electricity-generating facility in the Western District of North Carolina. It has two unlined coal ash basins, one constructed in 1964 and the other constructed in 1982. The basins, each approximately 45 acres in size, hold a total of approximately 3,000,000 tons of coal ash waste. **(See Appendix, Photograph 19)**. The basins were each characterized in the 2009 EPA Dam Safety Assessment as "High Hazard Potential," meaning that "failure or mis-operation results will probably cause loss of human life."

158. The ASHEVILLE NPDES permit, number NC0000396, was issued in 2005 and expired in 2010. Progress Energy Carolinas (now DUKE ENERGY PROGRESS) filed a timely permit renewal

application on June 11, 2010. DENR has not yet issued a new permit and ASHEVILLE continues to operate under the terms of the 2005 NPDES permit.

159. On May 13, 2011, DUKE ENERGY PROGRESS/Progress Energy Carolinas sought authority to relocate the settling basin and permitted discharge outfall at ASHEVILLE from its original location near the 1964 coal ash basin to a location approximately 3,000 feet away, latitude 35.47367 and longitude -82.504, in order to allow "stabilization work" on the 1964 ash pond impoundment.

160. On March 11, 2013, DENR staff inspected ASHEVILLE and identified seeps flowing from toe drains at the 1964 coal ash basins. The engineered seep from the 1964 coal ash basin has continued to discharge pollutants. This engineered seep is not authorized under the applicable NPDES permit. Engineered seeps from the 1964 coal ash basin are located at latitude 35.468319, longitude -82.549104 and latitude 35.466943, longitude -82.548502. These engineered seeps discharge through the toe drain to the French Broad River.

161. Unpermitted discharges, in violation of the applicable NPDES permit, occurred at ASHEVILLE from at least May 31, 2011, through December 30, 2014.

BROMIDE IMPACTS FROM FGD SYSTEMS

162. As described above, DUKE ENERGY CAROLINAS owns and operates Belews Creek Steam Station ("BELEWS") in Stokes County, North Carolina, and Cliffside Steam Station ("CLIFFSIDE") in Rutherford and Cleveland Counties, North Carolina.

163. As part of its efforts to comply with the Clean Air Act and North Carolina Clean Smokestacks Act, DUKE ENERGY CAROLINAS installed Flue Gas Desulfurization ("FGD") "scrubbers" to significantly reduce or eliminate certain air pollutants, such as sulfur dioxide and nitrogen oxide at several coal-fired facilities. FGD scrubbers isolate certain pollutants from coal combustion emissions into the air and ultimately divert those pollutants, including bromides, into a gypsum slurry that is eventually routed to the facility's coal ash basins. At times, portions of the slurry may be diverted for reuse in products such as wall board.

164. FGD installation was completed and the scrubbers at BELEWS became fully operational at the end of 2008.

165. When bromide comes into contact with chlorine-based water treatment systems, it can contribute to the formation of compounds known as trihalomethanes ("THMs"). There are no general federal or state water limits for the discharge of bromides to surface water. However, there are state and federal limits for total trihalomethanes ("total THMs") under the Safe

Drinking Water Act. If ingested in excess of the regulatory limits over many years, THMs may cause adverse health effects, including cancer.

DISCHARGE OF BROMIDES AT BELEWS

166. Beginning in 2008 or 2009, the City of Eden ("Eden"), downstream from BELEWS, noted an increase in total THMs in its drinking water.

167. Prior to the installation of the FGD scrubbers, DUKE ENERGY CAROLINAS reported to DENR in its BELEWS NPDES permit applications that bromide occurred in its waste stream at a level too low to detect. When BELEWS applied for a NPDES permit modification in 2009, it made no new disclosures concerning bromide levels because the modification did not relate to bromide and there were no federal or state limitations for bromide discharge.

168. DUKE ENERGY CAROLINAS tested for bromides, as well a number of other potential pollutants, at BELEWS in 2008-2009 to evaluate the effects of the FGD wastewater treatment system. Those test results showed that bromides were discharged from BELEWS into the Dan River. This did not violate the NDPES permit for the facility.

169. In consultation with an outside contractor, in January 2011, Eden determined that an increase in bromides contributed

to the increase in total THMs it had witnessed beginning in 2008-2009.

170. In early 2011, Eden tested the water entering its water treatment facility from the Dan River and performed water tests upstream to determine the source of the bromides.

171. On May 10, 2011, Eden notified DUKE ENERGY CAROLINAS that it was having difficulty with increasing levels of total THMs in its treated drinking water and requested DUKE ENERGY CAROLINAS' bromide sampling data from the outflow of BELEWS. An impending reduction in the threshold for total THMs (required by an EPA rule promulgated under the Safe Drinking Water Act) triggered Eden's particular interest in the pollutant, especially given that Eden was at the upper limit of the then-permissible total THM range.

172. As a result of the water testing, Eden identified the source of the increased bromides as BELEWS, which discharges into the Dan River. Eden shared this information and its test results with DUKE ENERGY CAROLINAS on June 7, 2011.

173. Shortly thereafter, DUKE ENERGY CAROLINAS and DUKE ENERGY BUSINESS SERVICES internally agreed that the increased bromides very likely came from BELEWS and, combined with a number of other factors, had likely caused the THM increase at Eden. DUKE ENERGY CAROLINAS and DUKE ENERGY BUSINESS SERVICES

also agreed internally that the increased bromides were likely the result of the FGD scrubber system.

174. In mid-June 2011, DUKE ENERGY CAROLINAS contacted the Town of Madison ("Madison"), which also draws water from the Dan River and processes that water for drinking and which is closer to BELEWS than Eden. DUKE ENERGY CAROLINAS informed Madison of its findings and Madison asked to be part of the discussions with Eden about reducing bromide levels. DUKE ENERGY CAROLINAS and DUKE ENERGY BUSINESS SERVICES employees met with Eden and Madison several times between June 2011 and April 2012 to discuss reducing total THMs in their drinking water.

175. DUKE ENERGY CAROLINAS informed DENR of the increase in bromide levels in its effluent when it filed its NPDES permit renewal application for BELEWS on August 29, 2011. In the application, DUKE ENERGY CAROLINAS listed bromide as a pollutant present in outfalls 001 (into Belews Lake) and 003 (into Dan River). The largest concentration of bromide was listed as 6.9 mg/L from Outfall 003, which translates to 6.9 parts per million (ppm) or 6907 parts per billion (ppb). This bromide result appears to have been taken from a sample of water collected in January 2011 and analyzed after Eden had brought the issue to DUKE ENERGY CAROLINAS' attention.

176. At the time DUKE ENERGY CAROLINAS filed its NPDES permit renewal application for BELEWS, none of the previous permits had placed any restrictions or limits on bromides.

177. In mid-October 2011, Eden informed DUKE ENERGY CAROLINAS that Madison had violated its limit on total THMs. DUKE ENERGY CAROLINAS was also informed that Henry County, Virginia, (which purchases Eden's water) violated its total THM limit. Dan River Water (another purchaser of Eden's water) also violated its total THM limit.

178. On November 16, 2011, DENR's Winston-Salem Regional Office held a meeting with DUKE ENERGY CAROLINAS, DUKE ENERGY BUSINESS SERVICES, Eden, and Madison regarding the bromide issue. All participants agreed that the total THM problem was caused by bromides entering the Dan River from BELEWS. DUKE ENERGY CAROLINAS was not aware of the relationship between bromides and THMs until Eden brought the matter to DUKE ENERGY CAROLINAS' attention in 2011.

179. Since the November 2011 meeting, DUKE ENERGY CAROLINAS has entered into written agreements with Eden and Madison to assist them with a portion of the costs of modifying and modernizing their water treatment systems.

DISCHARGE OF BROMIDES AT CLIFFSIDE

180. Beginning at about the time DUKE ENERGY CAROLINAS responded to Eden's initial complaints regarding the bromide

discharge at BELEWS, DUKE ENERGY CAROLINAS conducted an initiative to monitor bromide discharge at other locations employing FGD scrubbers.

181. As a result of this initiative, in or about early August 2011, DUKE ENERGY CAROLINAS also internally identified the CLIFFSIDE facility in western North Carolina as one that could pose a potential THM problem in light of the relatively shallow river (the Broad River) into which CLIFFSIDE discharged and the presence of relatively close downstream facilities that drew drinking water from the Broad River.

182. The last CLIFFSIDE NPDES permit was issued in January 2011 and did not reference bromide.

183. DUKE ENERGY CAROLINAS AND DUKE ENERGY BUSINESS SERVICES informed neither downstream communities nor DENR regarding this discharge from CLIFFSIDE. As of the date of this joint factual statement, the parties are not aware of a community downstream from CLIFFSIDE that has reported elevated levels of total THMs due to an increase in bromide discharge from the facility, but acknowledge the possibility that one or more communities may have been affected.

184. In 2013, DUKE ENERGY CAROLINAS installed a spray dry absorber for one of the two FGD scrubber units at the CLIFFSIDE facility which reduced the bromide discharge from CLIFFSIDE.

The other FGD scrubber unit at CLIFFSIDE operates only intermittently.

SUTTON FACILITY

185. DUKE ENERGY PROGRESS owns and operates the L.V. Sutton Steam Station ("SUTTON") in New Hanover County, North Carolina. SUTTON houses two coal ash basins, one constructed in 1971 and one constructed in 1984.

186. Located near SUTTON is the community of Flemington. Flemington's water supply has a history of water-quality problems. In 1978, an adjacent landfill, designated as a "Superfund" site, contaminated Flemington's drinking water and caused authorities to construct new wells.

187. Flemington's new wells are located near SUTTON's coal ash basins. They are located down-gradient from the SUTTON coal ash basins, meaning groundwater ultimately flows from the coal ash basins toward the Flemington wells.

188. DUKE ENERGY PROGRESS/Progress Energy Carolinas has monitored groundwater around SUTTON since 1990. Monitoring particularly focused on a boron plume emanating from the coal ash ponds.

189. From at least 2010 through 2013, the groundwater monitoring wells at SUTTON reported unnaturally elevated levels of some constituents, including manganese, boron, sulfate, and total dissolved solids.

190. Flemington's public utility also tested its water quality. Those tests showed exceedances of barium, manganese, sodium, and sulfate in 2013.

191. In June and July 2013, Flemington's public utility concluded that boron from SUTTON's ash ponds was entering its water supply. Tests of water from various wells at and near SUTTON from that period showed elevated levels of boron, iron, manganese, thallium, selenium, cadmium, and total dissolved solids.

192. In October 2013, DUKE ENERGY PROGRESS entered into an agreement with the Cape Fear Public Utility Authority to share costs for extending a municipal water line to the Flemington community.

(SPACE LEFT BLANK INTENTIONALLY)

SO AGREED, THIS 20th DAY OF FEBRUARY, 2015.

THOMAS G. WALKER
U.S. Attorney
Eastern District of North Carolina
North Carolina

JOHN C. CRUDEN
Assistant Attorney General
Department of Justice
Environment and Natural
Resources Division

JILL WESTMORELAND ROSE
Attorney for the United States
Acting Under Authority
Conferred by 28 USC §515
Western District of North Carolina

CLIFTON T. BARRETT
Attorney for the United States
Acting Under Authority
Conferred by 28 USC §515
Middle District of North Carolina

ON BEHALF OF EACH PROSECUTING OFFICE:

BANUMATHI RANGARAJAN
Senior Litigation Counsel
Criminal Division
U.S. Attorney's Office - EDNC

LANA N. PETTUS
Senior Trial Attorney
Environmental Crimes Section
U.S. Department of Justice

SETH M. WOOD
Assistant U.S. Attorney
Appellate Division
U.S. Attorney's Office - EDNC

STEPHEN INMAN
Deputy Chief
Criminal Division
U.S. Attorney's Office - MDNC

ERIN C. BLONDEL
Assistant U.S. Attorney
Criminal Division
U.S. Attorney's Office - EDNC

JOANNA G. MCFADDEN
Assistant U.S. Attorney
Criminal Division
U.S. Attorney's Office - MDNC

JODI MAZER
Special Assistant U.S. Attorney
Criminal Division
U.S. Attorney's Office - EDNC

STEVEN R. KAUFMAN
Assistant U.S. Attorney
Criminal Division
U.S. Attorney's Office - WDNC

SO AGREED, this the 20 day of February, 2015.

DUKE ENERGY CAROLINAS, LLC.
Defendant

BY: _____
JULIA S. JANSON
Executive Vice-President,
Chief Legal Officer, and
Corporate Secretary

Authorized Designated Official for
Duke Energy Carolinas, LLC

_____
JAMES P. COONEY, III
Womble Carlyle Sandridge & Rice LLP
Counsel for the Defendant

SO AGREED, this the 20 day of February, 2015.

DUKE ENERGY PROGRESS, INC.
Defendant

BY: _____
JULIA S. JANSON
Executive Vice-President,
Chief Legal Officer, and
Corporate Secretary

Authorized Designated Official for
Duke Energy Progress, Inc.

_____
JAMES P. COONEY, III
Womble Carlyle Sandridge & Rice LLP
Counsel for the Defendant

SO AGREED, this the 20 day of February, 2015.

DUKE ENERGY BUSINESS SERVICES, INC.
Defendant

BY: _____
JULIA S. JANSON
President and Chief Legal Officer

Authorized Designated Official for
Duke Energy Business Services, LLC

_____
JAMES P. COONEY, III
Womble Carlyle Sandridge & Rice LLP
Counsel for the Defendant

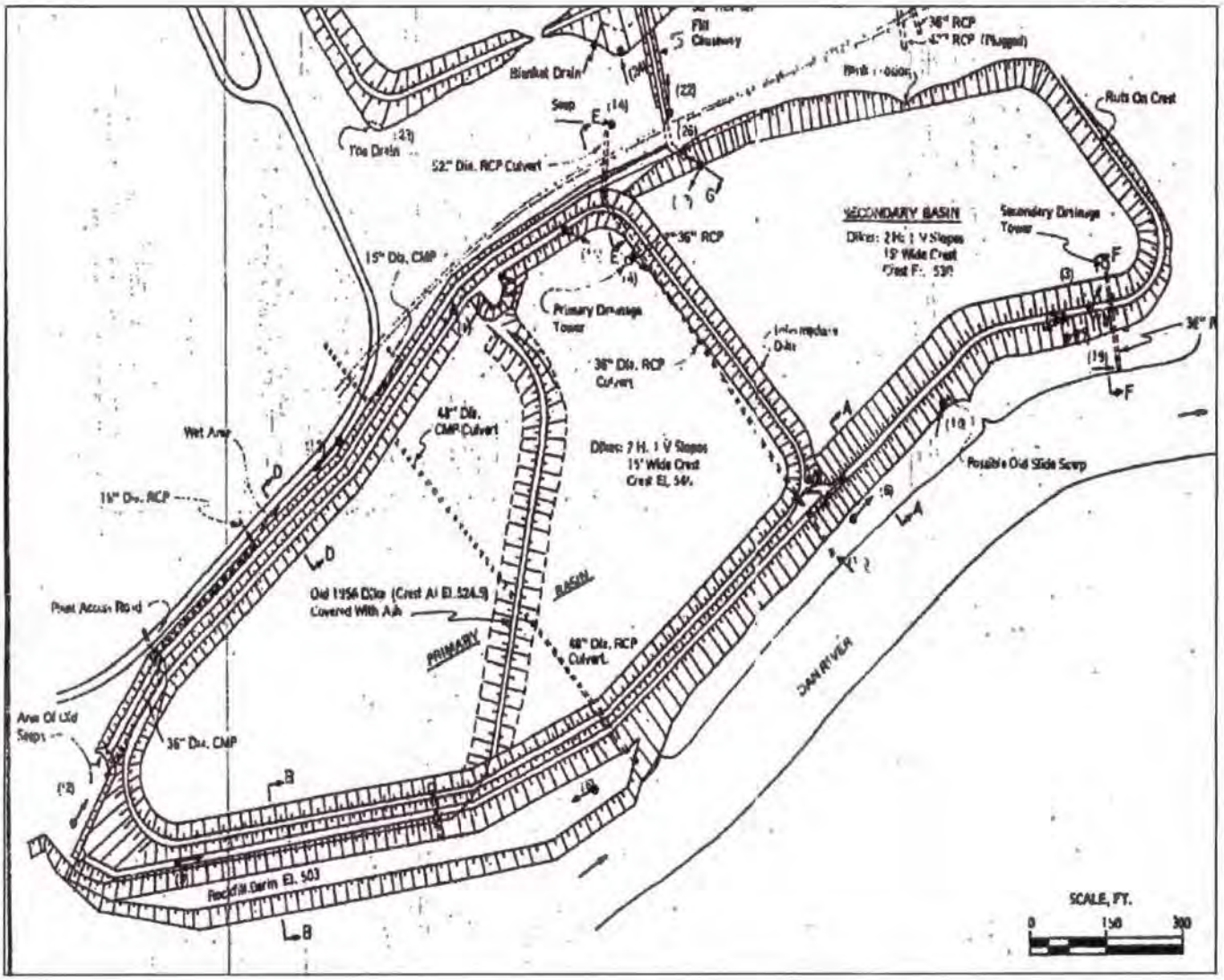
United States v. Duke Energy Business Services LLC, et al.

APPENDIX

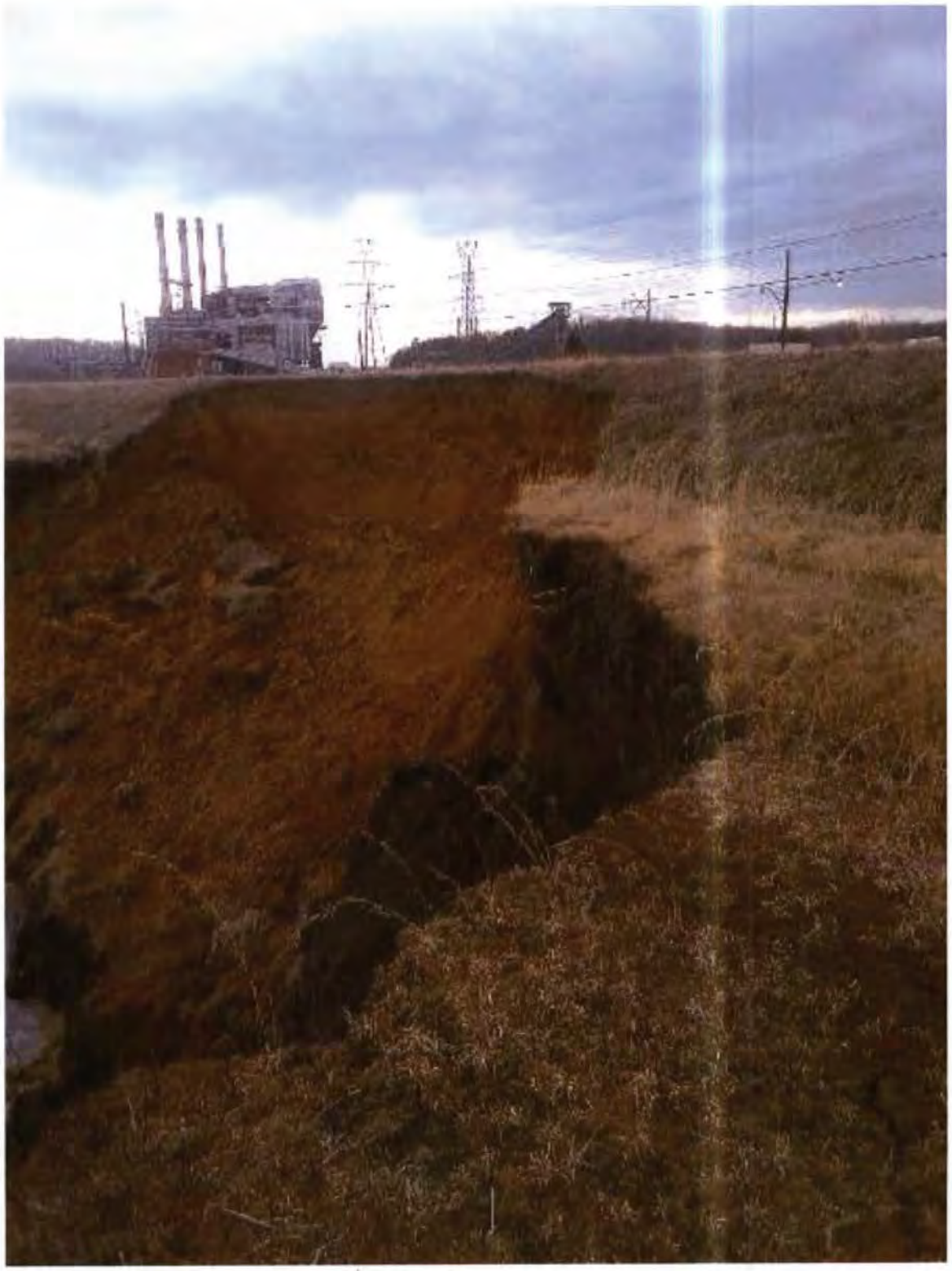
TO JOINT FACTUAL STATEMENT

February 20, 2015

Diagram 1. Engineering Firm #1, Report of Safety Inspection – Duke Power Dan River Steam Station Ash Dikes, at Fig. 4 (1981).

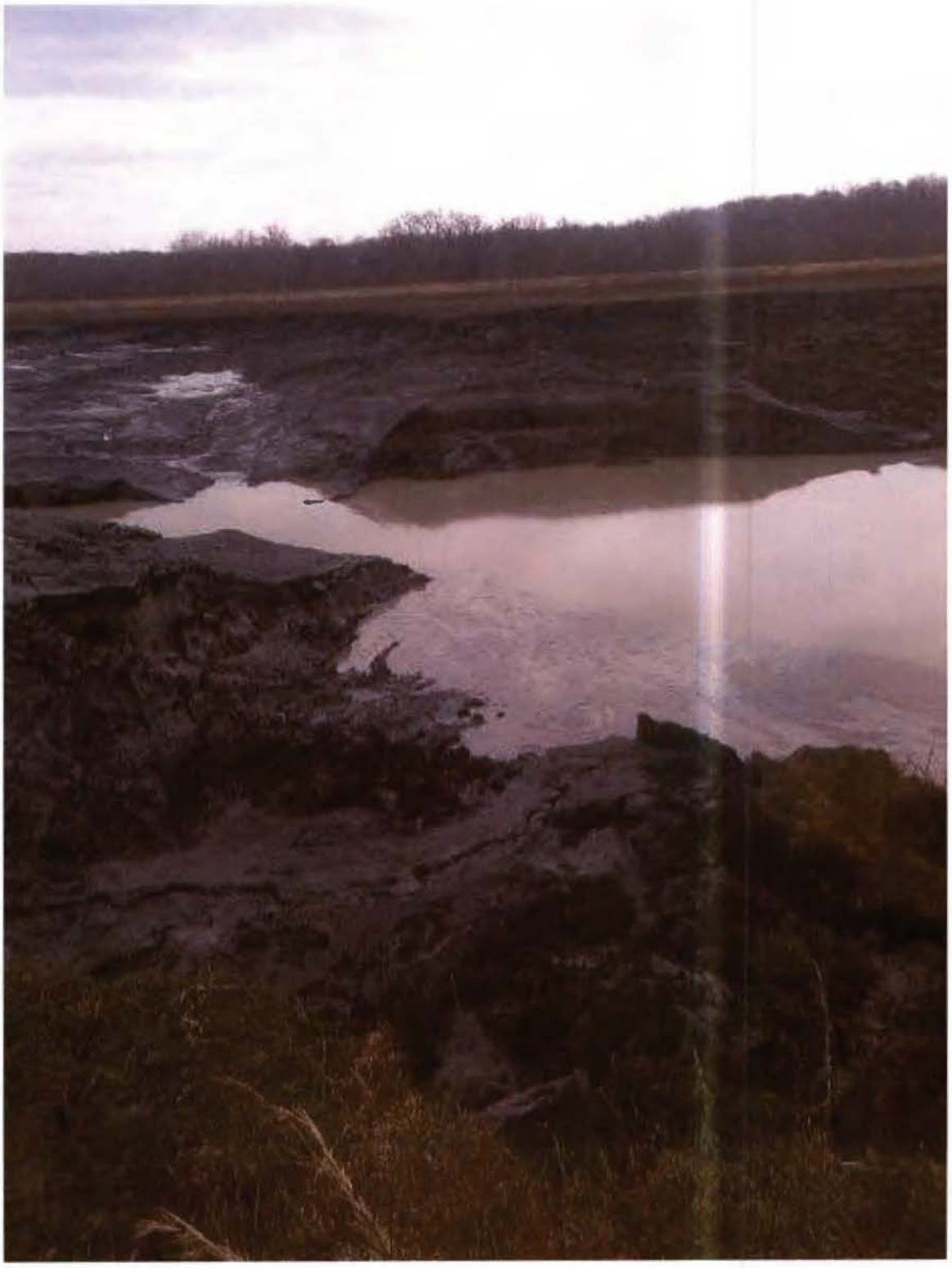


Photograph 1. Photograph of DAN RIVER coal ash basin during spill, attached to 2/2/2014, 3:49 p.m. e-mail from Duke Energy Business Services employee.



Photograph 2. Photograph of DAN RIVER coal ash basin during spill, attached to 2/2/2014, 3:49 p.m. e-mail from Duke Energy Business Services employee.

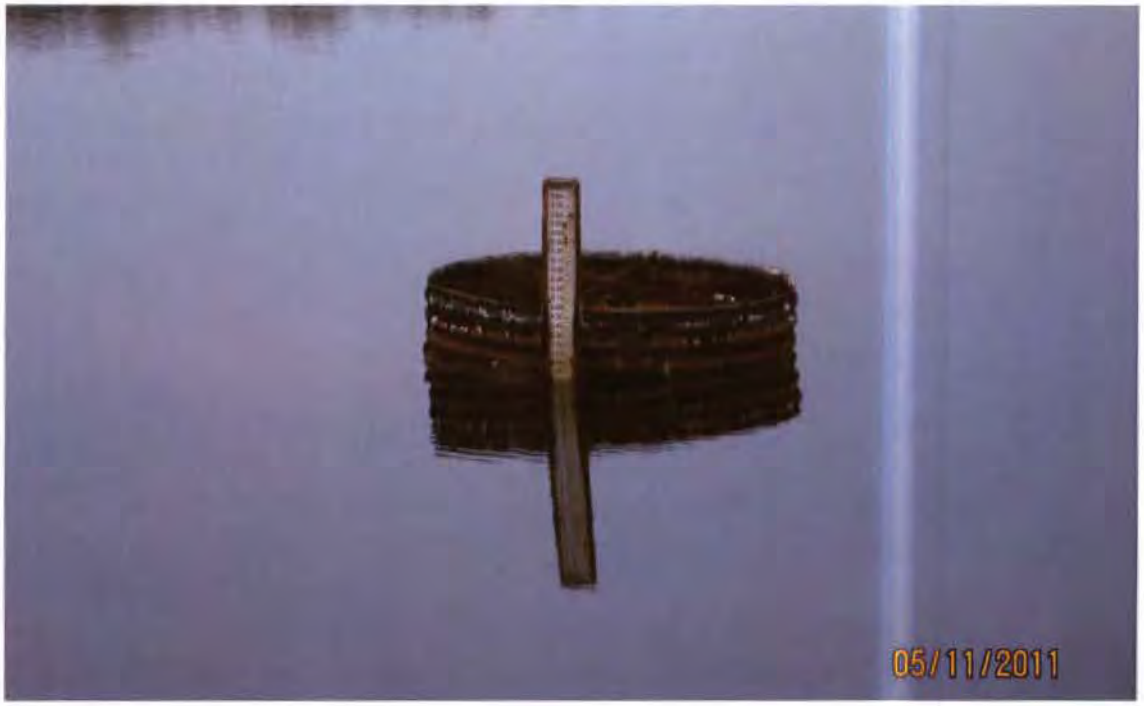
Photograph 3. Photograph of DAN RIVER coal ash basin during spill, attached to 2/2/2014, 3:49 p.m. e-mail from Duke Energy Business Services employee.



Photograph 4. Photograph of DAN RIVER coal ash basin during spill, attached to 2/2/2014, 3:49 p.m. e-mail from Duke Energy Business Services employee.

Photograph 5. Riser in CAPE FEAR 1978 coal ash basin from 2012 Five Year Independent Consultant Report.

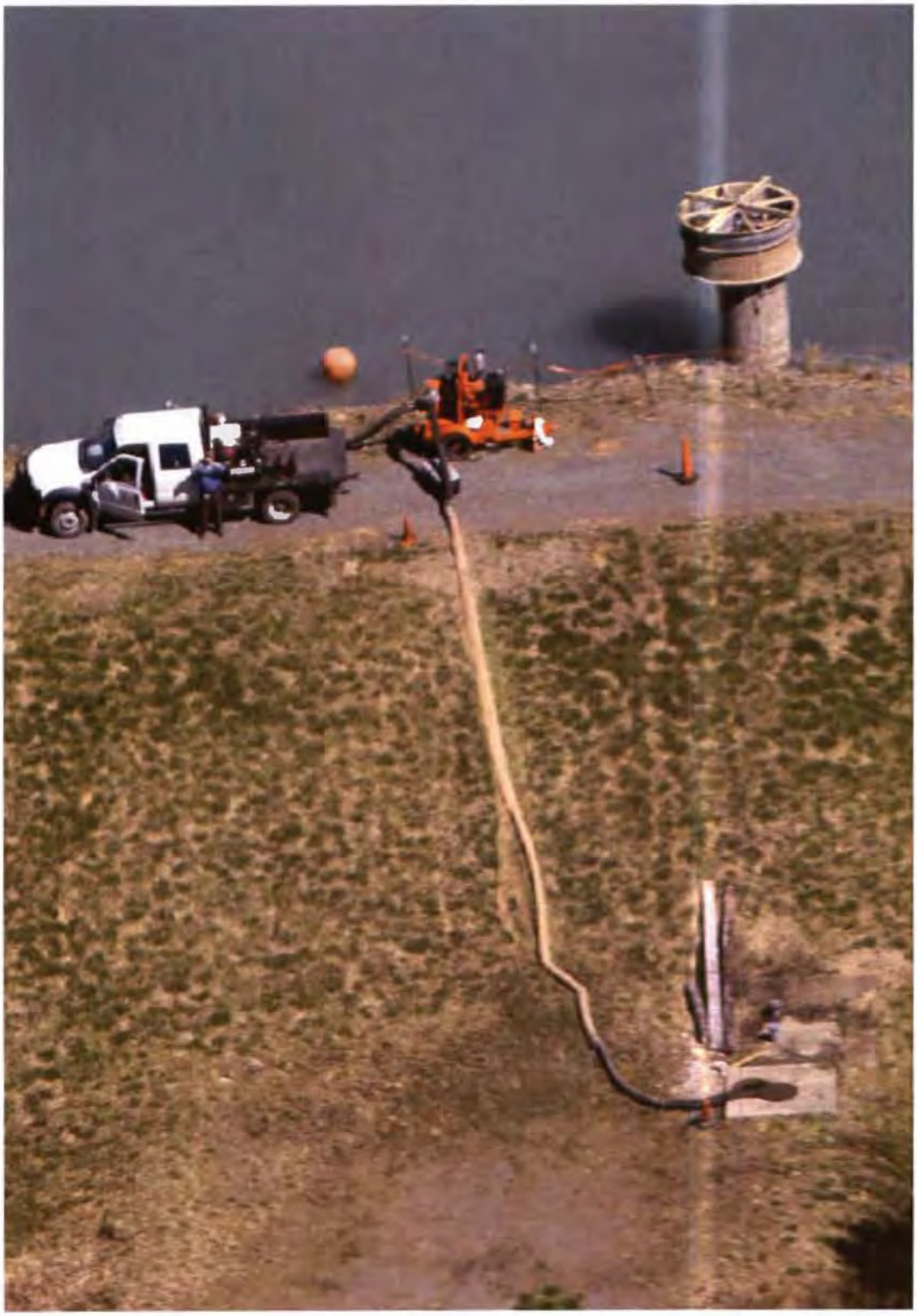
Photograph 6. Riser in CAPE FEAR 1978 coal ash basin from 2012 Five Year Independent Consultant Report.



Photograph 7. Riser in CAPE FEAR 1985 coal ash basin from 2012 Five Year Independent Consultant Report.

Photograph 8. 3/11/14 aerial photograph of CAPE FEAR 1978 coal ash basin with Godwin pump and truck.

Photograph 9. 3/11/14 aerial photograph of CAPE FEAR 1985 coal ash basin with Godwin pump and truck.



Photograph 10. 3/11/14 aerial photograph of CAPE FEAR 1985 coal ash basin with Godwin pump and truck.

Photograph 11. 3/19/14 photograph of CAPE FEAR 1978 coal ash basin riser, prior to repair work.

Photograph 12. 3/19/14 photograph of CAPE FEAR 1985 coal ash basin riser, prior to repair work.

Photograph 13. 3/19/14 photograph of old grout on CAPE FEAR coal ash basin riser.

Photograph 14. 3/19/14 photograph of new grout on CAPE FEAR coal ash basin riser.

Photograph 15. Aerial Photograph of LEE from 2011 EPA Dam Safety Assessment report.

Photograph 16. Aerial photograph depicting location of RIVERBEND Seep 12.

Photograph 17. Photograph of RIVERBEND Seep 12.

Photograph 18. Photograph of RIVERBEND Seep 12.

Photograph 19. Aerial photograph of ASHEVILLE.

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 261

[FRL–6588–1]

RIN 2050–AD91

Notice of Regulatory Determination on Wastes From the Combustion of Fossil Fuels

AGENCY: Environmental Protection Agency.

ACTION: Regulatory determination.

SUMMARY: This document explains EPA's determination of whether regulation of fossil fuel combustion wastes is warranted under subtitle C of the Resource Conservation and Recovery Act (RCRA). Today's action applies to all remaining fossil fuel combustion wastes other than high volume coal combustion wastes generated at electric utilities and independent power producing facilities and managed separately, which were addressed by a 1993 regulatory determination. These include: Large-volume coal combustion wastes generated at electric utility and independent power producing facilities that are co-managed together with certain other coal combustion wastes; coal combustion wastes generated by non-utilities; coal combustion wastes generated at facilities with fluidized bed combustion technology; petroleum coke combustion wastes; wastes from the combustion of mixtures of coal and other fuels (*i.e.*, co-burning); wastes from the combustion of oil; and wastes from the combustion of natural gas.

The Agency has concluded these wastes do not warrant regulation under subtitle C of RCRA and is retaining the hazardous waste exemption under RCRA section 3001(b)(3)(C). However, EPA has also determined national regulations under subtitle D of RCRA are warranted for coal combustion wastes when they are disposed in landfills or surface impoundments, and that regulations under subtitle D of RCRA (and/or possibly modifications to existing regulations established under authority of the Surface Mining Control and Reclamation Act (SMCRA)) are warranted when these wastes are used to fill surface or underground mines.

So that coal combustion wastes are consistently regulated across all waste management scenarios, the Agency also intends to make these national regulations for disposal in surface impoundments and landfills and minefilling applicable to coal combustion wastes generated at electric utility and independent power producing facilities that are not co-managed with low volume wastes,.

The Agency has concluded that no additional regulations are warranted for coal combustion wastes that are used beneficially (other than for minefilling) and for oil and gas combustion wastes. We do not wish to place any unnecessary barriers on the beneficial use of fossil fuel combustion wastes so that they can be used in applications that conserve natural resources and reduce disposal costs. Currently, about one-quarter of all coal combustion wastes are diverted to beneficial uses. We support increases in these beneficial uses, such as for additions to cement and concrete products, waste stabilization and use in construction products such as wallboard.

DATES: Comments in response to data and information requests in this document are due to EPA on September 19, 2000.

ADDRESSES: Public comments and supporting materials are available for viewing in the RCRA Information Center (RIC). In addition to the data and information that was included in the docket to support the RTC on FFC waste and the Technical Background Documents, the docket also includes the following document: Responses to Public Comments on the Report To Congress, Wastes from the Combustion of Fossil Fuels. The RIC is located at Crystal Gateway I, First Floor, 1235 Jefferson Davis Highway, Arlington, VA. The Docket Identification Number is F–2000–FF2F–FFFFF. The RIC is open from 9 a.m. to 4 p.m., Monday through Friday, excluding federal holidays. To review docket materials, we recommend that the public make an appointment by calling 703 603–9230. The public may copy a maximum of 100 pages from any regulatory docket at no charge. Additional copies cost $0.15/page. The index and some supporting materials are available electronically. See the **SUPPLEMENTARY INFORMATION** section for information on accessing them.

Commenters must send an original and two copies of their comments referencing docket number F–2000–FF2F–FFFFF to: (1) If using regular US Postal Service mail: RCRA Docket Information Center, Office of Solid Waste (5305G), U.S. Environmental Protection Agency Headquarters (EPA, HQ), Ariel Rios Building, 1200 Pennsylvania Avenue, NW., Washington, DC 20460–0002; or (2) if using special delivery, such as overnight express service: RCRA Docket Information Center (RIC), Crystal Gateway One, 1235 Jefferson Davis Highway, First Floor, Arlington, VA 22202. Comments may also be submitted electronically through the Internet to: *rcra-docket@epa.gov*. Comments in electronic format should also be identified by the docket number F–2000–FF2F–FFFFF and must be submitted as an ASCII file avoiding the use of special characters and any form of encryption.

Commenters should not submit electronically any confidential business information (CBI). An original and two copies of CBI must be submitted under separate cover to: RCRA CBI Document Control Officer, Office of Solid Waste (5305W), U.S. EPA, Ariel Rios Building, 1200 Pennsylvania Avenue, NW., Washington, DC 20460–0002.

FOR FURTHER INFORMATION CONTACT: For general information, contact the RCRA Hotline at 800 424–9346 or TDD 800 553–7672 (hearing impaired). In the Washington, DC, metropolitan area, call 703 412–9810 or TDD 703 412–3323.

For more detailed information on specific aspects of this regulatory determination, contact Dennis Ruddy, Office of Solid Waste (5306W), U.S. Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460–0002, telephone (703) 308–8430, e-mail address *ruddy.dennis@epa.gov*.

SUPPLEMENTARY INFORMATION: The index and several of the primary supporting materials are available on the Internet. You can find these materials at *<http://www.epa.gov/epaoswer/other/fossil/index.htm*.

The official record for this action will be kept in paper form. Accordingly, EPA will transfer all comments received electronically into paper form and place them in the official record, which will also include all comments submitted directly in writing. The official record is the paper record maintained at the address in **ADDRESSES** at the beginning of this notice.

EPA will not immediately reply to commenters electronically other than to seek clarification of electronic comments that may be garbled in transmission or during conversion to paper form, as discussed above.

The contents of today's notice are listed in the following outline:

1. General Information

A. What Action Is EPA Taking Today?

In today's action, we are determining that regulation of fossil fuel combustion (FFC) wastes under subtitle C of the Resource Conservation and Recovery Act (RCRA) is not warranted. This determination covers the following wastes:

- Large-volume coal combustion wastes generated at electric utility and independent power producing facilities that are co-managed together with certain other coal combustion wastes;
- Coal combustion wastes generated at non-utilities;
- Coal combustion wastes generated at facilities with fluidized bed combustion technology;
- Petroleum coke combustion wastes;
- Wastes from the combustion of mixtures of coal and other fuels (i.e., co-burning of coal with other fuels where coal is at least 50% of the total fuel);
- Wastes from the combustion of oil; and
- Wastes from the combustion of natural gas.

While these wastes remain exempt from subtitle C, we have further decided to establish national regulations under subtitle D of RCRA (RCRA sections 1008(a) and 4004(a)) for coal combustion wastes that are disposed in landfills or surface impoundments or used to fill surface or underground mines. For coal combustion wastes used as minefill, we will consult with the Office of Surface Mining in the Department of the Interior and thoroughly assess whether equivalent protectiveness could be achieved by using regulatory authorities available under the Surface Mining Control and Reclamation Act (SMCRA), as well as those afforded under the Resource Conservation and Recovery Act. We will consider whether RCRA subtitle D or SMCRA authorities or some combination of both are most appropriate to regulate the disposal of coal combustion wastes when used for minefill in surface and underground mines to ensure protection of human health and the environment. These standards will be developed through notice and comment rulemaking and in consultation with states and other stakeholders. These regulations will, in EPA's view, ensure that the trend towards improved management of coal combustion wastes over recent years will accelerate and will ensure a consistent level of protection of human health and the environment is put in place across the United States.

If, as a result of comments in response to this notice; the forthcoming analyses identified in this notice; or additional information garnered in the course of developing these national regulations; we find that there is a need for regulation under the authority of RCRA subtitle C, the Agency will revise this determination accordingly.

We recognize our decision to develop regulations under RCRA subtitle D (or, for minefilling, possibly under SMCRA) for the above-listed coal combustion wastes was not specifically identified as an option in our March 31, 1999 Report to Congress. Our final determination reflects our consideration of public comments received on the Report to Congress and other analyses that we conducted.

Today's decision was, in the Agency's view, a difficult one, given the many competing considerations discussed throughout today's notice. After considering all of the factors specified in RCRA section 8002(n), we have decided as discussed further below, that the decisive factors are the trends in present disposal and utilization practices (section 8002 (n)(2)), the current and potential utilization of the wastes (Section 8002 (n)(8), and the admonition against duplication of efforts by other federal and state agencies.

As described in the Report to Congress, the utility industry has made significant improvements in its waste management practices over recent years, and most state regulatory programs are similarly improving. For example, in the utility industry the use of liners and groundwater monitoring at landfills and surface impoundments has increased substantially over the past 15 years as indicated in the following table.

PERCENT OF UTILITY COAL COMBUSTION WASTE MANAGEMENT UNITS WITH CONTROLS IN 1995

Waste management unit	Liners		Groundwater monitoring	
	Percent of all units	Percent of new units*	Percent of all units	Percent of new units*
Landfills	57	75	85	88
Surface Impoundments	26	60	38	65

* New units constructed between 1985–1995.
Source: USWAG, EPRI 1995.

Public comments and other analyses, however, have convinced us that these wastes could pose risks to human health and the environment if not properly managed, and there is sufficient evidence that adequate controls may not be in place—for example, while most states can now require newer units to include liners and groundwater monitoring, 62% of existing utility surface impoundments do not have groundwater monitoring. This, in our view, justifies the development of national regulations. We note, however, that some waste management units may not warrant liners and/or groundwater monitoring, depending on site-specific characteristics.

New information we received in public comments includes additional documented damage cases, as well as cases indicating at least a potential for damage to human health and the environment. We did not independently investigate these damage cases; rather, we relied on information contained in state files. While the absolute number of documented damage cases is not large, we have considered the evidence of proven and potential damage in light of the proportion of facilities that lack basic environmental controls (*e.g.,* groundwater monitoring). We acknowledge, moreover, that our inquiry into the existence of damage cases was focused primarily on a subset of states—albeit states that account for almost 20 percent of coal fired utility electricity generation capacity. Given the volume of coal combustion wastes generated nationwide (115 million tons) and the numbers of facilities that currently lack some basic environmental controls, especially groundwater monitoring, other cases of proven and potential damage are likely to exist. Because EPA did not use a statistical sampling methodology to evaluate the potential for damage, the Agency is unable to determine whether the identified cases are representative of the conditions at all facilities and, therefore, cannot quantify the extent and magnitude of damages at the national level.

Since the Report to Congress, we have conducted additional analyses of the potential for the constituents of coal combustion wastes to leach in dangerous levels into ground water. Based on a comparison of drinking water and other appropriate standards to leach test data from coal combustion waste samples, we identified a potential for risks from arsenic that we cannot dismiss at this time. This conclusion is based on possible exceedences of a range of values that EPA is currently considering for a revised arsenic MCL. Once a new arsenic MCL is established, additional groundwater modeling may be required to evaluate the likelihood of exceeding that MCL.

As discussed further below, in light of certain comments received on the Report to Congress, we are not relying on a quantitative groundwater risk assessment to assess potential risks to human health or the environment. In the absence of a more complete groundwater risk assessment, we are unable at this time to draw quantitative conclusions regarding the risks due to arsenic or other contaminants posed by improper waste management. Once we have completed a review of our groundwater model and made any necessary changes, we will reevaluate groundwater risks and take appropriate regulatory actions. We will specifically assess new modeling results as they relate to any promulgated changes in the arsenic MCL.

We acknowledge that, even without federal regulatory action, many facilities in the utility industry have either voluntarily instituted adequate environmental controls or have done so at the direction of states that regulate these facilities. In addition, we found that for the proven damage cases, the states (and in two cases, EPA under the Superfund program) have taken action to mitigate risk and require corrective action. However, in light of the evidence of actual and potential environmental releases of metals from these wastes; the large volume of wastes generated from coal combustion; the proportion of existing and even newer units that do not currently have basic controls in place; and the presence of hazardous constituents in these wastes; we believe, on balance, that the best means of ensuring that adequate controls are imposed where needed is to develop national subtitle D regulations. As we develop and issue the national regulations, we will try to minimize disruptions to operation of existing waste management units.

In taking today's action, we carefully considered whether to develop national regulations under RCRA subtitle D or subtitle C authorities. One approach we considered was to promulgate regulations pursuant to subtitle C authority, similar to recently proposed regulations applicable to cement kiln dust. Under this approach, EPA would have established national management standards for coal combustion wastes managed in landfills and surface impoundments and used for minefilling, as well as a set of tailored subtitle C requirements, promulgated pursuant to RCRA section 3004(x). If wastes were properly managed in accordance with subtitle D-like standards, they would not be classified as a hazardous waste. If wastes were not properly managed, they would become listed hazardous wastes subject to tailored subtitle C standards. This approach would give EPA enforcement authority in states following their adoption of the contingent management listing.

We believe, however, for the reasons described below, the better approach at this time to ensuring adequate management of FFC wastes is to develop national regulations under subtitle D rather than subtitle C. EPA has reached this conclusion in large part based on consideration of ''present disposal and utilization practices.'' RCRA § 8002(n). As noted above, present disposal practices in landfills and surface impoundments are significantly better than they have been in the past in terms of imposing basic environmental controls such as liners and groundwater monitoring. This trend is the result of increasing regulatory oversight by states of the management of these wastes as well as voluntary industry improvements. In the 1980's, only 11

states had authority to require facilities to install liners, and 28 states had the authority to require facilities to conduct groundwater monitoring at landfills. As of 1995, these rates were significantly higher, with 43 states having the authority to require liners and 46 states having the authority to require groundwater monitoring at landfills. When authority under state groundwater and drinking water regulations are considered, some commenters have suggested that nearly all states can address the management of these wastes. Thus, with the exception of relatively few states, the regulatory infrastructure is generally in place at the state level to ensure adequate management of these wastes.

While the trend both in terms of state regulatory authorities and the imposition of controls at these facilities has been positive, between 40 and 70 percent of sites lacked controls such as liners and/or groundwater monitoring as of 1995. This gap is of environmental concern given the potential for risks posed by mismanagement of coal combustion wastes in certain circumstances. Nonetheless, given most of the states' current regulatory capabilities and the evidence that basic controls are increasingly being put in place by the states and facilities (see RCRA section 8002(n), which directs EPA to consider actions of state and other federal agencies with a view to avoiding duplication of effort), EPA believes that subtitle D controls will provide sufficient clarity and incentive for states to close the remaining gaps in coverage, and for facilities to ensure that their wastes are managed properly.

For minefilling, although we have considerable concern about certain current practices (*e.g.*, placement directly into groundwater) we have not yet identified a case where placement of coal wastes can be determined to have actually caused increased damage to ground water. In addition, there is a federal regulatory program—SMCRA—expressly designed to address environmental risks associated with coal mines. Finally, given that states have been diligent in expanding and upgrading programs, as they have done for surface impoundments and landfills, we believe they will be similarly responsive in addressing environmental concerns arising from this emerging practice. In short, we arrive at the same conclusions, for substantially the same reasons, for this practice as we did for landfills and surface impoundments: that subtitle D controls, or upgraded SMCRA controls or a combination of the two, should provide sufficient clarity and incentive to ensure proper handling of this waste. Having determined that subtitle C regulation is not warranted for all other management practices, EPA does not see a basis in the record for carving this one practice out for separate regulatory treatment.

Once these regulations are effective, facilities would be subject to citizen suits for any violation of the standards. If EPA were addressing wastes that had not been addressed by the states (or the federal government) in the past, or an industry with wide evidence of irresponsible solid waste management practices, EPA may well conclude that the additional incentives for improvement and compliance provided by the subtitle C scheme—the threat of federal enforcement and the stigma associated with improper management of RCRA subtitle C waste—were necessary. But the record before us indicates that the structure and the sanctions associated with a subtitle D approach (or a SMCRA approach if EPA determines it is equivalent) should be sufficient.

We also see a potential downside to pursuing a subtitle C approach. Section 8002(n)(8) directs us to consider, among other factors, "the current and potential utilization of such materials." Industry commenters have indicated that they believe subjecting any coal combustion wastes to a subtitle C regime would place a significant stigma on these wastes, the most important effect being that it would adversely impact beneficial reuse. As we understand it, the concern is that, even though beneficially reused waste would not be hazardous under the contemplated subtitle C approach, the link to subtitle C would nonetheless tend to discourage purchase and re-use of the waste. We do not wish to place any unnecessary barriers on the beneficial uses of these wastes, because they conserve natural resources, reduce disposal costs and reduce the total amount of waste destined for disposal. States and industry have also expressed concern that regulation under subtitle C could cause a halt in the use of coal combustion wastes to reclaim abandoned and active mine sites. We recognize that when done properly, minefilling can lead to substantial environmental benefits. EPA believes the contingent management scheme we discussed should diminish any stigma that might be associated with the subtitle C link. Nonetheless, we acknowledge the possibility that the approach could have unintended consequences. We would be particularly concerned about any adverse effect on the beneficial re-use market for these wastes because more than 23 percent (approximately 28 million tons) of the total coal combustion waste generated each year is beneficially reused and an additional eight percent (nine million tons) is used for minefilling. EPA believes that such reuse when performed properly, is by far the environmentally preferable destination for these wastes, including when minefilled. Normally, concerns about stigma are not a deciding factor in EPA's decisions under RCRA, given the central concern under the statute for protection of human health and the environment. However, given our conclusion that the subtitle D approach here should be fully effective in protecting human health and the environment, and given the large and salutary role that beneficial reuse plays for this waste, concern over stigma is a factor supporting our decision today that subtitle C regulation is unwarranted in light of our decision to pursue a subtitle D approach.

Additionally, in a 1993 regulatory determination, EPA previously addressed large volume coal combustion wastes generated at electric utility and independent power producing facilities that manage the wastes separately from certain other low volume and uniquely associated coal combustion wastes (see 58 FR 42466; August 9, 1993). Our 1993 regulatory determination maintained the exemption of these large volume coal combustion wastes from being regulated as hazardous wastes when managed separately from other wastes (e.g., in monofills). We intend that the national subtitle D regulations we develop for the coal combustion wastes subject to today's regulatory determination will also be applicable to the wastes covered in the 1993 regulatory determination for the reasons listed below, so that all coal combustion wastes are consistently regulated for placement in landfills, surface impoundments, and minefills.

- The co-managed coal combustion wastes that we studied extensively in making today's regulatory determination derive their characteristics largely from these large-volume wastes and not from the other wastes that are co-managed with them.
- We believe that the risks posed by the co-managed coal combustion wastes result principally from the large-volume wastes.
- These large-volume coal combustion wastes, account for over 20% of coal combustion wastes.

As we proceed with regulation development, we will also take enforcement action under RCRA section 7003 when we identify cases of imminent and substantial endangerment. We will also use Superfund remedial and emergency

response authorities under the Comprehensive Environmental Response Compensation and Liabilities Act (CERCLA), as appropriate, to address damages that result in risk to human health and the environment.

However, as stated above, this decision was a difficult one and EPA believes that, absent our conclusions regarding the current trends in management of this waste, the waste might present sufficient potential threat to human health and the environment to justify subtitle C regulation. There are several factors that might cause us to rethink our current determination. First, and perhaps most importantly, if current trends toward protective management do not continue, EPA may well determine that subtitle C regulation is warranted for this waste. As we have stated, we do not believe the current gaps in the basic controls are acceptable, and our determination that subtitle C regulation is not warranted is premised to a large extent on our conclusion that subtitle D regulation will be sufficient to close these gaps. If this conclusion turns out not to be warranted, we would be inclined to re-examine our current decision.

Second, EPA will continue to examine available information and, as a result of the ongoing review, may conclude over the next several months that this decision should be revised. Our ongoing review will include consideration of: (1) The extent to which fossil fuel combustion wastes have caused actual or potential damage to human health or the environment; (2) the environmental effects of filling underground and surface coal mines with fossil fuel combustion wastes; and (3) the adequacy of existing state and/or federal regulation of these wastes. Finally, the agency will consider the results of a report of the National Academy of Sciences regarding the adverse human health effects of mercury, one of the constituents in fossil fuel combustion wastes. EPA believes that this report will enhance our understanding of the risks due to exposure to mercury. All of these efforts may result in a subsequent revision of today's regulatory determination.

Finally, relating to oil combustion wastes, we will work with relevant stakeholders so that any necessary measures are taken to ensure that oil combustion wastes currently managed in the two known remaining unlined surface impoundments are managed in a manner that protects human health and the environment.

B. What Is the Statutory Authority for This Action?

We are issuing today's notice under the authority of RCRA section 3001 (b)(3)(C), as amended. This section exempts certain wastes, including fossil fuel combustion wastes, from hazardous waste regulation until the Agency completes a Report to Congress mandated by RCRA section 8002 (n) and maintains the exemption, unless the EPA Administrator makes a determination that subtitle C (hazardous waste) regulation is warranted. RCRA section 3004 (x) provides the Agency with flexibility in developing subtitle C standards. If appropriate, these formerly exempted wastes may not be subjected to full subtitle C requirements in areas such as treatment standards, liner design requirements and corrective action.

C. What Was the Process EPA Used in Making Today's Decision?

1. What Approach Did EPA Take to Studying Fossil Fuel Combustion Wastes?

We conducted our study of wastes generated by the combustion of fossil fuels in two phases. The first phase, called the Part 1 determination, covered high volume coal combustion wastes (*e.g.*, bottom ash and fly ash) generated at electric utility and independent power producing facilities (non-utility electric power producers that are not engaged in any other industrial activity) and managed separately from other fossil fuel combustion wastes. In 1993, EPA issued a regulatory determination that exempted Part 1 wastes from regulation as hazardous wastes (see 58 FR 42466; August 9, 1993). Today's regulatory determination is the second phase of our effort, or the Part 2 determination. It covers all other fossil fuel combustion wastes not covered in Part 1. This includes high volume, utility-generated coal combustion wastes when co-managed with certain low volume wastes that are also generated by utility coal burners; coal combustion wastes generated by industrial, non-utility, facilities; and wastes from the combustion of oil and gas. Under court order, we are required to complete the Part 2 regulatory determination by April 25, 2000. [1]

[1] The consent decree entered into by EPA (*Frank Gearhart, et al.* v. *Browner, et al.*, No. 91–2435 (D.D.C.) for completing the studies and regulatory determination for fossil fuel combustion wastes used the term "remaining wastes" to differentiate the wastes to be covered in today's decision from the large-volume utility coal combustion wastes that were covered in the August 1993 regulatory determination (see 58 FR 42466).

2. What Statutory Requirements Does EPA Have To Meet in Making Today's Regulatory Determinations?

RCRA section 8002(n) specifies eight study factors that we must take into account in our decision-making. These are:

1. The source and volumes of such materials generated per year.
2. Present disposal practices.
3. Potential danger, if any, to human health and the environment from the disposal of such materials.
4. Documented cases in which danger to human health or the environment has been proved.
5. Alternatives to current disposal methods.
6. The costs of such alternatives.
7. The impact of those alternatives on the use of natural resources.
8. The current and potential utilization of such materials.

Additionally, in developing the Report to Congress, we are directed to consider studies and other actions of other federal and State agencies with a view toward avoiding duplication of effort (RCRA section 8002(n)). In addition to considering the information contained in the Report, EPA is required to base its regulatory determination on information received in public hearings and comments submitted on the Report to Congress (RCRA section 3001(b)(3)(C)).

3. What Were the Agency's Sources of Information and Data That Serve as the Basis for This Decision?

We gathered publicly available information from a broad range of sources, including federal and state agencies, industry trade groups, environmental organizations, and open literature searches. We requested information from all stakeholder groups on each of the study factors Congress requires us to evaluate. For many of the study factors, very limited information existed prior to this study. We worked closely with the Edison Electric Institute (EEI), Utility Solid Waste Activities Group (USWAG), the Electric Power Research Institute (EPRI), and the Council of Industrial Boiler Owners (CIBO) as those organizations developed new information. Because other ongoing EPA projects currently focus on portions of the FFC waste generator universe, we also leveraged data collection efforts conducted for air, industrial waste, and hazardous waste programs. In addition, we obtained information from environmental organizations regarding beneficial uses of some FFC wastes and methods for characterizing the risks associated with FFC wastes.

Specifically, we gathered and analyzed the following information from industry, states and environmental groups:

- Published and unpublished materials obtained from state and federal agencies, utilities and trade industry groups, and other knowledgeable parties on the volumes and characteristics of coal, oil, and natural gas combustion wastes and the corresponding low-volume and uniquely associated wastes (see the following section for a description of "uniquely associated wastes").
- Published and unpublished materials on waste management practices (including co-disposal and re-use) associated with FFC wastes and the corresponding low-volume and uniquely associated wastes.
- Published and unpublished materials on the potential environmental impacts associated with FFC wastes.
- Published and unpublished materials on trends in utility plant operations that may affect waste volumes and characteristics. We gathered specific information on innovations in scrubber use and the potential impacts of the 1990 Clean Air Act Amendments on waste volumes and characteristics.
- Energy Information Agency (EIA), Department of Energy, data on utility operations and waste generation obtained from EIA's Form 767 database. These data are submitted to EIA annually by electric utilities.
- Site visit reports and accompanying facility submittals for utility and non-utility plants we visited during the study.
- Materials obtained from public files maintained by State regulatory agencies. These materials focus on waste characterization, waste management, and environmental monitoring data, along with supporting background information.

We visited five states to gather specific information about state regulatory programs, FFC waste generators, waste management practices and candidate damage cases related to fossil fuel combustion. The five states we examined in great detail were: Indiana, Pennsylvania, North Carolina, Wisconsin, and Virginia. These five states account for almost 20 percent of coal-fired utility electrical generation capacity.

We also performed a variety of analyses, including human health and ecological risk assessments, analyses of existing federal and state regulatory programs, and economic impact analyses. We discussed and shared these results with all of our stakeholders. We also conducted an external peer review of our risk analysis.

4. What Process Did EPA Follow To Obtain Comments on the Report to Congress?

RCRA requires that we publish a Report to Congress (RTC) evaluating the above criteria. Further, within six months of submitting the report, we must, after public hearings and opportunity for comment, decide whether to retain the exemption from hazardous waste requirements or whether regulation as hazardous waste is warranted. On March 31, 1999, we issued the required RTC on those fossil fuel combustion wastes (coal, oil and gas) not covered in the Part 1 regulatory determination, which are also known as the "remaining wastes" (see footnote 1).

We asked the public to comment on the Report and the appropriateness of regulating fossil fuel wastes under subtitle C of RCRA. To ensure that all interested parties had an opportunity to present their views, we held a public meeting with stakeholders on May 21, 1999. The April 28, 1999 **Federal Register** notice provided a 45-day public comment period, until June 14, 1999. We received over 150 requests to extend the public comment period by up to six months. However, we were obligated by a court-ordered deadline to issue our official Regulatory Determination by October 1, 1999. (See 64 FR 31170; June 10, 1999.) In response to requests for an extension, we entered into discussions with the parties to consider an extension of the comment period to ensure that all interested members of the public had sufficient time to complete their review and submit comments. Subsequently, the plaintiffs in *Gearhart* v. *Reilly* moved to modify the consent decree to reopen the comment period and to allow EPA until March 10, 2000 to complete the Regulatory Determination. We supported the motion, and on September 2, 1999, the Court granted the motion. In compliance with the court order, on September 20, 1999, we announced that public comments would be accepted through September 24, 1999 (64 FR 50788; Sept. 20, 1999). We have since received two extensions to the date for the final determination. Currently, EPA is directed to issue the Part 2 regulatory determination by April 25, 2000.

We received about 220 comments on the RTC from the public hearing and our **Federal Register** requests for comments. The docket for this action (Docket No. F–99–FF2P–FFFFF) contains all individual comments presented in the public meetings and hearing, and a transcript from the public hearing, and all written comments. The docket is available for public inspection. Today's decision is based on the RTC, its underlying data and analyses, public comments, and EPA analyses of these comments.

The comments covered a wide variety of topics discussed in the Report to Congress, such as fossil fuel combustion waste generation and characteristics; current and alternative practices for managing FFC waste; documented damage cases and potential danger to human health and the environment; existing regulatory controls on FFC waste management; cost and economic impacts of alternatives to current management practices; FFC beneficial use practices; and our review of applicable state and federal regulations.

D. What Is the Significance of "Uniquely Associated Wastes" and What Wastes Does EPA Consider To Be "Uniquely Associated Wastes?'

Facilities that burn fossil fuels generate combustion wastes and also generate other wastes from processes that are related to the main fuel combustion processes. Often, as a general practice, facilities co-dispose these wastes with the large volume wastes that are subject to the RCRA section 3001 (b) (3) (C) exemption. Examples of these related wastes are:

- Precipitation runoff from the coal storage piles at the facility.
- Waste coal or coal mill rejects that are not of sufficient quality to burn as fuel.
- Wastes from cleaning the boilers used to generate steam.

There are numerous wastes like these, collectively known as "low-volume" wastes. Further, when one of these low-volume wastes, during the course of generation or normal handling at the facility, comes into contact with either fossil fuel (*e.g.*, coal, oil) or fossil fuel combustion waste (*e.g.*, coal ash or oil ash) and it takes on at least some of the characteristics of the fuel or combustion waste, we call it a "uniquely associated" waste. When uniquely associated wastes are co-managed with fossil fuel combustion wastes, they fall within the coverage of today's regulatory determination. When managed separately, uniquely associated wastes are subject to regulation as hazardous waste if they are listed wastes or exhibit the characteristic of a hazardous waste (see 40 CFR 261.20 and 261.30, which specify when a solid waste is considered to be a hazardous waste).

The Agency recognizes that determining whether a particular waste

is uniquely associated with fossil fuel combustion involves an evaluation of the specific facts of each case. In the Agency's view, the following qualitative criteria should be used to make such determinations on a case-by-case basis:

(1) Wastes from ancillary operations are not "uniquely associated" because they are not properly viewed as being "from" fossil fuel combustion.

(2) In evaluating a waste from non-ancillary operations, one must consider the extent to which the waste originates or derives from the fossil fuels, the combustion process, or combustion residuals, and the extent to which these operations impart chemical characteristics to the waste.

The low-volume wastes that are not uniquely associated with fossil fuel combustion would not be subject to today's regulatory determination. That is, they would not be accorded an exemption from RCRA subtitle C, whether or not they were co-managed with any of the exempted fossil fuel combustion wastes. Instead, they would be subject to the RCRA characteristic standards and hazardous waste listings. The exemption applies to mixtures of an exempt waste with a non-hazardous waste, but when an exempt waste is mixed with a hazardous waste, the mixture is not exempt.

Based on our identification and review of low volume wastes associated with the combustion of fossil fuels, we are considering offering the following guidance concerning which low volume wastes are uniquely associated with and which are not uniquely associated with fossil fuel combustion. Unless there are some unusual site-specific circumstances, we would generally consider that the following lists of low volume wastes are uniquely and non-uniquely associated wastes:

Uniquely Associated

- Coal Pile Runoff
- Coal Mill Rejects and Waste Coal
- Air Heater and Precipitator Washes
- Floor and Yard Drains and Sumps
- Wastewater Treatment Sludges
- Boiler Fireside Chemical Cleaning Wastes

Not Uniquely Associated

- Boiler Blowdown
- Cooling Tower Blowdown and Sludges
- Intake or Makeup Water Treatment and Regeneration Wastes
- Boiler Waterside Cleaning Wastes
- Laboratory Wastes
- General Construction and Demolition Debris
- General Maintenance Wastes

Moreover, we do not generally consider spillage or leakage of materials used in the processes that generate these non-uniquely associated wastes, such as boiler water treatment chemicals, to be uniquely associated wastes, even if they occur in close proximity to the fossil fuel wastes covered by this regulatory determination.

An understanding of whether a waste is uniquely associated can be important in one circumstance. If a waste is not uniquely associated and is a hazardous waste, co-managment with a Bevill waste will result in loss of the Bevill exemption. As a general matter, the wastes identified above as potentially not uniquely associated do not tend to be hazardous. This issue may therefore not be critical. The Agency, however, must still define appropriate boundaries for the Bevill exemption, because there is no authority to grant Bevill status to wastes that are not uniquely associated—the exemption was not intended as an umbrella for wastes that other industries must treat as hazardous.

EPA solicits comment on this discussion of uniquely associated wastes in the context of fossil fuel combustion and will issue final guidance after reviewing and evaluating information we receive as a result of this request.

E. Who Is Affected by Today's Action and How Are They Affected?

As explained above, fossil fuel combustion wastes generated from the combustion of coal, oil and natural gas will continue to remain exempt from being regulated as hazardous wastes under RCRA. No party is affected by today's determination to develop regulations applicable to coal combustion wastes when they are land disposed or used to fill surface or underground mines because today's action does not impose requirements. However, if such regulations are promulgated, they would affect coal combustion wastes subject to today's regulatory determination as well as wastes covered by the Part 1 regulatory determination when they are disposed in landfills and surface impoundments, or when used to fill surface or underground mines.

While we do not intend that national subtitle D regulations would be applicable to oil combustion wastes, we intend to work with relevant stakeholders so that any necessary measures are taken to ensure that oil combustion wastes currently managed in the two known remaining unlined surface impoundments are managed in a manner that protects human health and the environment.

F. What Additional Actions Will EPA Take After this Regulatory Determination Regarding Coal, Oil and Natural Gas Combustion Wastes?

To ensure that entities who generate and/or manage fossil fuel combustion wastes provide long-term protection of human health and the environment, we plan several actions:

- We will review comments submitted in response to today's notice on uniquely associated wastes and on the adequacy of the guidance developed by the utility industry on co-management of mill rejects (pyrites) with large volume coal combustion wastes.
- We will work with the State of Massachusetts and the owners and operators of the remaining two oil combustion facilities that currently manage their wastes in unlined surface impoundments to ensure that any necessary measures are taken so these wastes are managed in a manner that protects human health and the environment (described in section 3.D. of this document).
- We are evaluating the groundwater model and modeling methods that were used in the RTC to estimate risks for these wastes. This review may result in a re-evaluation of the potential groundwater risks posed by the management of fossil fuel combustion wastes and action to revise our Part 1 and Part 2 determinations if appropriate (see section 2.C. of this document).
- There are a number of ongoing and evolving efforts underway at EPA to improve our understanding of the human health impacts of wastes used in agricultural settings. We expect to receive substantial comments and new scientific information based on a risk assessment of the use of cement kiln dust as a substitute for agricultural lime (see 64 FR 45632; August 20, 1999) and other Agency efforts. As a result, we may refine our methodology for assessing risks related to the use of wastes in agricultural settings. If these efforts lead us to a different understanding of the risks posed by fossil fuel combustion wastes when used as a substitute for agricultural lime, we will take appropriate action to reevaluate today's regulatory determination (see section 2.C. of this document).
- We will review the findings and recommendations of the National Academy of Sciences upcoming report on mercury and assess its implications on risks due to exposure to mercury. We will ensure that the regulations we develop as a result of today's regulatory determination address any additional

risks posed by these wastes if hazardous constituent levels exceed acceptable levels

- We will reevaluate risk posed by managing coal combustion solid wastes if levels of mercury or other hazardous constituents change due to any future Clean Air Act air pollution control requirements for coal burning utilities (see section 2.C. of this document).
- We will continue EPA's partnership with the states to finalize voluntary industrial solid waste management guidance that identifies baseline protective practices for industrial waste management units, including fossil fuel combustion waste management units. We will use relevant information and knowledge that we obtain as a result of this effort to assist us in developing national regulations applicable to coal combustion wastes.

2. What Is the Basis for EPA's Regulatory Determination for Coal Combustion Wastes?

A. What Is the Agency's Decision Regarding the Regulatory Status of Coal Combustion Wastes and Why Did EPA Make That Decision?

We have determined at this time that regulation of coal combustion wastes under subtitle C is not warranted. However, we have also decided that it is appropriate to establish national regulations under non-hazardous waste authorities for coal combustion wastes that are disposed in landfills and surface impoundments. We believe that subtitle D regulations are the most appropriate mechanism for ensuring that these wastes disposed in landfills and surface impoundments are managed safely.

EPA's conclusion that some form of national regulation is warranted to address these wastes is based on the following considerations: (a) The composition of these wastes could present danger to human health and the environment under certain conditions, and "potential" damage cases identified by EPA and commenters, while not definitively demonstrating damage from coal combustion wastes, may indicate that these wastes have the potential to pose such danger; (b) we have identified eleven documented cases of proven damages to human health and the environment by improper management of these wastes in landfills and surface impoundments; (c) present disposal practices are such that, in 1995, these wastes were being managed in 40 percent to 70 percent of landfills and surface impoundments without reasonable controls in place, particularly in the area of groundwater monitoring; and (d) while there have been substantive improvements in state regulatory programs, we have also identified gaps in state oversight.

When we considered a tailored subtitle C approach, we estimated the potential costs of regulation of coal combustion wastes (including the utility coal combustion wastes addressed in the 1993 Part 1 determination) to be $1 billion per year. While large in absolute terms, we estimate that these costs are less than 0.4 percent of industry sales. To improve our estimates we solicit public comment on the potential compliance costs to coal combustion waste generators as well as the indirect costs to users of these combustion by-products.

We have also decided that it is appropriate to establish national regulations under RCRA non-hazardous waste authorities (and/or possibly modifications to exiting regulations established under authority of SMCRA) applicable to the placement of coal combustion wastes in surface or underground mines. We have reached this decision because (a) we find that these wastes when minefilled could present a danger to human health and the environment under certain circumstances, and (b) there are few states that currently operate comprehensive programs that specifically address the unique circumstances of minefilling, making it more likely that damage to human health or the environment could go unnoticed.

With the exception of minefilling as described above, we have decided that national regulation under subtitle C or subtitle D is not warranted for any of the other beneficial uses of coal combustion wastes. We have reached this decision because: (a) We have not identified any other beneficial uses that are likely to present significant risks to human health or the environment; and (b) no documented cases of damage to human health or the environment have been identified. Additionally, we do not want to place any unnecessary barriers on the beneficial uses of coal combustion wastes so they can be used in applications that conserve natural resources and reduce disposal costs.

B. What Were EPA's Tentative Decisions as Presented in the Report to Congress?

On March 31, 1999, EPA indicated a preliminary decision that disposal of coal combustion wastes should remain exempt from regulation under RCRA subtitle C. We also presented our tentative view that most beneficial uses of these wastes should remain exempt from regulation under RCRA subtitle C. However, in the RTC we identified three situations where we had particular concerns with the disposition or uses of these wastes.

First, we indicated some concern with the co-management of mill rejects ("pyrites") with coal combustion wastes which, under certain circumstances, could cause or contribute to ground water contamination or other localized environmental damage. We indicated that the utility industry responded to our concern by implementing a voluntary education and technical guidance program for the proper management of these wastes. We expressed satisfaction with the industry program and tentatively concluded that additional regulation in this area was not necessary. We explained that we were committed to overseeing industry's progress on properly managing pyritic wastes, and would revisit our regulatory determination relative to co-management of pyrites with large volume coal combustion wastes at a later date, if industry progress was insufficient in this area.

Second, in the RTC we identified potential human health risks from arsenic when these wastes are used for agricultural purposes (*e.g.*, as a lime substitute). To address this risk, we indicated our preliminary view that Subtitle C regulations may be appropriate for this management practice. We explained that an example of such controls could include regulation of the content of these materials such that, when used for agricultural purposes, the arsenic level could be no higher than that found in agricultural lime. As an alternative to subtitle C regulation, we indicated that EPA could engage the industry to implement a voluntary program to address the risk, for example, by limiting the level of arsenic in coal combustion wastes when using them for agricultural purposes. Moreover, we indicated that a decision to establish hazardous waste regulations applicable to agricultural uses of co-managed coal combustion wastes would likely affect the regulatory status of the Part 1 wastes (i.e., electric utility high volume coal combustion wastes managed separately from other coal combustion wastes) when used for agricultural purposes. This is because the source of the identified risk was the arsenic content of the high volume coal combustion wastes and not other materials that may be co-managed with them.

Third, we expressed concern with potential impacts from the expanding practice of minefilling coal combustion wastes (i.e., backfilling the wastes into mined areas) and described the

difficulties we had with assessing the impacts and potential risks of this practice. We explained that these difficulties include:

- Determining if elevated contaminants in ground water are due to minefill practices or pre-existing conditions resulting from mining operations,
- Trying to model situations that may be more complex than our groundwater models can accommodate,
- The lack of long-term experience with the recent practice of minefilling, which limits the amount of environmental data for analysis, and
- The site-specific nature of these operations.

Accordingly, we did not present a tentative decision in the RTC for this practice. We indicated that subtitle C regulation would remain an option for minefilling, but that we needed additional information prior to making a final decision. Rather, we solicited additional information from commenters on these and other aspects of minefilling practices and indicated we would carefully consider that information in the formulation of today's decision.

C. How Did Commenters' React to EPA's Tentative Decisions and What Was EPA's Analysis of Their Comments?

Commenter's provided substantial input and information on several aspects of our overall tentative decision to retain the exemption for these wastes from RCRA subtitle C regulation. These aspects are: modeling and risk assessment for the groundwater pathway, documented damage cases, the potential for coal combustion waste characteristics to change as a result of possible future Clean Air Act regulations, proper management of mill rejects (pyrites), agricultural use of coal combustion wastes, the practice of minefilling coal combustion wastes, and our assessment of existing State programs and industry waste management practices.

1. How Did Commenters React to the Groundwater Modeling and Risk Assessment Analyses Conducted by EPA To Support its Findings in the Report to Congress?

Comments. Industry and public interest group commenters submitted detailed critiques of the groundwater model, EPACMTP, that we used for our risk analysis. Industry commenters believe that the model will overestimate the levels of contaminants that may migrate down-gradient from disposed wastes. Environmental groups expressed the opposite belief; that is, that the model underestimates down-gradient chemical concentrations and, therefore, underestimates the potential risk posed by coal combustion wastes.

The breadth and potential implications of the numerous technical comments on the EPACMTP model are significant. Examples of the comments include issues relating to:

- The thermodynamic data that are the basis for certain model calculations,
- The model's ability to account for the effects of oxidation-reduction potential,
- The model's ability to account for competition between multiple contaminants for adsorption sites,
- The model's algorithm for selecting adsorption isotherms,
- The impact of leachate chemistry on adsorption and aquifer chemistry, and
- The model's inherent assumptions about the chemistry of the underlying aquifer.

EPA's Analysis of the Comments. We have been carefully reviewing all of the comments on the model. We determined that the process of thoroughly investigating all of the comments will take substantially more time to complete than is available within the court deadline for issuing this regulatory determination. At this time, we are uncertain of the overall outcome of our analysis of the issues raised in the comments. Accordingly, we have decided not to use the results of our groundwater pathway risk analysis in support of today's regulatory determination on fossil fuel combustion wastes. As explained below, in making today's regulatory determination, we have relied in part on other information related to the potential danger that may result from the management of fossil fuel combustion wastes.

Meanwhile, we will continue with our analysis of comments on the groundwater model and risk analysis. This may involve changing or re-structuring various aspects of the model, if appropriate. It may also include additional analyses to determine whether any changes to the model or modeling methodology would materially affect the groundwater risk analysis results that were reported in the RTC. If our investigations reveal that a re-analysis of groundwater risks is appropriate, we will conduct the analysis and re-evaluate today's decisions as warranted by the re-analysis.

In addition to our ongoing review of comments on the groundwater model, one element of the model—the metals partitioning component called "MINTEQ"—has been proposed for additional peer review. When additional peer review is completed, we will take the findings and recommendations into account in any overall decision to re-evaluate today's regulatory determination.

While not relying on the EPACMTP groundwater modeling as presented in the RTC, we have since conducted a general comparison of the metals levels in leachate from coal combustion wastes to their corresponding hazardous waste toxicity characteristic levels. Fossil fuel wastes infrequently exceed the hazardous waste characteristic. For co-managed wastes, 2% (1 of 51 samples) exceeded the characteristic level. For individual wastes streams, 0% of the coal bottom ash, 2% of the coal fly ash, 3% of the coal flue gas desulfurization, and 7% of the coal boiler slag samples that were tested exceeded the characteristic level. Nevertheless, once we have completed a review of our groundwater model and made any necessary changes, we will reevaluate groundwater risks and take appropriate regulatory actions. We will specifically assess new modeling results as they relate to any promulgated changes in the arsenic MCL.

We also compared leach concentrations from fossil fuel wastes to the drinking water MCLs. In the case of arsenic, we examined a range of values because EPA expects to promulgate a new arsenic drinking water regulation by January 1, 2001. This range includes the existing arsenic MCL (50 ug/l), a lower health based number presented in the FFC Report to Congress (RTC) (0.29 ug/l), and two assumed values in between (10 and 5 ug/l). We examined this range of values because of our desire to bracket the likely range of values that EPA will be considering in its effort to revise the current MCL for arsenic. The National Research Council's 1999 report on Arsenic in Drinking Water indicated that the current MCL is not sufficiently protective and should be revised downward as soon as possible. For this reason, we selected the current MCL of 50 ug/L for the high end of the range because EPA is now considering lowering the current MCL and does not anticipate that the current MCL would be revised to any higher value. We selected the health-based number presented in the Report to Congress for the low end of the range because we believe this represents the lowest concentration that would be considered in revising the current MCL. Because at this time we cannot project a particular value as the eventual MCL, we also examined values in between these low-end and high-end values, a value of 5

ug/L and a value of 10 ug/L, for our analyses supporting today's regulatory determination. The choice of these mid-range values for analyses does not predetermine the final MCL for arsenic.

Those circumstances where the leach concentrations from the wastes exceed the drinking water criteria have the greatest potential to cause significant risks. This "potential" risk, however, may not occur at actual facilities. Pollutants in the leachate of the wastes undergo dilution and attenuation as they migrate through the ground. The primary purpose of models such as EPACMTP is to account for the degree of dilution and attenuation that is likely to occur, and to obtain a realistic estimate of the concentration of contaminants at a groundwater receptor. To provide a view of potential groundwater risk, we tabulated the number of occurrences where the waste leachate hazardous metals concentrations were: (a) Less than the criteria, (b) between 1 and 10 times the criteria, (c) between 10 and 100 times the criteria, and (d) greater than 100 times the criteria. Groundwater models that we currently use, when applied to large volume monofill sources of metals, frequently predict that dilution and attenuation will reduce leachate levels on the order of a factor of 10 under reasonable high end conditions. This multiple is commonly called a dilution and attenuation factor (DAF). For this reason and because lower dilution and attenuation factors (*e.g.*, 10) are often associated with larger disposal units such as those typical at facilities where coal is burned, we assessed the frequency of occurrence of leach concentrations for various hazardous metals which were greater than 10 times the drinking water criteria. Based on current MCLs, there was only one exceedence (for cadmium). However, when we considered the arsenic health based criterion from the RTC, we found that a significant percentage (86%) of available waste samples had leach concentrations for arsenic that were greater than ten times the health-based criterion. Even considering intermediate values closer to the current MCL, a significant percentage of available waste samples had leach concentrations for arsenic that were greater than ten times the criteria (30% when the criterion was assumed to be 5 ug/l, and 14% when the criterion was assumed to be 10 ug/l). Similar concerns also occurred when comparing actual groundwater samples associated with FFC waste units and this range of criteria for arsenic. We believe this is an indication of potential risks from arsenic.

For the above analysis, we used a value equal to half the detection level to deal with those situations where analyses resulted in "less than detection" values that exceeded the MCL criteria. The actual concentration may be as low as zero or up to the detection level. To illustrate the impact of this assumption, an analysis was performed setting the "less than detection" values to zero, and an arsenic criteria at 50 ug/l. While 30% of the values exceeded 10 times the criteria when using half the detection level, exceedences dropped to 13% when "less than detection" values were set to zero.

The comparison of the leachate levels to 10 times MCL criteria is a screening level analysis that supports our concerns, which are primarily based on damage cases and the lack of installed controls (liners and groundwater monitoring). We recognize, however, that prior to issuing a regulation the Agency expects to address the issues raised on the groundwater model and complete a comprehensive groundwater modeling effort. Furthermore, we anticipate that uncertainty regarding whether the arsenic MCL will be amended and to what level, will be more settled prior to regulation of these wastes. These factors could heighten or reduce concerns with regard to the need for Federal regulation of fossil fuel combustion wastes.

2. How Did Commenters React to EPA's Assessment of Documented Damage Cases Presented in the Report to Congress?

Prior to issuing the RTC, we sought and reviewed potential damage cases related to these particular wastes. The activities included:

- A re-analysis of the potential damage cases identified during the Part 1 determination,
- A search of the CERCLA Information System for instances of these wastes being cited as causes or contributors to damages,
- Contacts and visits to regulatory agencies in five states with high rates of coal consumption to review file materials and discuss with state officials the existence of damage cases,
- A review of information provided by the Utility Solid Waste Act Group and the Electric Power Research Institute on 14 co-management sites, and
- A review of information provided by the Council of Industrial Boiler Owners on eight fluidized bed combustion (FBC) facilities.

These activities yielded three damage case sites in addition to the four cases initially identified in the Part 1 determination.[2] Five of the damage cases involved surface impoundments and the two other cases involved landfills. The waste management units in these cases were all older, unlined units. The releases in these cases were confined to the vicinity of the facilities and did not affect human receptors. None of the damages impacted human health. We did not identify any damage cases that were associated with beneficial use practices.

Comments. Public interest group commenters criticized our approach to identifying damage cases associated with the management of fossil fuel combustion (FFC) wastes, stating that EPA did not use the same procedure used to identify damage cases for the cement kiln dust (CKD) Report to Congress. These commenters believed that we were too conservative in our interpretation and determination of FFC damage cases and dismissed cases that commenters believe are relevant instances of damage. For example, these commenters indicated that EPA, in the RTC, did not consider cases where the only exceedences of ground water standards were for secondary MCLs (Maximum Contaminant Levels as established by EPA for drinking water standards). They further indicated that the states often require ground water monitoring only for secondary MCL constituents and that elevated levels of the secondary MCL constituents are an indication of future potential for more serious, health-based standards to be exceeded for other constituents in the wastes, such as toxic metals. Additionally, these commenters stated that the Agency's analysis for damage cases was incomplete and they provided information on 59 possible damage cases involving these wastes, mostly at utilities. Additionally, commenters submitted seven cases of ecological damage that allege damage to mammals, amphibians, fish, benthic layer organisms and plants from co-management of coal combustion wastes in surface impoundments.

Industry commenters cited EPA's finding of so few damage cases as important support for our tentative conclusion to exempt these wastes from hazardous waste regulation. Further, some of the industry commenters indicated that the few damage cases that EPA identified do not represent current

[2] The Part 1 determination identified six cases of documented damages. Upon further reveiw, we determined that two of these cases involve utility coal ash monofills which are covered by the Part 1 determination. However, the other four cases involved remaining wastes that are covered by today's determination.

utility industry management practices, but rather reflect less environmentally protective management practices at older facilities that pre-date the numerous state and federal requirements that are now in effect for managing these wastes.

EPA's Analysis of the Comments. Regarding ecological damage, while we did not identify any ecological damage cases in the RTC associated with management of coal combustion wastes, we reviewed the information on ecological damage submitted by commenters and agree that four of the seven submitted are documented damage cases that involve FFC wastes. All of these involve some form of discharge from waste management units to nearby lakes or creeks. These confirm our risk modeling conclusions as presented in the RTC that there could be adverse impacts on amphibians, birds, or mammals if they were subject to the elevated concentrations of selected chemicals that had been measured in some impoundments. However, no information was submitted in comments that would lead us to alter our conclusion that these threats are not substantial enough to cause large scale, system level ecological disruptions. These damage cases, attributable to runoff or overflow that is already subject to Clean Water Act discharge or stormwater regulations, are more appropriately addressed under the existing Clean Water Act requirements.

Regarding our assessment of damage to ground water, we believe our approach to FFC damage cases in the RTC was consistent with the approach we used for identifying CKD damage cases. For CKD, we established two categories of damage cases—"proven" damage cases and "potential" damage cases. Proven damage cases were those with documented MCL exceedences that were measured in ground water at a sufficient distance from the waste management unit to indicate that hazardous constituents had migrated to the extent that they could cause human health concerns. Potential damage cases were those with documented MCL exceedences that were measured in ground water beneath or close to the waste source. In these cases, the documented exceedences had not been demonstrated at a sufficient distance from the waste management unit to indicate that waste constituents had migrated to the extent that they could cause human health concerns. We do not believe that it would be appropriate to consider an exceedence directly beneath a waste management unit or very close to the waste boundary to be a documented, proven damage case. State regulations typically use a compliance procedure that relies on measurement at a receptor site or in ground water at a point beyond the waste boundary (*e.g.*, 150 meters). While our CKD analysis did not distinguish between primary and secondary MCL exceedences, most CKD damage cases involved a primary MCL constituent. Our principal basis for determining that CKD when managed in land-based units would no longer remain exempt from being regulated as a hazardous waste was our concern about generally poor management practices characteristic of that industry. Our conclusion was further supported by the extremely high percentage of proven damage cases occurring at active CKD sites for which groundwater monitoring data were available.

For FFC, we used the same test of proof to identify possible damage cases. Our FFC analysis drew a distinction between primary and secondary MCL exceedences because we believe this factor is appropriate in weighing the seriousness of FFC damage in terms of indicating risk to human health and the environment. For FFC, in the RTC, we reported only the "proven" damage (*i.e.*, exceedence of a health-based standard such as a primary MCL and measurement in ground water or surface water). As was done in the CKD analysis, we also identified a number of potential FFC damage cases (eleven) which were included in the background documents that support the RTC.

Unlike the primary MCLs, secondary MCLs are not based on human health considerations. (Examples are dissolved solids, sulfate, iron, and chloride for which groundwater standards have been established because of their effect on taste, odor, and color.) While some commenters believe that elevated levels of some secondary MCL parameters such as soluble salts are likely precursors or indicators of future hazardous constituent exceedences that could occur at coal combustion facilities, we are not yet able and will not be able to test their hypothesis until we complete our analysis of all comments received on our groundwater model and risk analysis, which will not be concluded until next year.

Of the 59 damage cases reported by commenters, 11 cases appear to involve exceedences of primary MCLs or other health-based standards as measured either in off-site ground water or in nearby surface waters, the criteria we used in the RTC to identify proven damage cases. Of these eleven cases, two are coal ash monofills which were included in the set of damage cases described by EPA in its record supporting the Part 1 regulatory determination. The remaining nine cases involve the co-management of large volume coal combustion wastes with other low volume and uniquely associated coal combustion wastes. We had already identified five of these nine cases in the RTC. Thus, only four of these eleven damage cases are newly identified to us. Briefly, the four new cases involve:

- Exceedence of a state standard for lead in downgradient ground water at a coal fly ash landfill in New York. There were also secondary MCL exceedences for sulfate, dissolved solids, and iron.
- Primary MCL exceedences for arsenic and selenium in downgradient monitoring wells for a coal ash impoundment at a power plant in North Dakota. There were also secondary MCL exceedences for sulfate and chloride.
- Primary MCL exceedences for fluoride and exceedence of a state standard for boron in downgradient monitoring wells at a utility coal combustion waste impoundment in Wisconsin. There was also a secondary MCL exceedence for sulfate.
- Exceedence of a state standard for boron and the secondary MCL for sulfate and manganese in downgradient monitoring wells at a utility coal combustion landfill in Wisconsin.

We found that in nine of the 11 proven damage cases (including one Superfund site), states took appropriate action to require or conduct remedial activities to reduce or eliminate the cause of contamination. EPA took action in the remaining two cases under the Superfund program

Nineteen of the candidate damage cases submitted by commenters involve either on-site or off-site exceedences of secondary MCLs, but not primary MCLs or other health-based standards. Consistent with our CKD analysis, we consider these cases to be indicative of a potential for damage to occur at these sites because they demonstrate that there has been a release to ground water from the waste management unit.

Regarding the remaining 29 cases submitted by commenters:

- Six involve primary MCL exceedences, but measurements were in ground water either directly beneath the waste or very close to the waste boundary, *i.e.*, no off-site ground water or receptor measurements indicated that ground water standards had been exceeded. Consistent with our analysis of damage cases for cement kiln dust, we consider these six cases to be indicative of a potential for damage to occur at these sites because they demonstrate that there has been a

release to ground water from the waste management unit..

• Eighteen case summary submissions contained insufficient documentation and data for us to verify and draw a conclusion about whether we should consider these to be potential or proven damage cases. Of these 18 cases, commenters claimed that 11 cases involve primary MCL exceedences, and another two involve secondary MCLs, but not primary MCLs. The other five cases lacked sufficient information and documentation to determine whether primary or secondary MCLs are involved. Examples of information critical to assessing and verifying candidate damage cases that was not available for these particular cases include: Identification of the pollutants causing the contamination; identification of where or how the damage case information was obtained (*e.g.*, facility monitoring data, state monitoring or investigation, third party study or analysis); monitoring data used to identify levels of contaminants; and/or sufficient information to determine whether the damages were actually attributable to fossil fuel combustion wastes; and/or location of the identified contamination (*i.e.*, directly beneath the unit or very close to the waste boundary or at a point some distant (*e.g.*, 150 meters) from the unit boundary).

• Three case submissions are cases we identified in the Part 1 determination and involve monofilled utility coal ash wastes. However, as explained in the Report to Congress for the Part 1 determination, EPA determined that there was insufficient evidence to consider them to be documented damage cases.

• One case did not involve fossil fuel combustion wastes.

• One case involved coal combustion wastes and other unrelated wastes in an illegal, unpermitted dump site. This site was handled by the state as a hazardous waste cleanup site.

Our detailed analysis of the damage cases submitted by commenters is available in the public docket for this regulatory determination.

In summary, based on damage case information presented in the RTC and our review of comments, we conclude that there are 11 proven damage cases associated with wastes covered by today's regulatory determination. We identified seven of these damage cases in the RTC, so there are four new proven damage cases that were identified by commenters. All of the sites were at older, unlined units, with disposal occurring prior to 1993. For all 11 of the proven damage cases, either the state or EPA provided adequate follow-up to require or else undertake corrective action. Although these damage cases indicate that coal combustion wastes can present risks to human health and the environment, they also show the effectiveness of states' responses when damages were identified. None of these cases involved actual human exposure.

Additionally, we determined that another 25 of the commenter submitted cases are potential damage cases for the reasons described above. Thus, including the 11 potential damage cases that we identified in the background documents that support the RTC, we are aware of 36 potential damage cases. While we do not believe the latter 36 cases satisfy the statutory criteria of documented, proven damage cases because damage to human health or the environment has not been proven, we believe that these cases may indicate that these wastes pose a "potential" danger to human health and the environment in some circumstances.

In conclusion, while the absolute number of documented, proven damage cases is not large, we believe that the evidence of proven and potential damage should be considered in light of the proportion of new and existing facilities, particularly surface impoundments, that today lack basic environmental controls such as liners and groundwater monitoring. Approximately one-third of coal combustion wastes are managed in surface impoundments. We note that controls such as liners may not be warranted at some facilities, due to site-specific conditions. We acknowledge, however, that our inquiry into the existence of damage cases was focused primarily on a subset of states. Given the volume of coal combustion wastes generated nationwide and the number of facilities that lacked groundwater monitoring as of 1995, there is at least a substantial likelihood other cases of actual and potential damage likely exist. Because we did not use a statistical sampling methodology to evaluate the potential for damage, we are unable to determine whether the identified cases are representative of the conditions at all facilities and, therefore, cannot quantify the extent and magnitude of damages at the national level.

3. What Concerns Did Commenters Express About the Impact of Potential Future Regulation of Hazardous Air Pollutants Under the Clean Air Act on Today's Regulatory Determination?

Comments. In both public hearing testimony and written comments, public interest groups expressed concern about potential changes in the characteristics of these wastes when new air pollution controls are established under the Clean Air Act. The commenters referred to the possible future requirement for hazardous air pollutant controls at coal burning electric utility power plants, which could result in an increased level of metals and possibly other hazardous constituents in coal combustion wastes. The commenters indicated that these increased levels, in turn, could have serious implications for cross-media environmental impacts such as leaching to groundwater and volatilization to the air. The commenters argued that the Agency should include these factors in its current decision making on the regulatory status of coal combustion under the Resource Conservation and Recovery Act.

EPA's Analysis of the Comments. We have carefully considered the issue of cross-media impacts and the commenters' specific concerns that future air regulations could have an adverse impact on the characteristics of coal combustion wastes. We have concluded that it is premature to consider the possible future impact of such new air pollution controls on the wastes that are subject to today's regulatory determination. The Agency plans to issue a regulatory determination in the latter part of 2000 regarding hazardous air pollutant (HAP) controls at coal-burning, power generating facilities. If EPA decides to initiate a rulemaking process, final rulemaking under the Clean Air Act is projected to occur in 2004. Thus, no final decision has been made on what, if any, constituents will be regulated by future air pollution control requirements. Additionally, the regulatory levels of the those specific pollutants that might be controlled and the control technologies needed to attain any regulatory requirements have not yet been identified. Therefore, we believe there is insufficient information at this time for evaluating the characteristics and potential environmental impacts of solid wastes that would be generated as a result of new Clean Air Act requirements.

When any rulemaking under the Clean Air Act proceeds to a point where we can complete an assessment of the likely changes to the character of coal combustion wastes, we will evaluate the implications of these changes relative to today's regulatory determination and take appropriate action.

4. How Did Commenters React to the Findings Presented in the Report to Congress Related to Proper Management of Mill Rejects (Pyrites)?

The RTC explained that we identified situations where pyrite-bearing

materials such as mill rejects (a low volume and uniquely associated waste) that are co-managed with coal combustion wastes may cause or contribute to risks or environmental damage if not managed properly. These materials when managed improperly with exposure to air and water can generate acid. The acid, in turn, can mobilize metals contained in the co-managed combustion wastes. The RTC also explained that the Agency engaged the utility industry in a voluntary program to ensure appropriate management of these wastes. The industry responded by developing technical guidance and a voluntary industry education program on proper management of these wastes.

Comments. Utility industry commenters supported our tentative decision to continue the exemption for coal combustion wastes co-managed with mill rejects from regulation as a hazardous waste. Their position is based primarily on the industry's voluntary implementation of an education program and technical guidance on the proper management of these wastes, as described in the RTC.

Public interest groups and other commenters disagreed with our tentative decision, explaining their belief that such voluntary controls or programs are inadequate. They indicated that coal combustion wastes should be subject to hazardous waste regulations.

EPA's Analysis of the Comments. We remain encouraged by the utility industry program to educate and inform its members by implementing guidance on the proper management of coal mill rejects. However, as pointed out by commenters, there is no assurance that facilities where coal combustion wastes co-managed with pyritic wastes will follow the guidance developed by industry. In light of the number of demonstrated and potential damage cases identified to date, we are concerned that simply relying on voluntary institution of necessary controls would not adequately ensure the protection of human health and the environment. At this time, to ensure that we are aware of all stakeholders views on the adequacy of the control approaches described in the guidance to protect human health and the environment, we are soliciting public comment on the final version of the industry coal mill rejects guidance. This guidance is available in the docket supporting today's decisions.

5. How Did Commenters React to the Findings Presented in the Report to Congress Related to Agricultural Use of Coal Combustion Wastes?

In the RTC, we presented findings on the human health risks associated with agricultural use of coal wastes as an agricultural lime substitute. The pathway examined embodies risks from ingestion of soil and inhalation, and from ingestion of contaminated dairy, beef, fruit and vegetable products. The resultant "high end" cancer risk reported in the RTC was 1×10^{-5} (one in one hundred thousand exposed population), for the child of a farmer. The variables held at high end for this calculation were contaminant concentration and children's soil ingestion. With all variables set to central tendency values, the risk was calculated to be 1×10^{-7} (one in ten million exposed population). We did not identify the presence of any non-cancer hazard of concern. Based on the high end risk, the Agency raised the possibility in the RTC of developing Subtitle C controls or seeking commitments from industry to a voluntary program.

Comments. A number of industry, academic, and federal agency commenters disagreed with our tentative conclusion that some level of regulation may be appropriate for coal combustion wastes when used as an agricultural soil supplement. They indicated that EPA used unrealistically conservative levels for four key inputs used in our risk analysis and that use of a realistic level for any one of these inputs would result in a risk level less than 1×10^{-6}. The four inputs identified by the commenters are: application rate of the wastes to the land, the rate of soil ingestion by children, the bioavailability of arsenic and the phytoavailability of arsenic.

These commenters further recommended that EPA not regulate, but rather encourage voluntary restrictions because:

- Agricultural use of coal combustion wastes creates no adverse environmental impacts and EPA identified no damage cases associated with this practice;
- Agricultural use of these wastes has significant technical and economic benefits;
- Federal controls would be unnecessarily costly and would create a barrier for research and development on the practice;
- Existing regulatory programs are sufficient to control any risks from this practice; and
- The limits suggested in the RTC for arsenic levels in coal combustion wastes are inconsistent with limits applied to other materials used in agriculture.

Public interest groups stated their belief that a voluntary approach would not be sufficiently protective of human health and the environment. They believe the Agency should apply restrictions on the use of these wastes in agriculture because the Agency's analyses of the risks and benefits of this practice were inadequate. They further recommended that EPA should prohibit the land application of coal combustion wastes generated by conventional boilers, and make the arsenic limitation of EPA's sewage sludge land application regulations applicable to the land application of coal combustion wastes generated by fluidized bed combustors, which add lime as part of the combustion process.

EPA's Analysis of Comments. After reviewing these comments and supporting information provided by the commenters, we concluded that a revised input into the model for children's soil ingestion rate is appropriate. Based on further review of the Agency's Exposure Factors Handbook (EFH), we decided to model a children's soil ingestion rate of 0.4 grams per day instead of the 1.4 grams per day that underlay the results given in the RTC.

Many studies have been conducted to estimate soil ingestion by children. Early studies focused on dirt present on children's hands. More recently, studies have focused on measuring trace elements in soil and then in feces as a function of internal absorption. These measurements are used to estimate amounts of soil ingested over a specified time period. The EFH findings for children's soil ingestion are based on seven key studies and nine other relevant studies that the Agency reviewed on this subject. These studies showed that mean values for soil ingestion ranged from 39 mg/day to 271 mg/day with an average of 146 mg/day. These results are characterized for studies that were for short periods with little information reported for pica behavior. To account for longer periods of time, the EFH reviewed the upper percentile ranges of the data studied and found ingestion rates that ranged from 106 mg/day to 1,432 mg/day with an average of 383 mg/day for soil ingestion. Rounding to one significant figure, the EFH recommended an upper percentile children's soil ingestion rate of 400 mg/day. The Agency believes that this recommendation is the best available information to address children's exposure through the soil ingestion route. Reducing the ingestion rate to the EFH handbook recommended level of

400 mg/day reduced the calculated risk to 3.4 × 10–6 for this one child risk situation and suggests that agricultural use of FFC wastes does not cause a risk of concern.

EPA believes its inputs for phytoavailability are accurate, although there are studies that suggest phytoavailability will decrease over time. Arsenic bioavailability is a function of all sources of arsenic and EPA believes it has characterized this accurately. However, as noted elsewhere, arsenic toxicity is now being studied by the Agency in conjunction with a proposed new arsenic MCL and may necessitate re-visiting today's judgement on agricultural use.

Our technical analysis that resulted in revised risk is explained in a document titled Reevaluation of Non-groundwater Pathway Risks from Agricultural Use of Coal Combustion Wastes, which is available in the docket for this action.

The comment on inappropriateness of application frequency was caused by a misunderstanding of the language in the RTC. The rate used was actually every two or three years, not two or three times per year.

Two ongoing studies of wastes of potential use as agricultural soil supplements relate to the use of FFC wastes for this purpose. Although these did not play a direct role in EPA's decision regarding FFC wastes, they are summarized below and may play a role in any future review of today's decision.

(1) On August 20, 1999, the agency proposed risk-based standards for cement kiln dust when used as a liming agent (see 64 FR 45632; August 20, 1999). This analysis was completed in 1998 just prior to our completion of the analysis of FFC wastes when used as agricultural supplements. The CKD analysis underwent a special peer review by a standing committee that is used by the Department of Agriculture. We were not able to respond to the peer review comments in either the CKD proposal or in our assessment for fossil fuel combustion wastes prior to publication of today's regulatory determination. The comment period for the CKD proposal closed on February 17, 2000, and we will soon begin our review and analyses of the public and peer review comments.

(2) In December 1999, EPA proposed new risk based standards for the use of municipal sewage sludge under section 503 of the Clean Water Act (the "503 standards"). It is important to note that municipal sludge has unique properties, application rates, and uses. This makes it inappropriate to transfer the 503 standards directly. Even though the standards cannot be used directly, there may be interest in the risk assessment methodologies used to support the development of these standards. We disagree that it is appropriate to establish an arsenic limitation for coal combustion ash when used for agricultural purposes equivalent to that contained in the EPA sewage sludge land application regulations. The organic nature of sewage sludge makes it behave very differently from inorganic wastes such as coal combustion wastes.

We conclude at this time that arsenic levels in coal combustion wastes do not pose a significant risk to human health when used for agricultural purposes. We expect to continue to review and refine the related risk assessments noted above, and will consider comments on the Agency's CKD and municipal sludge proposals, as well as new scientific developments related to this issue such as additional peer review of the EPA MINTEQ model that was used as a component of our risk analysis. If these efforts lead us to a different understanding of the risks posed by coal combustion wastes when used as a substitute for agricultural lime, we will take appropriate action to reevaluate today's regulatory determination.

6. How Did Commenters React to the Findings Presented in the Report to Congress Related to Minefilling of Coal Combustion Wastes?

In the RTC, we explained that we had insufficient information to adequately assess the risks associated with the use of coal combustion wastes to fill surface and underground mines, whether the mines are active or abandoned. Accordingly, we did not present a tentative conclusion in the RTC with respect to the use of coal combustion wastes for disposal in active mines or for reclamation of mines. However, we did indicate that regulation of minefilling under hazardous waste rulemaking authority would remain an option for minefilling, but that we needed additional information prior to making a final decision. Thus, we solicited additional information on specific minefilling techniques, problems that may be inherent in this management practice, risks posed by this practice, existing state regulatory requirements, and environmental monitoring data. We indicated that we would consider any comments and new information on minefilling received in comments and would address this management practice in today's regulatory determination.

Comments. A number of commenters responded to our request by providing reports on individual case studies, including minefilling in underground as well as in surface mines, descriptions of current state regulatory requirements that address this practice, monitoring data, and information about risk analysis techniques.

Industry commenters and one federal agency supported our decision to study the issue further and not attempt to estimate the risks posed by this practice using existing methods. Further, numerous industry, academic, state agency, and federal agency commenters encouraged EPA not to adopt national regulations or voluntary restrictions on minefilling because: (a) Nationwide standards would not be conducive to the site-specific evaluations needed to appropriately control these operations; (b) minefilling creates no adverse environmental impacts and EPA identified no damage cases associated with this practice; (c) existing state and federal regulatory programs and industry practices are sufficient to control any risks from this practice, and (d) federal standards would be an unreasonable interference with states' authorities.

Additionally, several industry representatives, legislators, and state mining and environmental agencies mentioned that this practice, when used to remediate abandoned mine lands, will produce considerably greater environmental benefits than risks. Further, they maintained that minefilling is a relatively inexpensive means to stop or even reverse the environmental damage caused by old mining practices. They indicated that through remediation by minefilling, these lands frequently can be returned to productive use. These commenters recommended no additional regulation of this practice.

Public interest groups and others believe we should regulate minefilling under RCRA subtitle C or prohibit it for several reasons including weaknesses in existing state and federal regulatory programs, the poor practices and performance at existing minefilling operations, and potential impacts on potable water sources. Commenters stated that state programs effectively allow open dumps without any design or construction standards. For minefilling, one commenter urged EPA to defer to state regulations only if the Agency specifically found existing state regulations to be adequate.

EPA's Analysis of Comments. We agree with commenters that it is inappropriate to estimate the risks posed by minefilling using the existing methods that we employed to conduct risk analyses for disposal of coal combustion wastes in landfills and impoundments. We found that the

groundwater models available to us are unsuitable for estimating risks from minefills because, for example, they are not able to account for conditions such as fractured flow that are typical of the hydrogeology associated with mining operations. In addition, as explained above, EPA's primary groundwater model, EPACMTP, is now undergoing careful review on the basis of comments received on the Report to Congress.

We are aware that the use of coal combustion wastes to conduct remediation of mine lands can improve conditions caused by mining activities. We also recognize that this often is the lowest cost option for conducting these remediation activities. We generally encourage the practice of remediating mine lands with coal combustion wastes when minefilling is conducted properly and when there is adequate oversight of the remediation activities. We are also aware that relatively few states currently operate regulatory or other programs that specifically address minefilling, and that many states where this practice is occurring do not have programs in place. Based on our review of information on existing state minefill programs, we find serious gaps such as a lack of adequate controls and restrictions on unsound practices, *e.g.*, no requirement for groundwater monitoring and no control or prohibitions on waste placement in the aquifer.

At this time, we cannot reach definitive conclusions about the adequacy of minefilling practices employed currently in the United States and the ability of government oversight agencies to ensure that human health and the environment are being adequately protected. For example, it is often impossible to determine if existing groundwater quality has been impacted by previous mining operations or as a result of releases of hazardous constituents from the coal combustion wastes used in the minefilling applications. Additionally, data and information submitted during the public comment period indicate that if the chemistry of the mine relative to the chemistry of the coal combustion wastes is not properly taken into account, the addition of coal combustion wastes to certain environmental settings can lead to an increase in hazardous metals released into the environment. This phenomena has been substantiated by data available to the Agency that show when pyrites, which can cause acid generation, have been improperly co-managed with coal combustion wastes, high levels of metals, especially arsenic, have leached from the wastes.

Finally, we concluded in our recent study of disposal of cement kiln dust that placement of cement kiln dust directly in contact with ground water led to a substantially greater release of hazardous metal constituents than we predicted would occur when such placement in ground water did not occur. We are aware of situations where coal combustion wastes are being placed in direct contact with ground water in both underground and surface mines. This could lead to increased releases of hazardous metal constituents as a result of minefilling. Thus, if the complexities related to site-specific geology, hydrology, and waste chemistry are not properly taken into account when minefilling coal combustion wastes, we believe that certain minefilling practices have the potential to degrade, rather than improve, existing groundwater quality and can pose a potential danger to human health and the environment. Subsequent impacts on human health would depend in part on the proximity of drinking water wells, if any, to elevated levels of metals in the water. To date we are unaware of any proven damage cases resulting from minefilling operations.

7. How Did Commenters React to EPA's Tentative Reliance on State Programs and Voluntary Industry Implementation of Improved Management Practices To Mitigate Potential Risks From Coal Combustion Waste Management?

In the RTC, EPA considered retaining the exemption for coal combustion wastes disposed in surface impoundments and landfills and for mill rejects (pyrites) that are managed with those wastes. The Agency cited a reliance on state programs that have improved substantially over the past 10 to 15 years and continue to improve, combined with voluntary industry implementation of guidance for improved management practices to mitigate risk. In addition, we stated that we would continue to work with industries and states to promote and monitor improvements.

To assess the adequacy of state programs and the potential for voluntary implementation of improved practices, we looked at the current number of facilities with liners and groundwater monitoring (which may reflect voluntary industry upgrading as well as state requirements), and the number of state programs that currently have authority to require a broad range of environmental controls. For units operating as of 1995, we found that among utilities, slightly more than half of the disposal units were surface impoundments. Of these impoundments, 38 percent had groundwater monitoring and 26 percent had liners. Eighty-five percent of the utility landfills had groundwater monitoring and 57 percent had liners. For non-utility landfills, 94 percent had groundwater monitoring, and between 16 percent and 52 percent had liners. Between 1985 and 1995, 75 percent of new landfills and 60 percent of new surface impoundments within the utility sector had been lined. We have no information regarding the percentage of units built since 1995 (the date when the study we have relied on ended) that have liners or groundwater monitoring programs.

In looking at state programs, we found that for landfills, more than 40 states have the authority to require permits, siting restrictions, liners, leachate collection, groundwater monitoring, closure controls, and cover/dust controls. Forty-three states can require liners and 46 can require groundwater monitoring compared to 11 and 28 states, respectively, in the 1980's. For surface impoundments, more than 40 states have authority to require permits, siting restrictions, liners, groundwater monitoring, and closure control; 33 can require leachate collection (there is no earlier comparison data for surface impoundments). Forty-five states can require liners and 44 can require groundwater monitoring for impoundments.

Comments. Industry and state agency commenters generally stated that the Agency presented an accurate and comprehensive analysis of state programs and that existing state regulations are adequate. Public interest commenters raised many concerns about the adequacy of state programs: Either they do not have provisions to cover all elements of a protective program; they do not consistently impose the requirements for which they have authority; and/or enforcement is lax. Evidence commenters cited for the inadequacy of state programs included grandfathering for older management units and an apparent lack of controls for surface impoundments. For these reasons, some found EPA's review of state programs inaccurate or incomplete.

Public interest commenters were also skeptical of programs or efforts that rely on voluntary industry implementation because adherence to guidance is not guaranteed. Several commenters, primarily from industry, urged the Agency not to regulate pyrite co-management because of the voluntary, industry-developed guidance.

EPA's Analysis of Comments. We believe that state programs have, in fact, substantially improved over the last 15

years or so. A high percentage of states have authority to impose protective management standards on surface impoundments and landfills, especially for groundwater monitoring, liners, and leachate collection, which mitigate potential risks posed by these units. Over 40 states today have these authorities (33 states have authority to require leachate collection in surface impoundments). When authority under state groundwater and drinking water regulations are considered, some commenters have suggested that nearly all states can address the management of these wastes. In addition, we believe that the trend to line and install groundwater monitoring for new surface impoundments and landfills is positive. However, as some commenters noted, we acknowledge that our state program review looked at the authorities available to states and their overall regulatory requirements, not the specific requirements applied to given facilities, which could be more or less stringent. In addition, we recognize that individual state programs may have some gaps in coverage, as indicated below, so that some controls may not now be required at coal combustion waste impoundments and landfills. We would expect to see some differences in the application of requirements, depending on site-specific conditions.

One consistent trend that raises concern for the Agency is that controls are much less common at surface impoundment than at landfills. Even for newer units at utilities (constructed between 1985 and 1995), liners are used at 75 percent of landfills and only 60 percent of surface impoundments. Also at newer units, groundwater monitoring is implemented at 88 percent of landfills and at only 65 percent of surface impoundments. Approximately one-third of coal combustion wastes were managed in surface impoundments in 1995. Hydraulic pressure in a surface impoundment increases the likelihood of releases. We believe that groundwater monitoring, at a minimum, in existing as well as new impoundments, is a reasonable approach to monitor performance of the unit and a critical first step to addressing groundwater damage that may be caused by the unit. As of 1995, 38 percent of currently operating utility surface impoundments had groundwater monitoring and only 26 percent had liners.

While liners and groundwater monitoring are applied more frequently at landfills, there are still many utility and non-utility landfills that do not have liners. In addition, 15 percent of utility landfills do not have groundwater monitoring, and some six percent of non-utility landfills do not have groundwater monitoring, based on a limited survey.

The utility industry through its trade associations has demonstrated a willingness to work with EPA to develop protective management practices, and individual companies have committed to upgrading their own practices. However, the Agency recognizes that participation in voluntary programs is not assured. Also, individual facilities and companies may not implement protective management practices and controls, for a variety of reasons, in spite of their endorsement by industry-wide groups.

We see a trend toward significantly improving state programs and voluntary industry investment in liners and groundwater monitoring that we believe can mitigate potential risks over time. However, we identified significant gaps in controls already in place and, in particular, requirements that may be lacking in some states, either in authority to impose the requirements or potentially in exercising that authority. In response to comments, we further analyzed risks posed by coal combustion wastes taking into account waste characteristics and potential and actual damage cases. Based on these analyses, we concluded that coal combustion wastes, in certain circumstances, could unnecessarily increase risks to human health and the environment, and that a number of proven damages have been documented, and that more are likely if we had been able to conduct a more thorough search of available state records and if groundwater monitoring data were available for all units. We recognize there will probably continue to be some gaps in practices and controls and are concerned at the possibility that these will go unaddressed. We also believe the time frame for improvement of current practices is likely to be longer in the absence of federal regulations.

D. What Is the Basis for Today's Decisions?

Based on our collection and analysis of information reflecting the criteria in section 8002(n) of RCRA that EPA must consider in making today's regulatory determination, materials developed in preparing the RTC and supportive background materials, existing state and federal regulations and programs that affect the management of coal combustion wastes, and comments received from the public on the findings we presented in the RTC, we have concluded the following:

1. Beneficial Uses

To the extent coal combustion wastes are used for beneficial purposes, we believe they should continue to remain exempt from being regulated as hazardous wastes under RCRA. Beneficial purposes include waste stabilization, beneficial construction applications (*e.g.*, cement, concrete, brick and concrete products, road bed, structural fill, blasting grit, wall board, insulation, roofing materials), agricultural applications (*e.g.*, as a substitute for lime) and other applications (absorbents, filter media, paints, plastics and metals manufacture, snow and ice control, waste stabilization). For the reasons presented in section 3 below, we are separately addressing the use of coal combustion wastes to fill surface or underground mines.

For beneficial uses other than minefilling, we have reached this decision because: (a) We have not identified any beneficial uses that are likely to present significant risks to human health or the environment; and (b) no documented cases of damage to human health or the environment have been identified. Additionally, we do not want to place any unnecessary barriers on the beneficial use of coal combustion wastes so that they can be used in applications that conserve natural resources and reduce disposal costs.

Disposal can be burdensome and fails to take advantage of beneficial characteristics of fossil fuel combustion wastes. About one-quarter of the coal combustion wastes now generated are diverted to beneficial uses. Currently, the major beneficial uses of coal combustion wastes include: Construction (including building products, road base and sub-base, blasting grit and roofing materials) accounting for approximately 21%; sludge and waste stabilization and acid neutralization accounting for approximately 3%; and agricultural use accounting for 0.1%. Based on our conclusion that these beneficial uses of coal combustion wastes are not likely to pose significant risks to human health and the environment, we support increases in these beneficial uses of coal combustion wastes.

Off-site uses in construction, including wallboard, present low risk due to the coal combustion wastes being bound or encapsulated in the construction materials or because there is low potential for exposure. Use in waste and sludge stabilization and in acid neutralization are either regulated (under RCRA for hazardous waste stabilization or when placed in

municipal solid waste landfills, or under the Clean Water Act in the case of municipal sewage sludge or wastewater neutralization), or appear to present low risk due to low exposure potential. While in the RTC, we expressed concern over risks presented by agricultural use, we now believe our previous analysis assumed unrealistically high-end conditions, and that the risk, which we now believe to be on the order of 10^{-6}, does not warrant national regulation of coal combustion wastes that are used in agricultural applications.

In the RTC, we were not able to identify damage cases associated with these types of beneficial uses, nor do we now believe that these uses of coal combustion wastes present a significant risk to human health or the environment. While some commenters disagreed with our findings, no data or other support for the commenters' position was provided, nor was any information provided to show risk or damage associated with agricultural use. Therefore, we conclude that none of the beneficial uses of coal combustion wastes listed above pose risks of concern.

2. Disposal in Landfills and Surface Impoundments

In this section, we discuss available information regarding the potential risks to human health and the environment from the disposal of coal combustion wastes into landfills and impoundments. In sum, our conclusion is these wastes can pose significant risks when mismanaged and, while significant improvements are being made in waste management practices due to increasing state oversight, gaps in the current regulatory regime remain.

We have determined that the establishment of national regulations is warranted for coal combustion wastes when they are disposed in landfills and surface impoundments, because: (a) The composition of these wastes has the potential to present danger to human health and the environment under some circumstances and "potential" damage cases identified by EPA and commenters, while not definitively demonstrating damage from coal combustion wastes, lend support to our conclusion that these wastes have the potential to pose such danger; (b) we have identified eleven cases of proven damage to human health and the environment by improper management of these wastes when land disposed; (c) while industry management practices have improved measurably in recent years, there is sufficient evidence these wastes are currently being managed in a significant number of landfills and surface impoundments without proper controls in place, particularly in the area of groundwater monitoring; and (d) while there have been substantive improvements in state regulatory programs, we have also identified significant gaps either in states' regulatory authorities or in their exercise of existing authorities. Moreover, we believe that the costs of complying with regulations that specifically address these problems, while large in absolute terms, are only a small percentage of industry revenues.

When we considered a tailored subtitle C regulatory approach, we estimated the potential costs of regulation of coal combustion wastes (including the utility coal combustion wastes addressed in the 1993 Part 1 determination) to be $1 billion per year. While large in absolute terms, we estimate that these costs are less than 0.4 percent of industry sales. Our preliminary estimate of impact on profitability is a function of facility size, among other factors. For the larger facilities, we estimate that reported pre-tax profit margins of about 13 percent may be reduced to about 11 percent. For smaller facilities, margins may be reduced from about nine percent to about seven percent.

We identified that the constituents of concern in these wastes are metals, particularly hazardous metals. We further identified that leachate from various large volume wastes generated at coal combustion facilities infrequently exceed the hazardous waste toxicity characteristic, for one or more of the following metals: arsenic, cadmium, chromium, lead, and mercury. Additionally, when we compared waste leachate concentrations for hazardous metals to their corresponding MCLs (or potential MCLs in the case of arsenic), we found that there was a potential for risk as a result of arsenic leaching from these wastes. The criteria we examined included the existing arsenic MCL, a lower health based number presented in the RTC, and two assumed values in between. We examined this range of values because, as explained earlier in this notice, EPA is in the process of revising the current MCL for arsenic to a lower value as a result of a detailed study of arsenic in drinking water and we wanted to assess the likely range of values that would be under consideration by EPA. Once we have completed a review of our groundwater model and made necessary changes, we will reevaluate the potential risks from metals in coal combustion wastes and compare any projected groundwater contamination to the MCLs that exist at that time.

We also identified situations where the improper management of mill rejects, a low volume and uniquely associated waste, with high volume coal combustion wastes has the potential to cause releases of higher quantities of hazardous metals. When these wastes are improperly managed, the mill rejects can create an acidic environment which enhances leachability and can lead to the release of hazardous metals in high concentrations from the co-managed wastes to ground water or surface waters. Thus, our analysis of the characteristics of coal combustion wastes leads us to conclude that these wastes have the potential to pose risk to human health and the environment. We also plan to address such waste management practices in our subsequent rulemaking.

Additionally, we identified 11 proven damage cases that documented disposal of coal combustion wastes in unlined landfills or surface impoundments that involved exceedences of primary MCLs or other health-based standards in ground water or drinking water wells. Three of the proven damage cases were on the EPA Superfund National Priorities List. Although these damage cases indicate that coal combustion wastes can present risks to human health and the environment, they also show the effectiveness of states' responses when damages were identified. All of the sites were at older, unlined units, with disposal occurring prior to 1993. None of these cases involved actual human exposure. Given the large number of facilities that do not now conduct groundwater monitoring, we have a concern that additional cases of damage may be undetected.

As detailed in the RTC and explained earlier in this notice, we identified that the states and affected industry have made considerable progress in recent years toward more effective management of coal combustion wastes. We also identified that the ability for most states to impose specific regulatory controls for coal combustion wastes has increased almost three-fold over the past 15 years. Forty-three states can now impose a liner requirements at landfills whereas 15 years ago, 11 had the same authority. In addition to regulatory permits, the majority of states now have authority to require siting controls, liners, leachate collection, groundwater monitoring, closure controls, and other controls and requirements for surface impoundments and landfills.

Nonetheless, we have concluded that there are still gaps in the actual application of these controls and

requirements, particularly for surface impoundments. While most states now have the appropriate authorities and regulations to require liners and groundwater monitoring that would reduce or minimize the risks that we have identified, we have also identified numerous situations where these controls are not being applied. For example, only 26 percent of utility surface impoundments and 57 percent of utility landfills have liner systems in place. We have insufficient information to determine whether the use of these controls is significantly different for non-utility disposal units, due to a small sample size.

While many of these unlined units may be subject to grandfathering provisions that allow them to continue to operate without being lined, or may not need to be lined due to site-specific conditions, we are especially concerned that a substantial number of units do not employ groundwater monitoring to ensure that if significant releases occur from these unlined units, they will be detected and controlled. In 1995, groundwater was monitored at only 38 percent of utility surface impoundments. While monitoring is more frequent at landfills, there are still many units at which releases of hazardous metals could go undetected. For example, of the approximately 300 utility landfills, 45 newer landfills (15%) do not monitor ground water. We are concerned that undetected releases could cause exceedences of drinking water or other health-based standards that may threaten public health or groundwater and surface water resources. Thus, we conclude that national regulations would lead to substantial improvements in the management of coal combustion wastes.

3. Minefilling

We have determined that the establishment of national regulations is warranted for coal combustion wastes when they are placed in surface or underground mines because: (a) We wind that these wastes when minefilled have the potential to present a danger to human health and the environment, (b) minefilling of these wastes has been an expanding practice and there are few states that currently operate comprehensive programs that specifically address the unique circumstances of minefilling, making it more likely that any damage to human health or the environment would go unnoticed or unaddressed, and (c) we believe that the cost of complying with regulations that address these potential dangers may not have a substantial impact on this practice because minefilling continues to grow in those few states that already have comprehensive programs.

We recognize that at this time, we cannot quantify the nature of damage that may be occurring or may occur in the future as a result of using coal combustion wastes as minefill. It is often impossible to determine if existing groundwater quality has been impacted by previous mining operations or as a result of releases of hazardous constituents from the coal combustion wastes used in minefilling applications. We have not as yet identified proven damage cases resulting from the use of coal combustion wastes for minefilling.

We also acknowledge that when the complexities related to site-specific geology, hydrology, waste chemistry and interactions with the surrounding matrix, and other relevant factors are properly taken into account, coal combustion wastes used as minefill can provide significant benefits. However, when not done properly, minefilling has the potential to contaminate ground water to levels that could damage human health and the environment. Based on materials submitted during the public comment period, coal combustion wastes used as minefill can lead to increases in hazardous metals released into ground water if the acidity within the mine overwhelms the capacity of the coal combustion wastes to neutralize the acidic conditions. This is due to the increased leaching of hazardous metals from the wastes. The potential for this to occur is further supported by data showing that management of coal combustion wastes in the presence of acid-generating pyritic wastes has caused metals to leach from the combustion wastes at much higher levels than are predicted by leach test data for coal combustion wastes when strongly acidic conditions are not present. Such strongly acidic conditions often exist at mining sites.

Although we have identified no damage cases involving minefilling, we are also aware of situations where coal combustion wastes are being placed in direct contact with ground water in both surface and underground mines. We concluded in our recent study of cement kiln dust management practices that placement of cement kiln dust in direct contact with ground water led to a substantially greater release of hazardous metals than we predicted would occur when the waste was placed above the water table. For this reason, we find that there is a potential for increased releases of hazardous metals as a result of placing coal combustion wastes in direct contact with groundwater. Also, there are damage cases associated with coal combustion wastes in landfills. The Agency believes it is reasonable to be concerned when similar quantities of coal combustion wastes are placed in mines, which often are not engineered disposal units and in some cases involve direct placement of wastes into direct contact with ground water.

We are concerned that government oversight is necessary to ensure that minefilling is done appropriately to protect human health and the environment, particularly since minefilling is a recent, but rapidly expanding use of coal combustion wastes. Government oversight has not yet "caught up" with the practice consistently across the country. There are some states that have programs that specifically address minefilling practices. We are likely to find that their programs or certain elements of their programs could serve as the basis for a comprehensive, flexible set of national management standards that ensure protection of human health and the environment. We also believe that these state programs will provide valuable experience in coordinating with SMCRA program requirements. However, at this time, few of the programs are comprehensive. Commenters pointed out, and we agree, there are significant gaps in other states. We believe that additional requirements for long-term groundwater monitoring, and controls on wastes placed directly into groundwater might be prudent.

E. What Approach Will EPA Take in Developing National Regulations?

We will not promulgate any regulations for beneficial uses other than minefilling. We do not wish to place any unnecessary barriers on the beneficial use of fossil fuel combustion wastes so that they can be used in applications that conserve natural resources and reduce disposal costs.

Once we concluded there is a need for some form of national regulation of coal combustion wastes disposed in landfills and surface impoundments and used as minefill, we considered two approaches. One approach would involve promulgating subtitle D regulations, pursuant to sections 1008 and 4004(a) of RCRA, that would contain criteria defining landfills and impoundments that would constitute "sanitary landfills." Any facility that failed to meet the standards would constitute an open dump, which is prohibited by section 4005(a) of RCRA. Such standards would set a consistent baseline for protective management throughout the country. We would also work with the Department of Interior,

Office of Surface Mining to evaluate whether equivalent protectiveness for minefilling could be afforded by relying on revision of existing SMCRA regulations or by relying on a combination of RCRA and SMCRA authorities.

The second approach was to promulgate regulations pursuant to Subtitle C of RCRA, that would have been similar to our recent proposed regulation of cement kiln dust. Following this approach, EPA would develop national management standards based on the Subtitle D open dump criteria as discussed above, as well as a set of tailored Subtitle C requirements promulgated pursuant to RCRA section 3004(x). If the wastes were properly managed in accordance with the subtitle D-like standards, they would not be classified as hazardous wastes. When they were not properly managed, they would become listed hazardous wastes subject to tailored subtitle C standards. This scheme would be effective in each state authorized for the hazardous waste program when that state modified its hazardous waste program to incorporate the listing.

Under this approach, after states have adopted the contingent listing, facilities that have egregious or repeated violations of the management standards would be moved into the subtitle C program (subject to the tailored RCRA 3004 (x) requirements, rather than to the full set of subtitle C requirements). Thus, EPA would have authority to enforce the management standards.

The decision whether to establish regulations under subtitle C or D of RCRA for disposal of coal combustion wastes in landfills and surface impoundments and when minefilled was a difficult one. EPA believes that, in this case, either approach would ensure adequate protection of public health and the environment. Either subtitle C or D provides EPA with the authority to prescribe protective standards for the management of these wastes. Moreover, as described above, the standards that EPA would adopt under either regime, because of the flexibility provided by section 3004 (x), would be substantively the same. Also, under either approach, a facility that fails to comply with the standards is in violation of RCRA—in the case of subtitle C, the facility would be in violation of the tailored standards promulgated under section 3004(x). In the case of subtitle D, the facility would be in violation of the prohibition in section 4005(a) of RCRA against "open dumping." The prohibition against open dumping is, however, enforceable only by private citizens and states, not EPA. Management standards established under the authority of subtitle C (including tailored section 3004(x) standards) are also enforceable by EPA. It appears that more than 40 states already have sufficient authority to implement most, if not all of the national standards we contemplate would be appropriate for surface impoundments and landfills. One difference between the two regimes may be that states could cite revised subtitle D standards as a basis for exercising their existing authorities more vigorously, potentially promoting swifter adoption of appropriate controls for surface impoundments and landfills. In addition, subtitle D standards would be applicable and enforceable by citizens as soon as the federal rule becomes effective. subtitle C standards in contrast, would not apply until incorporated into state subtitle C programs. For minefilling, we would also explore SMCRA as a possible mechanism to speed implementation, even if we relied on subtitle D to establish protective standards, because minefilling operations already are subject to SMCRA permitting authority.

Taking into account the common and distinct features of these alternative approaches, EPA believes at this time, based on the current record, that subtitle D regulations are the more appropriate mechanism for a number of reasons. In view of the very substantial progress that states have made in regulating disposal of fossil fuel combustion wastes in surface impoundments and landfills in recent years, as well as the active role that this industry has played recently in facilitating responsible waste disposal practices, EPA believes that subtitle D controls will provide sufficient clarity and incentive for states to close the remaining gaps in coverage, and for facilities to ensure that their wastes are managed properly.

For minefilling, although we have considerable concern about certain current practices (*e.g.*, placement directly into groundwater), we have not yet identified a case where placement of coal wastes can be determined to have actually caused increased damage to ground water. In addition, there is a federal regulatory program—SMCRA—expressly designed to address environmental risks associated with coal mines. Finally, given that states have been diligent in expanding and upgrading programs for surface impoundments and landfills, we believe they will be similarly responsive in addressing environmental concerns arising from this emerging practice. In short, we arrive at the same conclusions, for substantially the same reasons, for this practice as we did for landfills and surface impoundments: that subtitle D controls, or upgraded SMCRA controls or a combination of the two, should provide sufficient clarity and incentive to ensure proper handling of this waste when minefilled. Having determined that subtitle C regulation is not warranted for all other management practices, EPA does not see a basis in the record for carving this one practice out for separate regulatory treatment.

Once these subtitle D regulations are effective, facilities would be subject to citizen suits for any violation of the standards. If EPA were addressing wastes that had not been addressed by the states (or the federal government) in the past, or an industry with wide evidence of irresponsible solid waste management practices, EPA may well conclude that the additional incentives for improvement and compliance provided by the subtitle C scheme—the threat of federal enforcement and the stigma associated with improper management of RCRA subtitle C waste—were necessary. But the record before us indicates that the structure and the sanctions associated with a subtitle D approach (or a SMCRA approach if EPA determines it is equivalent) should be sufficient.

We also see a potential downside to pursuing a subtitle C approach. Section 8002(n)(8) directs us to consider, among other factors, "the current and potential utilization of such materials." Industry commenters have indicated that they believe subjecting any coal combustion wastes to a subtitle C regime would place a significant stigma on these wastes, the most important effect being that it would adversely impact beneficial reuse. As we understand it, the concern is that, even though beneficially reused waste would not be hazardous under the contemplated subtitle C approach, the link to subtitle C would nonetheless tend to discourage purchase and re-use of the wastes or products made from the wastes. We do not wish to place any unnecessary barriers on the beneficial uses of these wastes, because they conserve natural resources, reduce disposal costs and reduce the total amount of waste destined for disposal. States and industry have also expressed concern that regulation under subtitle C could cause a halt in the use of coal combustion wastes to reclaim abandoned and active mine sites. If this were to occur, it would be unfortunate in that when done properly, we recognize this practice can lead to substantial environmental benefits. EPA believes the contingent management scheme we discussed should diminish

any stigma that might be associated with the subtitle C link. Nonetheless, we acknowledge the possibility that the approach could have unintended consequences. We would be particularly concerned about any adverse effect on the beneficial re-use market for these wastes because more than 23 percent (approximately 28 million tons) of the total coal combustion waste generated each year is beneficially reused and an additional eight percent (nine million tons) is used for minefilling. EPA believes that such reuse when performed properly, is by far the environmentally preferable destination for these wastes, including when minefilled. Normally, concerns about stigma are not a deciding factor in EPA's decisions under RCRA, given the central concern under the statute for protection of human health and the environment. However, given our conclusion that the subtitle D approach here should be fully effective in protecting human health and the environment, and given the large and salutary role that beneficial reuse plays for this waste, concern over stigma is a factor supporting our decision today that subtitle C regulation is unwarranted in light of our decision to pursue a subtitle D approach.

As we proceed with regulation development, we will also take enforcement action under RCRA section 7003 when we identify cases of imminent and substantial endangerment. We will also use Superfund remedial and emergency response authorities under the Comprehensive Environmental Response Compensation and Liabilities Act (CERCLA), as appropriate, to address damages that result in risk to human health and the environment. We will also take into account new information as it becomes available. We are awaiting a National Academy of Sciences report scheduled to be released in June 2000. This report will present a comprehensive review of mercury and recommendations on appropriate adverse health effects levels for this constituent. We believe that this report will enhance our understanding of the risks due to exposure to mercury, and we will review and assess its implications for today's decision on fossil fuel combustion wastes. These efforts may result in a re-evaluation of the risks posed by managing coal combustion wastes.

3. What Is the Basis for EPA's Regulatory Determination for Oil Combustion Wastes?

A. What Is the Agency's Decision Regarding the Regulatory Status of Oil Combustion Wastes and Why Did EPA Make This Decision?

We have determined that it is not appropriate to issue regulations under subtitle C of RCRA applicable to oil combustion wastes because: (a) We have not identified any beneficial uses that are likely to present significant risks to human health or the environment; and (b) except for a limited number of unlined surface impoundments, we have not identified any significant risks to human health and the environment associated with any waste management practices.

We intend to work with the State of Massachusetts and the owners and operators of the remaining two oil combustion facilities that currently manage their wastes in unlined surface impoundments to ensure that their wastes are managed in a manner that protects human health and the environment.

B. What Were EPA's Tentative Decisions as Presented in the Report to Congress and Why Did EPA Make That Decision?

In the Report to Congress, we stated that the only management scenario for which we found risks posed by management of oil combustion wastes was when oil combustion wastes are managed in unlined surface impoundments. The Report to Congress further explained that we were considering two approaches to address these identified risks. One approach was to regulate using RCRA subtitle C authority. The other approach was to encourage voluntary changes so that no oil combustion wastes are managed in unlined surface impoundments. This voluntary approach is based on recent industry and state regulatory trends to line oil combustion waste disposal units and implement groundwater monitoring.

We also tentatively decided that the existing beneficial uses of oil combustion wastes should remain exempt from RCRA subtitle C. There are few existing beneficial uses of these wastes, which include use in concrete products, structural fill, roadbed fill, and vanadium recovery. We determined that no significant risks to human health exist for the beneficial uses of these wastes. For the case of facilities that accept these wastes to recover vanadium from them, we explained that if the wastes resulting from the metal recovery processes are hazardous, they will be subject to existing hazardous waste requirements.

We found in most cases that OCW, whether managed alone or co-managed, are rarely characteristically hazardous. Additionally, we identified no significant ecological risks posed by land disposal of OCW. We identified only one documented damage case involving OCW in combination with coal combustion wastes, and it did not affect human receptors.

Although most of the disposed oil combustion wastes are managed in lined surface impoundments, we did identify six utility sites where wastes are managed in unlined units. We expressed particular concern with management of these wastes in unlined settling basins and impoundments that are designed and operated to discharge the aqueous portion of the wastes to ground water. Our risk analysis indicated that, in these situations, three metals—arsenic, nickel, and vanadium—may pose potential risk by the groundwater pathway.

C. How Did Commenters React to EPA's Tentative Decisions and What Was EPA's Analysis of Their Comments?

Because we were able to identify so few unlined surface impoundments, the only management scenario for which we found risks, the primary focus of the comments regarding oil combustion wastes was on the six unlined surface impoundments that we identified. In addition, there were extensive comments on our modeling and risk assessment methodology for the groundwater pathway that are applicable to our assessment of risks posed by oil combustion wastes.

1. How Did Commenters React to the Six Unlined Oil Combustion Waste Surface Impoundments That We Identified?

Comments. Industry commenters supported the approach to encourage voluntary changes in industry practices on a site-specific basis, and explained why they believed hazardous waste regulations are unnecessary. The environmental community supported the development of hazardous waste regulations.

EPA's Analysis of Comments. In the RTC, we identified that our only concern about oil combustion wastes was based on the potential for migration of arsenic, nickel, and vanadium from unlined surface impoundments. We requested information on this issue and did not receive any additional data and/or information to refute our tentative finding stated in the RTC that these

unlined surface impoundments could pose a significant risk.

As stated in the RTC, there are only six sites involving two companies that have unlined surface impoundments. Four of the sites are in Florida and are operated by one company. The company operating the four unlined impoundments in Florida is undertaking projects to mitigate potential risks posed by their unlined management units. At a May 21, 1999 public hearing, the company announced its plans to remove all the oil ash and basin material from its unlined impoundments and to line or close the units. The company informed us in January 2000 that it had completed the lining of all the units. Based on this information, we do not believe that these units pose a significant risk to human health and the environment.

The other two sites with unlined impoundments are operated by one utility in Massachusetts. Both sites are permitted under Massachusetts' ground water discharge permit program and have monitoring wells around the unlined basins. Arsenic is monitored for compliance with state regulations. Although the company expressed no plans to line their impoundments, they are preparing to implement monitoring for nickel and vanadium in ground water around the waste management units. We have been working with the State and the company to obtain additional information to evaluate these two management units. We will continue this effort and will work with the company and the State to ensure that any necessary measures are taken so that these wastes are managed in a manner that protects human health and the environment.

2. How Did Commenters React to the Groundwater Modeling and Risk Assessment Analyses Conducted by EPA to Support Its Findings in the Report to Congress?

Comments. Industry and public interest group commenters submitted detailed critiques of the ground water model, EPACMTP, that we used for our risk analysis. Industry commenters believe that the model will overestimate the levels of contaminants that may migrate down-gradient from disposed wastes. Environmental groups expressed the opposite belief; that is, that the model underestimates down-gradient chemical concentrations and, therefore, underestimates the potential risk posed by oil combustion wastes.

EPA's Analysis of the Comments. We are carefully reviewing all of the comments on the model and have determined that the process of thoroughly investigating all of the comments will take substantially more time to complete than is available within the court deadline for issuing this regulatory determination. At this time, we are uncertain of the overall outcome of our analysis of the issues raised in the comments. Accordingly, we have decided not to use the results of our ground water pathway risk analysis in support of today's regulatory determination on fossil fuel combustion wastes. As explained above, we believe that actions have been taken or are under way by specific companies and/or the State of Massachusetts to address potential risks at the six impoundments that we have been able to identify. Therefore we believe that further groundwater analysis is unnecessary at this time.

Meanwhile, we will continue with our analysis of comments on the groundwater model and risk analysis. This may involve changing or restructuring various aspects of the model, if appropriate. It may also include additional analyses to determine whether any changes to the model or modeling methodology would materially affect the groundwater risk analysis results that were reported in the RTC. If our investigations reveal that a reanalysis of groundwater risks is appropriate, we will conduct the analysis and reevaluate today's decisions as appropriate.

In addition to our ongoing review of comments on the groundwater model, one element of the model—the metals partitioning component called "MINTEQ"—has been proposed for additional peer review. When this additional peer review is completed, we will take the findings and recommendations into account in any overall decision to re-evaluate today's regulatory determination.

D. What Is the Basis for Today's Decisions?

We have determined that it is not appropriate to establish national regulations applicable to oil combustion wastes because: (a) We have not identified any beneficial uses that are likely to present significant risks to human health or the environment; and (b) except for two remaining unlined surface impoundments, we have not identified any significant risks to human health and the environment associated with any waste management practices. As explained in the previous section, we intend to work with the State of Massachusetts and the owners and operators of the remaining two oil combustion facilities that currently manage their wastes in unlined surface impoundments to ensure that any necessary measures are taken so that their wastes are managed in a manner that protects human health and the environment. Given the limited number of sites at issue and our ability to adequately address risks from these waste management units through site-specific response measures, we see no need for issuing regulations under subtitle C or D of RCRA.

4. What Is the Basis for EPA's Regulatory Determination for Natural Gas Combustion Wastes?

A. What Is the Decision Regarding the Regulatory Status of Natural Gas Combustion Wastes?

For the reasons described in the Report to Congress (pages 7–1 to 7–3), EPA has decided that regulation of natural gas combustion wastes as hazardous wastes under RCRA subtitle C or D is not warranted. The burning of natural gas generates virtually no solid waste.

B. What Was EPA's Tentative Decision as Presented in the Report to Congress?

The Agency's tentative decision was to retain the subtitle C exemption for natural gas combustion because virtually no solid waste is generated.

C. How Did Commenters React to EPA's Tentative Decision?

No commenters on the RTC disagreed with EPA's findings or its tentative decision to continue the exemption for natural gas combustion wastes.

Specific comments on this issue supported our tentative decision to retain the exemption for natural gas combustion waste. One industry association encouraged us to foster the use of natural gas as a substitute for other fossil fuels. While some public interest group commenters disagreed broadly with our tentative conclusions to retain the exemption for fossil fuel combustion wastes, they did not specifically address natural gas combustion wastes.

D. What Is the Basis for Today's Decision?

The burning of natural gas generates virtually no solid waste. We, therefore, believe that there is no basis for EPA developing subtitle C or D regulations applicable to natural gas combustion wastes.

5. What Is the History of EPA's Regulatory Determinations for Fossil Fuel Combustion Wastes?

A. On What Basis Is EPA Required To Make Regulatory Determinations Regarding the Regulatory Status of Fossil Fuel Combustion Wastes?

Section 3001(b)(3)(C) of the Resource Conservation and Recovery Act (RCRA) as amended requires that, after completing a Report to Congress mandated by section 8002(n) of RCRA, the EPA Administrator must determine whether Subtitle C (hazardous waste) regulation of fossil fuel combustion wastes is warranted.

B. What Was EPA's General Approach in Making These Regulatory Determinations?

We began our effort to make our determination of the regulatory status of fossil fuel combustion wastes by studying high volume coal combustion wastes managed separately from other fossil fuel combustion wastes that are generated by electric utilities. In February 1988, EPA published the Report to Congress on Wastes from the Combustion of Coal by Electric Utility Power Plants. The report addressed four large-volume coal combustion wastes generated by electric utilities and independent power producers when managed alone. The four wastes are fly ash, bottom ash, boiler slag, and flue gas desulfurization (FGD) wastes. The report did not address co-managed utility coal combustion wastes (UCCWs), other fossil fuel wastes generated by utilities, or wastes from non-utility boilers burning any type of fossil fuel. Because of other priorities at the time, we did not immediately complete a determination of the regulatory status of these large-volume coal combustion wastes.

C. What Happened When EPA Failed To Issue Its Determination of the Regulatory Status of the Large Volume Utility Combustion Wastes in a Timely Manner?

In 1991, a suit was filed against EPA for not completing a regulatory determination on fossil fuel combustion wastes (*Gearhart* v. *Reilly*, Civil No. 91–2345 (D.D.C.)). On June 30, 1992, the Agency entered into a Consent Decree that established a schedule for us to complete the regulatory determination for all fossil fuel combustion wastes in two phases:

- The first phase covers fly ash, bottom ash, boiler slag, and flue gas emission control wastes from the combustion of coal by electric utilities and independent commercial power producers. These are the four large volume wastes that were the subject of the 1988 Report to Congress described above. We refer to this as the Part 1 regulatory determination.
- The second phase covers all of the "remaining" fossil fuel combustion wastes not covered in the Part 1 regulatory determination. We refer to this as the Part 2 regulatory determination, which is the subject of today's action. Under the current court-order, EPA was directed to issue the Part 2 regulatory determination by April 25, 2000.

D. When Was the Part 1 Regulatory Decision Made and What Were EPA's Findings?

In 1993, EPA issued the Part 1 regulatory determination, in which we retained the exemption for Part 1 wastes (see 58 FR 42466; August 9, 1993). The four Part 1 large-volume utility coal combustion wastes (UCCWs) are also addressed in the Part 2 regulatory determination when they are co-managed with low-volume fossil fuel combustion wastes not covered in the Part 1 determination.

6. Executive Orders and Laws Addressed in Today's Action

A. Executive Order 12866—Determination of Significance

Under Executive Order 12866, (58 FR 51735, Oct. 4, 1993) we must determine whether the regulatory action is "significant" and therefore subject to review by the Office of Management and Budget (OMB) and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

- Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;
- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles in the Executive Order."

Under Executive Order 12866, this is a "significant regulatory action." Thus, we have submitted this action to OMB for review. Changes made in response to OMB suggestions or recommendations are documented in the public record.

B. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq.

Today's action is not subject to the RFA, which generally requires an agency to prepare a regulatory flexibility analysis for any rule that will have a significant economic impact on a substantial number of small entities. The RFA applies only to rules subject to notice-and-comment rulemaking requirements under the Administrative Procedure Act (APA) or any other statute. This action is not subject to notice and comment requirements under the APA or any other statute. Today's action is being taken pursuant to section 3001(b)(3)(C) of the Resource Conservation and Recovery Act. This provision requires EPA to make a determination whether to regulate fossil fuel combustion wastes after submission of its Report to Congress and public hearings and an opportunity for comment. This provision does not require the publication of a notice of proposed rulemaking and today's action is not a regulation. *See American Portland Cement Alliance* v. *E.P.A.*, 101 F.3d 772 (D.C.Cir. 1996).

C. Paperwork Reduction Act Information Collection Requests

Today's final action contains no information collection requirements.

D. Unfunded Mandates Reform Act

Today's action is not subject to the requirements of sections 202 and 205 of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4. Title II of UMRA establishes requirements for federal agencies to assess the effects of their regulatory actions on state, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "federal mandates" that may result in expenditures to state, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year.

Before we issue a rule for which a written statement is needed, section 205 of the UMRA generally requires us to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the rule's objectives. Section 205 doesn't apply when it is inconsistent with applicable law. Moreover, section 205 allows us to adopt an alternative other than the least costly, most cost-effective, or least

burdensome alternative if the final rule explains why that alternative was not adopted. Before we establish any regulatory requirements that may significantly affect small governments, including tribal governments, we must have developed under section 203 of the UMRA a small-government-agency plan. The plan must provide for notifying potentially affected small governments, enabling them to have meaningful and timely input in the developing EPA regulatory proposals with significant federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Today's final action contains no federal mandates (under the regulatory provisions of Title II of the UMRA) for state, local, or tribal governments or the private sector. Today's final action imposes no enforceable duty on any state, local or tribal governments or the private sector.

In addition, we have determined this action contains no federal mandate that may result in expenditures of $100 million or more for state, local, and tribal governments, in the aggregate, or the private sector in any one year.

E. Executive Order 13132: Federalism

Executive Order 13132, entitled Federalism (64 FR 43255, August 10, 1999) requires us to develop an accountable process to ensure meaningful and timely input by state and local officials in the development of regulatory policies that have federalism implications. The executive order defines policies that have federalism implications to include regulations that have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

Under section 6 of Executive Order 13132, we may issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that isn't required by statute, only if the federal government provides funds the direct compliance costs incurred by state and local governments, or if EPA consults with state and local officials early in the development of the proposed regulation. Also, EPA may issue a regulation that has federalism implications and that preempts state law, only if we consult with state and local officials early in the development of the proposed regulation.

If EPA complies by consulting, Executive Order 13132 requires us to provide OMB, in a separately identified section of the rule's preamble, a federalism summary impact statement (FSIS). The FSIS must describe the extent of our prior consultation with state and local officials, summarizing the nature of their concerns and our position supporting the need for the regulation, and state the extent to which the concerns of state and local officials have been met. Also, when we transmit a draft final rule with federalism implications to OMB for review under Executive Order 12866, our federalism official must include a certification that EPA has met the requirements of Executive Order 13132 in a meaningful and timely manner.

Today's final action does not have federalism implications. It will not have a substantial direct affect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This is because no requirements are imposed by today's action, and EPA is not otherwise mandating any state or local government actions. Thus, the requirements of section 6 of the Executive Order do not apply to this final action.

F. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments

Under Executive Order 13084, EPA may take an action that isn't required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, only if the federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires us to describe in a separately identified section of the preamble to the rule the extent of our prior consultation with representatives of affected tribal governments, summarizing of the nature of their concerns, and state the need for the regulation. Also, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

Today's final action does not significantly or uniquely affect the communities of Indian tribal governments. This is because today's action by EPA involves no regulations or other requirements that significantly or uniquely affect Indian tribal governments. So, the requirements of section 3(b) of Executive Order 13084 do not apply to this action.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

"Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, we must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

Today's final action isn't subject to the Executive Order because it is not economically significant as defined in Executive Order 12866, and because we have no reason to believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. Risks were thoroughly evaluated during the course of developing today's decision and were determined not to disproportionately affect children.

H. National Technology Transfer and Advancement Act of 1995

As noted in the proposed rule, section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law. No. 104–113, section12(d) (15 U.S.C. 272 note) directs EPA to use voluntary-consensus standards in its regulatory activities unless doing so would be inconsistent with applicable law or otherwise impractical. Voluntary-consensus standards are technical standards (such as materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary-consensus standards bodies. The NTTAA directs us to explain to Congress, through OMB, when we decide not to use available and applicable voluntary-consensus standards.

Today's final action involves no technical standards. So, EPA didn't consider using any voluntary-consensus standards.

I. Executive Order 12898: Environmental Justice

EPA is committed to addressing environmental justice concerns and is assuming a leadership role in environmental justice initiatives to enhance environmental quality for all populations in the United States. The Agency's goals are to ensure that no segment of the population, regardless of race, color, national origin, or income bears disproportionately high and adverse human health or environmental impacts as a result of EPA's policies, programs, and activities, and that all people live in safe and healthful environments. In response to Executive Order 12898 and to concerns voiced by many groups outside the Agency, EPA's Office of Solid Waste and Emergency Response formed an Environmental Justice Task Force to analyze the array of environmental justice issues specific to waste programs and to develop an overall strategy to identify and address these issues (OSWER Directive No. 9200.317).

J. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, does not apply because this action is not a rule for purposes of 5 U.S.C. 804(3). Rather, this action is an order as defined by 5 U.S.C. 551(6).

7. How To Obtain More Information

Documents related to this regulatory determination, including EPA's response to the public comments, are available for inspection in the docket. The relevant docket numbers are: F–99–FF2D–FFFFF for the regulatory determination, and F–99–FF2P–FFFFF for the RTC. The RCRA Docket Information Center (RIC), is located at Crystal Gateway I, First Floor, 1235 Jefferson Davis Highway, Arlington, VA. The RIC is open from 9 a.m. to 4 p.m., Monday through Friday, excluding Federal holidays. To review docket materials, it is recommended that the public make an appointment by calling 703-603–9230. The public may copy a maximum of 100 pages from any regulatory docket at no charge. Additional copies cost $0.15/page. The index and some supporting materials are available electronically. See the Supplementary Information section for information on accessing them.

List of Subjects in 40 CFR Part 261

Fossil fuel combustion waste, Coal combustion, Gas combustion, Oil combustion, Special wastes, Bevill exemption

Dated: April 25, 2000.

Carol M. Browner,

Administrator.

[FR Doc. 00–11138 Filed 5–19–00; 8:45 am]

BILLING CODE 6560–50–U

EXHIBIT JH -1

JOHN G. HOWAT

PROFESSIONAL EXPERIENCE

Senior Energy Policy Analyst: National Consumer Law Center. 1999 - Present Boston, MA

- Advocate for enhanced low-income home energy security with particular focus on energy and utility economics, technologies and regulation
- Manage broad range of state and national low-income energy advocacy projects
- Provide expert testimony on low-income energy and utility issues before state regulatory agencies
- Support the enhancement of advocacy capacity of a national network of low-income program delivery and policy organizations through targeted advice and assistance, trainings, and maintenance of communications networks
- Track technology, economic, programmatic, regulatory and policy developments pertaining to low-income access to energy and utility service
- Provide state and federal legislative services on behalf of low-income advocates and clients
- Develop reports and publications; coordinate and present low-income energy advocacy perspectives at national energy conferences

Sole Proprietor: John Howat Associates. 1995 - 1999 Boston, MA

- Conducted market and economic analysis, analysis of customer energy consumption and load profiles, development of power supply requests for proposals, and analysis of utility rates, assets and power purchase contracts.
- Provided Legislative and Regulatory representation
- Provided communications planning and program implementation
- Registered Massachusetts Energy Broker

Resource Planning Economist: Massachusetts Department of Public Utilities. 1991 - 1995 Boston, MA

- Participated in adjudication and settlement proceedings pertaining to electric utility resource planning.
- Conducted technical analysis in conjunction with development of regulatory review policies.
- Prepared and conducted discovery and cross examinations of witnesses.
- Drafted Orders, Decisions, and internal communications.
- Acted as liaison to various public and private sector organizations.

Massachusetts State Legislature. 1985 - 1991 Boston, MA

Research Director: Joint Committee on Energy. 1991

- Directed all committee legislative activities.
- Hired, trained and supervised research and support staffs.
- Conducted legal research and quantitative analysis leading to development of new legislation.
- Worked with Committee Chairmen, rank and file legislators, lobbyists, members of the public and the press.

Legislative Director: State Senator Sal Albano. 1988 - 1990

- Coordinated all legislative and budgetary activities for Senate Chairman of the Joint Committees on Education and Public Safety, including drafting of legislation, amendments and budgetary proposals, and supervision of legislative aides and interns.
- Advised the Senator on policies and programs related to education, health care, human services, housing, the environment, public safety, and taxation.
- Coordinated public relations, including drafting of press releases and answering press inquiries.
- Developed a legislative tracking system.
- Wrote briefing materials for debates and public presentations.

jhowat@nclc.org
617-542-8010

Senior Legislative Research Analyst: Joint Committee on Energy. 1985 - 1988

- Conducted research and analysis of legislation before the committee.
- Drafted new legislation relative to energy efficiency programs and policies, non-utility generation, low-income energy programs, utility rates, municipal utilities, and the "Bottle Law."

Executive Director: Association of Massachusetts Local Energy Officials. 1982 - 1985 Boston, MA

- Promoted, monitored and evaluated four statewide institutional energy conservation programs as a consultant to the Mass. Municipal Assn. and the Mass. Executive Office of Energy Resources.
- Wrote and negotiated grant proposals.
- Conducted member recruitment, fund raising and financial management.
- Produced, edited and contributed to quarterly newsletters distributed statewide.
- Organized workshops and conferences for public sector energy managers.

Teaching Assistant: Tufts University Graduate Department of Urban and Environmental Policy.
1983 - 1984 Medford, MA

- Conducted graduate workshops in financial analysis and management of local governments and non-profit organizations.
- Subject matter included cash flow, net present value, internal rate of return, business planning and benefit/cost analyses with emphasis on externalities and non-quantitative values.

Legislative Aide: Washington State Senator King Lysen. 1981 - 1982 Olympia, WA

- Conducted inquiry into energy consumption, rate structures and taxation of Direct Service Industrial customers of energy suppliers and brokers in the Pacific Northwest.
- Coordinated media relations and production of constituent newsletters.

County Coordinator/Research Analyst: "Don't Bankrupt Washington" Campaign. 1981 Olympia, WA

- Conducted analysis of economic impacts to electric utility ratepayers caused by cost overruns on five Washington Public Power Supply System nuclear power plants.
- Served as Thurston County Coordinator of the organization that sponsored Initiative Measure No. 394, requiring voter approval for bonding of public energy facilities.
- Conducted fund raising activities, coordinated the efforts of 30 volunteers, and waged an effective voter turnout campaign.

EDUCATION

Master of Urban and Environmental Policy. Tufts University. Graduate Department of Urban and Environmental Policy. Medford, Massachusetts. January, 1984.

Areas of Study: Community Energy Planning, Energy Economics, Housing Policy, Community Economic Development, Communications Methods, Financial Analysis and Management, Research Methods, Statistical Analysis, and various computer applications.

Bachelor of Arts. The Evergreen State College. Olympia, Washington. June, 1981.

Areas of Study: Economics, Political Science, American and European History.

jhowat@nclc.org
617-542-8010

John Howat Regulatory Commission Testimony and Comment Experience

Case Name/Docket	Client	Topic	Jurisdiction	Date
Docket No. 32953 - Alabama Power Company	Energy Alabama and Gasp	Direct Testimony - Affordability of residential electricity service	Alabama	Dec-19
Cause No. 45253 - Duke Energy Indiana	Indiana Citizens Action Coalition, Indiana Community Action Association, Environmental Working Group	Direct Testimony - Low-income affordability program, credit and collections data reporting	Indiana	Oct-19
D.P.U. 18-150 - National Grid	Massachusetts Energy Directors Association	Direct Testimony - Transportation Electrification, Rate Design	Massachusetts	Mar-19
Docket No. 2018-318-E - Duke Energy Progress	Southern Environmental Law Center, NAACP, South Carolina Coastal Conservation League	Direct Testimony - Rate design, low-income energy efficiency and affordability programs	South Carolina	Mar-19
Cause No. 45159 - Northern Indiana Public Service Company	Citizens Action Coalition of Indiana	Direct Testimony - Rate design, low-income affordability program, credit and collections data reporting	Indiana	Feb-19
Docket No. 2018-319-E - Duke Energy Carolinas	Southern Environmental Law Center, NAACP, South Carolina Coastal Conservation League	Direct Testimony - Rate design, low-income energy efficiency and affordability programs	South Carolina	Feb-19
Docket No. 18-1008/1009 - Ameren Illinois Company	Illinois Attorney General's Office	Rebuttal Testimony - Prepaid utility service	Illinois	Nov-18
Docket No. 18-1008/1009 - Ameren Illinois Company	Illinois Attorney General's Office	Direct Testimony - Prepaid utility service	Illinois	Sep-18
D.P.U. 18-40 - The Berkshire Gas Company	Massachusetts Low-Income Weatherization and Fuel Assistance Program Network and the Massachusetts Energy Directors Association	Direct Testimony - General rate case, low-income discount rate	Massachusetts	Sep-18

D.P.U. 18-45 - Bay State Gas Company d/b/a Columbia Gas of Massachusetts	Massachusetts Low-Income Weatherization and Fuel Assistance Program Network and the Massachusetts Energy Directors Association	Direct Testimony - General rate case, low-income discount rate	Massachusetts	Aug-18
Case No. 18-00043-UT - Public Service Company of New Mexico	New Mexico Coalition for Clean Affordable Energy	Direct Testimony - Rate design	New Mexico	Aug-18
Cause No. 45029 - Indianapolis Power & Light Company	Citizens Action Coalition of Indiana, Indiana Coalition for Human Services, Indiana Community Action Association, Sierra Club	Direct Testimony - Rate design	Indiana	May-18
Docket No. 17-0837 - Commonwealth Edison Company	Illinois Attorney General's Office	Direct Testimony - Prepaid utility service	Illinois	Mar-18
D.P.U. 17-170 - Boston Gas Company, Colonial Gas Company, each d/b/a National Grid	Massachusetts Low-Income Weatherization and Fuel Assistance Program Network and the Massachusetts Energy Directors Association	Direct Testimony - General rate case, low-income discount rate	Massachusetts	Mar-18
Docket No. E-7, Sub 1146 - Duke Energy Carolinas	Southern Environmental Law Center, North Carolina Justice Center, North Carolina Housing Coalition, Natural Resources Defense Council, and Southern Alliance for Clean Energy	Direct Testimony - General rate case, rate design, affordable payment program	North Carolina	Jan-18
Cause No. 44967 - Indiana Michigan Power Company	Citizens Action Coalition of Indiana, Indiana Coalition for Human Services, Indiana Community Action Association, Sierra Club	Direct Testimony - Rate design, affordable payment program	Indiana	Nov-17
Docket No. E-2, Sub 1142 - Duke Energy Progress	Southern Environmental Law Center, North Carolina Justice Center, North Carolina Housing Coalition, Natural Resources Defense Council, and Southern Alliance for Clean Energy	Direct Testimony - General rate case, rate design, affordable payment program	North Carolina	Oct-17

jhowat@nclc.org
617-542-8010

Docket No. P-2016-2572033 - RECO Energy Company's plan for an advanced payments program and petition for waiver of a portion of the Commission's regulations	Pennsylvania Office of Consumer Advocate	Surrebuttal Testimony - Prepaid utility service	Pennsylvania	Aug-17
Docket No. P-2016-2572033 - RECO Energy Company's plan for an advanced payments program and petition for waiver of a portion of the Commission's regulations	Pennsylvania Office of Consumer Advocate	Rebuttal Testimony - Prepaid utility service	Pennsylvania	Jul-17
Docket No. P-2016-2572033 - RECO Energy Company's plan for an advanced payments program and petition for waiver of a portion of the Commission's regulations	Pennsylvania Office of Consumer Advocate	Direct Testimony - Prepaid utility service	Pennsylvania	Jun-17
D.P.U 15-155 - Massachusetts Electric Company, Nantucket Electric Company, each d/b/a National Grid	Massachusetts Low-Income Weatherization and Fuel Assistance Program Network	Direct Testimony - low-income discount rate, rate design, net energy metering and solar renewable energy credits	Massachusetts	Mar-16
Cause No. 44688 - Northern Indiana Public Service Company	Citizens Actions Coalition of Indiana and the Environmental Law & Policy Center	Direct Testimony - General rate case - rate design, affordability program, credit and collections data reporting	Indiana	Jan-16
Case No. 15-00261-UT - Public Service Company of New Mexico	New Mexico Coalition for Clean Affordable Energy	Direct Testimony - Rate design, affordable payment program, credit and collections data collection and reporting	New Mexico	Jan-16
6690-UR-124 - Wisconsin Public Service Corporation	Wisconsin Community Action Program Association	Comment - Rate design	Wisconsin	Oct-15

jhowat@nclc.org
617-542-8010

Cause No. 44576 - Indianapolis Power and Light Company	Citizens Actions Coalition of Indiana, Indiana Association for Community and Economic Development, Indiana Coalition of Human Services, Indiana Community Action Association, Indiana NAACP, and National Association of Social Workers Indiana Chapter	Direct Testimony - energy affordability program, rate design	Indiana	Jul-15
05-UR-107 - Wisconsin Electric Power Company and Wisconsin Gas Company	Wisconsin Community Action Program Association	Comment - Rate design	Wisconsin	Oct-14
3270-UR-120 - Madison Gas and Electric Company	Wisconsin Community Action Program Association	Comment - Rate design	Wisconsin	Oct-14
6690-UR-123 - Wisconsin Public Service Corporation	Wisconsin Community Action Program Association	Comment - Rate design	Wisconsin	Sep-14
Docket 14-05004 - Nevada Energy Company	Nevada Bureau of Consumer Protection	Direct Testimony - Prepaid utility service	Nevada	Aug-14
D.P.U. 14-04 - Investigation into time-varying rates	NCLC's low-income clients	Comment - Rate design, regulatory consumer protections	Massachusetts	Mar-14
Docket No. 4450 - Rules and regulations governing the termination of residential electric and natural gas service	George Wiley Center	Comment - Regulatory consumer protections	Rhode Island	Dec-13
Application 11-10-002 - San Diego Gas and Electric Company For Authority To Update Marginal Costs, Cost Allocation, And Electric Rate Design	National Consumer Law Center's low-income clients, The Utility Reform Network, Center for Accessible Technology, Greenlining Institute	Direct Testimony - Prepaid utility service	California	Jun-12
Rulemaking 09-11-014 - Rulemaking to Examine the Commission's Post-2008 Energy Efficiency Policies, Programs, Evaluation, Measurement, and Verification, and Related Issues	NCLC's low-income clients	Comment - Energy efficiency financing	California	Feb-12

jhowat@nclc.org
617-542-8010

Rulemaking 09-11-014 - Rulemaking to Examine the Commission's Post-2008 Energy Efficiency Policies, Programs, Evaluation, Measurement, and Verification, and Related Issues	NCLC's low-income clients	Reply Comment - Energy efficiency financing	California	Feb-12
Docket Nos. UE-111048 and UG-111049 - Puget Sound Energy	The Opportunity Council	Direct Testimony - Bill payment assistance, home energy affordability	Washington	Dec-11
R-10-02-005 - Rulemaking to address the issue of customers' electric and natural gas service disconnection	NCLC's low-income clients	Comments - Regulatory consumer protections	California	Sep-10
Docket No. 7535 - Petition of AARP for the establishment of reduced rates for low-income consumers of Green Mountain Power Corporation and Central Vermont Public Service Corporation; and as expanded to possibly include general applicability to all Vermont retail electric utilities	AARP Vermont	Rebuttal Testimony - Bill payment assistance	Vermont	Jun-10
Docket 10-02009 - Nevada Energy	Washoe County Senior Law Project	Direct Testimony - Advanced meter consumer protections	Nevada	Apr-10

jhowat@nclc.org
617-542-8010

R-10-02-005 - Rulemaking to address the issue of customers' electric and natural gas service disconnection	NCLC's low-income clients	Opening Comment - Regulatory consumer protections	California	Mar-10
Docket No. 06-0703 - Rulemaking IL Admin. Code - Part 280	South Austin Community Council and Community Action for Fair Utility Practice	Direct Testimony - Regulatory consumer protections	Illinois	Jan-10
Project No. 35533	NCLC's low-income clients	Comment - Prepaid utility service	Texas	Jan-10
Cause No. 43669 - Citizens Gas, Northern Indiana Public Service Company, and Vectren Energy Delivery	AARP and Citizens Action Coalition	Direct Testimony - Bill payment assistance, home energy affordability	Indiana	Sep-09
Docket No. 7535 - Petition of AARP for the establishment of reduced rates for low-income consumers of Green Mountain Power Corporation and Central Vermont Public Service Corporation; and as expanded to possibly include general applicability to all Vermont retail electric utilities	AARP Vermont	Direct Testimony - Bill payment assistance	Vermont	Sep-09
D.P.U. 09-34 - Western Massachusetts Electric Company	Low Income Weatherization and Fuel Assistance Network	Comment - Prepaid utility service	Massachusetts	Jun-09
Case No. ER-2008-0318 - Ameren UE	AARP	Surrebuttal Testimony - Hot weather safety program	Missouri	Nov-08
Case No. ER-2008-0318 - Ameren UE	AARP	Direct Testimony - Hot weather safety program	Missouri	Aug-08
D.T.E./D.P.U. 07-30 - Petition of the Attorney General for an Oversight Investigation of the Proposed Merger of National Grid and Keyspan	Low-Income Weatherization and Fuel Assistance Program Network and Massachusetts Energy Directors Association	Supplemental Direct Testimony - Customer service and regulatory consumer protections	Massachusetts	Nov-07

jhowat@nclc.org
617-542-8010

D.T.E./D.P.U. 07-30 - Petition of the Attorney General for an Oversight Investigation of the Proposed Merger of National Grid and Keyspan	Low-Income Weatherization and Fuel Assistance Program Network and Massachusetts Energy Directors Association	Direct Testimony - Customer service and regulatory consumer protections	Massachusetts	Nov-07
CASE NO. PAC- 07-5 - Rocky Mountain Power	Community Action Partnership of Idaho	Direct Testimony - Collection agency costs, credit and collection rules	Idaho	Sep-07
Docket No. P- 00062240 - Equitable Gas company for Approval to Increase the Level of Funding for its Customer Assistance Program and to Implement an Adjustable Rate Mechanism to Recover Associated Expenses Concerning Universal Service and Energy Conservation Plan Costs	Pennsylvania Utility Law Project	Surrebuttal Testimony - Low Income affordability programs	Pennsylvania	May-07
Docket No. P- 00062240 - Equitable Gas company for Approval to Increase the Level of Funding for its Customer Assistance Program and to Implement an Adjustable Rate Mechanism to Recover Associated Expenses Concerning Universal Service and Energy Conservation Plan Costs	Pennsylvania Utility Law Project	Rebuttal Testimony - Low Income affordability programs	Pennsylvania	May-07
Docket No. P- 00062240 - Equitable Gas company for Approval to Increase the Level of Funding for its Customer Assistance Program and to Implement an Adjustable Rate Mechanism to Recover Associated Expenses Concerning Universal Service and Energy Conservation Plan Costs	Pennsylvania Utility Law Project	Direct Testimony - Low Income affordability programs	Pennsylvania	Apr-07

jhowat@nclc.org
617-542-8010

Project No. 33814 - Rulemaking concerning prepaid retail electric service	AARP	Reply Comment - Prepaid electric service	Texas	Mar-07
Docket No. D-06-13 - Petition of Narragansett Electric Company and Southern Union Gas Company for Purchase and Sale of Assets	George Wiley Center	Direct Testimony - Merger impact mitigation	Rhode Island	Jun-06
Docket No. 06-0202 - Petition to Initiate Rulemaking with Notice and Comment for Approval of Certain Amendments to Illinois Administrative Code Part 280	South Austin Community Council and Community Action for Fair Utility Practice	Direct Testimony - Regulatory consumer protections	Illinois	Apr-06
Docket No. 3696 - New England Gas Company	George Wiley Center	Direct Testimony - General rate case - mitigation of low-income rate and bill impacts	Rhode Island	Oct-05
Docket 05-0237 - Petition to Initiate Rulemaking with Notice and Comment for Approval of Certain Amendments to Illinois Administrative Code Part 280	South Austin Community Council and Community Action for Fair Utility Practice	Direct Testimony - Regulatory consumer protections	Illinois	Jun-05
Docket No. 04-5003 - Nevada Power Company	Nevada Bureau of Consumer Protection	Direct Testimony - Prepaid utility service	Nevada	Jun-04
Docket No. R-00049255 - PPL Universal Service Programs	Commission on Economic Opportunity	Direct Testimony - Universal service programs	Pennsylvania	Jun-04
Docket No. UD-97-5 - Entergy New Orleans' and Entergy Louisiana's Electric and Natural Gas Service Regulations, Policies and Standards	Alliance for Affordable Energy, Louisiana Environmental Action Network, League of Women Voters of New Orleans, Pax Christi, and Bread for the World	Direct Testimony - Regulatory consumer protections	New Orleans City Council	Jul-00

jhowat@nclc.org
617-542-8010

EXHIBIT JH-2

Duke Energy Carolinas
Response to
NCJC Data Request
Data Request No. 7

Docket No. E-7, Sub 1214

Date of Request: January 24, 2020
Date of Response: February 17, 2020

[ ] **CONFIDENTIAL**

[X] **NOT CONFIDENTIAL**

Confidential Responses are provided pursuant to Confidentiality Agreement

The attached supplemental response to NCJC Data Request No. 7-2, was provided to me by the following individual(s): Conitsha B. Barnes, Regulatory Affairs Manager, and was provided to NCJC under my supervision.

Camal O. Robinson
Senior Counsel
Duke Energy Carolinas

NCJC
Data Request No. 7
DEC Docket No. E-7, Sub1214
Item No. 7-2
Page 1 of 1

Request:

7-2. For each 5-digit zip code identified in 7-2 above, please provide the following:
a. The average number of residential customers served during the most recent 12-month period,
b. The number of residential accounts charged a late payment fee or charge each month during the most recent 12-month period,
c. The dollar value of residential late payment charges each month during the most recent 12-month period,
d. The number of disconnection notices sent to residential customers each month during the most recent 12-month period,
e. The number of residential accounts written off as uncollectible each month during the most recent 12-month period,
f. The dollar value of residential account write-offs each month during the most recent 12-month period, and
g. The number of residential disconnections for non-payment during the most recent 12-month period.

Supplemental Response:

As requested, attached is the data in the aggregate.

DEC NCJC DR 7-2.xlsx

A. The average number of residential customers served during the most recent 12-month period,

MONTH	CUSTOMER
1	1,759,964
2	1,759,964
3	1,766,329
4	1,770,832
5	1,777,131
6	1,757,900
7	1,808,654
8	1,787,831
9	1,785,824
10	1,780,780
11	1,782,825
12	1,785,831

7-2.B The number of residential accounts charged a late payment fee or charge each month during the most recent 12-month period,

Charge_Bill_Month	LPC_ACCTS
1	493,508
2	389,615
3	310,667
4	512,037
5	443,908
6	428,110
7	389,593
8	509,588
9	490,789
10	384,219
11	583,480
12	551,454

7-2.C The dollar value of residential late payment charges each month during the most recent 12-month period,

Charge_Bill_Month	LPC_CHARGE
1	$875,542
2	$788,851
3	$639,932
4	$961,187
5	$732,577
6	$637,577
7	$633,836
8	$926,175
9	$978,391
10	$744,433
11	$1,032,221
12	$852,596

7-2.D The number of disconnection notices sent to residential customers each month during the most recent 12-month period (24 hour notice)

MONTH	NOTICES
1	145,527
2	159,139
3	155,147
4	154,547
5	155,529
6	151,321
7	157,385
8	168,531
9	179,143
10	195,463
11	176,293
12	177,046

7-2.E The number of residential accounts written off as uncollectible each month during the most recent 12-month period,
7-2.F The dollar value of residential account write-offs each month during the most recent 12-month period

* Gross charge off numbers & dollars provided

CHO_MONTH	CHO_CUSTOMERS	CHO_DOLLARS
1	6,154	$1,614,679
2	4,211	$997,785
3	3,642	$888,386
4	5,125	$1,472,402
5	5,788	$1,867,070
6	4,983	$1,634,792
7	5,542	$1,559,051
8	4,307	$1,036,332
9	5,355	$1,131,792
10	5,762	$1,211,937
11	5,881	$1,548,363
12	6,612	$1,645,251

EXHIBIT JH-3

Ohio | Public Utilities Commission

Energy Assistance Resource Guide

2019–2020

- PIPP Plus
- Graduate PIPP Plus
- Winter Reconnect Order
- Energy Assistance Programs
- Payment Plans
- Disconnect and Reconnect Procedures

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

GENERAL PIPP PLUS INFORMATION

1. What is PIPP Plus?

The Percentage of Income Payment Plan or PIPP Plus is an extended payment arrangement that requires regulated gas and electric companies to accept payments based on a percentage of the household income for those customers who are at or below 150% of the federal income guidelines. The PIPP Plus payment amount is based on the household's countable income received during the previous 30 days.

- If a gas customer qualifies for PIPP Plus, he or she would pay 6% of the household's current gross monthly income to the gas company or a minimum of ten dollars, whichever is greater, year-round.

- If electricity is not the primary heat source, a customer pays 6% of the household's current gross monthly income to the electric company or a minimum of ten dollars, whichever is greater, year-round.

- The customer of an all-electric household pays 10% of the household's monthly income or a minimum of ten dollars, whichever is greater, year-round.

- A customer served by Duke who has a gas heating account and an electric baseload account would pay 12% (6% gas, 6% electric) of the monthly household income or $10 per utility whichever is greater, year-round.

- A customer served by Duke Energy with an all electric home will pay 10% of the monthly household income or $10, whichever is greater, year-round.

The Development Services Agency (ODSA), Office of Community Assistance (OCA), administers PIPP Plus for electric customers statewide. The Public Utilities Commission of Ohio (PUCO) created the PIPP Plus gas rules in PUCO case number 08-723-AU-ORD. Development created electric PIPP Plus rules in Chapter 122:5-3, Ohio Administrative Code (O.A.C.).

A PIPP Plus customer is also required to apply for all public energy assistance and weatherization programs for which he/she is eligible. PIPP Plus customers must apply for the regular Home Energy Assistance Program (HEAP) and the Home Weatherization Assistance Program (HWAP).

2. How does one qualify for PIPP Plus?

In order to qualify for PIPP Plus, a customer must:

(A) Receive his or her gas heat or electric service from a company regulated by the PUCO;

(B) Apply for all energy assistance and weatherization programs for which he or she is eligible; and

(C) Have a total household income which is at or below 150% of the federal income guidelines.

PIPP PLUS INCOME GUIDELINES
150% Federal Income Guidelines 2019-2020

SIZE OF HOUSEHOLD	12-Month Income Limit	30-Day Income Limit
1- Person	$ 18,735.00	$ 1,539.86
2- Persons	$ 25,365.00	$ 2,084.79
3- Persons	$ 31,995.00	$ 2,629.73
4- Persons	$ 38,625.00	$ 3,174.66
5- Persons	$ 45,255.00	$ 3,719.59
6- Persons	$ 51,885.00	$ 4,264.52

Households with more than six members add $544.93 or $6,630/yr. for each additional member.

Winter Crisis and Regular HEAP Income Guidelines
175% Federal Income Guidelines 2019-2020

SIZE OF HOUSEHOLD	12-Month Income Limit	30-Day Income Limit
1- Person	$ 21,857.50	$ 1,796.51
2-Persons	$ 29,592.50	$ 2,432.26
3- Persons	$ 37,327.50	$ 3,068.01
4- Persons	$ 45,062.50	$ 3,703.77
5- Persons	$ 52,797.50	$ 4,339.52
6- Persons	$ 60,532.50	$ 5,611.03

Households with more than six members add $635 or $7,735/yr. for each additional member.

3. Heating sources

Rule 122:5-3-01, O.A.C.

- "Electrically heated" residence means a residence for which the primary source of heating is an electric appliance such as an electric furnace, heat pump, or electric baseboard heater.

- Electric "baseload" means a residence for which electricity is not the primary source of heat.

Rule 4901:1-18-13(A) (1), O.A.C.

Gas PIPP Plus is only available to customers who heat with natural gas. (The Duke Energy Ohio hybrid plan is an exception to this statement.)

Examples

If a customer has a gas furnace with an electric thermostat or blower, the primary source of heat would be gas and the electric service is considered baseload. The customer would pay a monthly installment based on 6% of the household income for gas service and a monthly installment based on 6% of the household income for electric service.

If a customer has both natural gas space heaters and electric space heaters, but the natural gas heaters are used to heat the largest portion of the residence, the primary source of heat would be gas. The customer would pay a monthly installment based on 6% or a minimum of $10, (whichever is greater) of the household income for gas service and a monthly installment based on 6% of the household income for electric service.

A customer has an unregulated source of heat (fuel oil, propane, wood, electric co-op) and a regulated source of heat which is used to heat the largest portion of the residence. This customer receives regular HEAP benefits for the regulated source of heat. In that instance, the customer is eligible for PIPP Plus for the regulated utility. The customer would pay a monthly installment based on 6% or a minimum of $10, (whichever is greater) of the household income, or a minimum of $10, whichever is greater for the regulated source of heat.

4. How does a customer sign up for PIPP Plus?

- Individuals who are applying for PIPP Plus for the first time must go to the local HEAP Agency.
- Customers who need to reverify their household income and size can do so the following ways:
- Online at www.energyhelp.ohio.gov
- Download and complete an Energy Assistance application by going to www.development.ohio.gov
  Mail completed applications with documentation to:
  Ohio Development Services Agency
  P. O. Box 1240
  Columbus, OH 43216
- If applying by mail, customers must submit proof of income documentation as required by ODSA (See Appendix B for income documentation).
- Mailed applications will not be accepted for first time PIPP Plus enrollees.
- Mailed applications will not be accepted for households claiming zero income. All applicants who claim zero income must apply for assistance in person at the local HEAP agency.
- For the mail-in application process, companies may also require that every adult member of the household sign a statement affirming that the information on the application is true and giving the company permission to verify the information provided.
- The customer must also apply for all energy assistance and weatherization programs for which he or she is eligible.

5. What is the percentage of income amount paid by a natural gas customer?

PIPP Plus customers who use natural gas to heat the largest portion of their residence will pay 6% of their monthly household income or $10, whichever is greater, year-round.

6. What is the percentage of income amount paid by an electric customer?

PIPP Plus customers who use electric as baseload will pay 6% of their monthly household income or $10, whichever is greater, year-round.

PIPP Plus customers who use electric as their primary heating source will pay 10% of their monthly household income or $10, whichever is greater year-round.

7. What is the minimum amount that a customer can pay on PIPP Plus?

A customer who is determined zero income must pay a $10 minimum installment. **All applicants who claim zero income** must apply for assistance in person at the local HEAP agency.

8. What if the household income or size changes?

The customer must report income changes to the local HEAP provider or OCA within 30 days. If the household income decreases, this will lower the PIPP Plus installment amount. If the household income increases, the customer's PIPP Plus installment amount will increase. Electric and gas companies must accept the income as reported by OCA.

9. What if the household's income rises above 150% of the federal income guidelines?

If the household's income rises above 150% of the federal income guidelines, the customer becomes ineligible for PIPP Plus. Graduate PIPP Plus is available to customers who are no longer income eligible for PIPP Plus. The customer must be current with PIPP Plus installments to join Graduate PIPP Plus; therefore, the customer has one billing cycle to make up missed PIPP Plus payments (the grace period). The customer's eligibility begins no later than the end of the grace period. **(See Graduate PIPP Plus Section).**

10. What are the benefits of PIPP Plus?

- PIPP Plus customer bills will be adjusted for the difference between the required installment payment and the current month's utility charges.
- Customers will earn 1/24th credit on the arrearage for on-time and in-full payments.
- No deposit or late fees will be applied to the account.

11. When can a customer enroll on PIPP Plus?

Customers may enroll on PIPP Plus at any time. However, before enrolling on PIPP Plus, the customer must have utility service in his/her name. The customer must then meet the income guidelines for PIPP Plus.

12. When is the first PIPP Plus installment due?

The first PIPP Plus installment is owed to the company by the due date of the current bill. If the due date of the current bill has passed and the customer has not made a payment the customer will be required to make two installment payments by the due date of the next bill (one installment will be applied to the past due bill, and one installment will cover the current installment amount due).

13. What is considered an on-time payment?

For the purpose of applying incentive credits, the PIPP Plus installment payment must be received by the utility company prior to the date that the next bill is issued.

14. What happens if the PIPP Plus installment is not received by the due date?

If the installment payment is not received before the next month's bill is issued; the customer is not eligible to receive the incentive credit (the difference between the required installment payment and the current month's utility charges). Also, the customer will not receive the 1/24th credit for the month.

15. If a customer makes multiple payments in one billing cycle equal to the amount of the PIPP Plus installment, will the customer receive an arrearage credit?

Yes, as long as the total of all payments made during the billing cycle equal the PIPP Plus installment and is paid prior to the date that the next bill is issued.

16. Will the utility company change the due date for the customer?

No, the utility company is not obligated to change the due date for a customer; some utility companies **may be** willing to adjust the due date so customers can meet their payment obligations and receive credits.

17. May the utility company charge a PIPP Plus customer a security deposit?

Utilities are **not** permitted to charge PIPP Plus customers a security deposit. Any deposit paid by a customer prior to enrolling in PIPP Plus shall be credited to the customer's outstanding arrearage.

18. How much does an income eligible PIPP Plus customer with an arrearage have to pay to get service at a new address if the most recent PIPP Plus account has been finalized?

The customer will be required to pay any missed payments (which may include actual bill charges), including previous PIPP Plus installments which would have been due for the months the customer is disconnected from service. The amount owed shall not exceed the amount of the customer's arrearages.

During the winter heating season, PIPP Plus customers may utilize the winter reconnect order to have service restored for a maximum of $175.00. **(See Special Reconnection Procedures).**

19. If a customer is on another type of payment plan, is he or she still eligible for PIPP Plus?

Yes, if the customer meets the eligibility requirements of PIPP Plus, he or she may enroll on PIPP Plus at any time. The customer will not be required to complete the terms of the previous payment arrangement or be current on the previous arrangement to go on PIPP Plus. If the customer has PIPP Plus default, the PIPP Plus default needs to be paid prior to re-enrolling on PIPP Plus.

20. May the company pursue collections from the PIPP Plus customer for his or her arrearages?

Yes, the arrearages are a legal debt. The company may use any standard means of collection after a judgment is obtained from a court, such as the garnishment of wages or the placing of a lien on the customer's property. The company may also turn the debt over to a collection agency. The company may ***not*** disconnect service to collect the arrearage as long as the customer remains current on the PIPP Plus plan.

21. If a customer overpays his or her PIPP Plus installment one month, will it be credited to the next month's payment?

Gas: No, any overpayments of installments are used to offset the arrearage balance. Gas utilities may review any overpayments made by a customer on a case by case basis and may apply the overpayment toward a future installment as a courtesy.

Electric: Yes, any overpayments of installments are applied to future installments once any missed installments have been cured. An overpayment made by the customer will be eligible for an incentive credit for the month. **(Duke will follow the electric practice.)**

22. Can the company refuse to transfer service if the customer has a PIPP Plus default?

Yes, the customer must cure any PIPP Plus default (customer is not required to pay the entire account balance) in order to transfer service. If the customer has reverified his/her income within the last 12 months and the installments are current, the PIPP Plus account balance shall transfer to the new address.

23. Does a customer have to go on PIPP Plus for both gas and electric service if the customer needs the plan for only one of them?

No, a customer may elect to go on PIPP Plus for gas or electric or both. Gas PIPP Plus is only available to customers who heat with natural gas.

24. Are gas and electric companies regulated by the PUCO the only companies required to offer PIPP Plus?

Yes, only companies regulated by the Commission are required to offer PIPP Plus. Non-regulated utilities may offer PIPP Plus, but they are not required by law to do so. (Some small gas companies may continue to offer the old PIPP Plan. (**See Appendix C for details).**

25. Are PIPP Plus customers allowed to choose a Certified Retail Natural Gas Supplier (CRNGS) or Certified Retail Electric Supplier (CRES)?

No, PIPP Plus customers can not choose a supplier (CRNGS, CRES) on an individual basis.

26. Are PIPP Plus customers eligible for a governmental aggregation program?

No, PIPP Plus customers must continue to pay the installment amount based upon the total household income as determined by the HEAP Provider or OCA, however PIPP Plus customers will see overall lower bills, which will reduce their total arrearages.

27. What happens if a customer who is with a supplier (CRNGS or CRES) wants to enroll in PIPP Plus?

When the HEAP Provider enrolls a customer in PIPP Plus and notifies the electric distribution utility (EDU) or the local distribution company (LDC) of the enrollment, the utility will then notify the supplier of the change. However, it is strongly advised that the customer also notify the supplier of the change. The change will take place within one or two billing cycles after the EDU/LDC enrolls the customer in PIPP Plus.

Note: The supplier may charge a cancellation fee if allowed per contract.

28. Can a customer who is with a supplier (CRNGS or CRES) receive energy assistance?

Yes, customers who are with a supplier but meet the income eligibility guidelines can still receive energy assistance (WCP, SCP, HEAP, and fuel funds). Energy

assistance payments will go to the regulated utility company to be applied to the customer's account.

CREDIT BALANCE

29. What happens if a PIPP Plus or Graduate PIPP Plus customer's account becomes a credit balance?

In order to remain on PIPP Plus or Graduate PIPP Plus the customer must continue to make his/her installment payments.

30. Will the customer earn incentive credits if there is a credit balance on the account?

No, the customer will no longer earn incentive credits until the account balance is no longer a credit. The difference between the current usage and the installment is reduced from the credit balance.

31. Can the credit balance be used in lieu of making installment payments?

No, if the customer would like to remain on PIPP Plus or Graduate PIPP Plus he/she must make the required installment payments.

32. Can the customer request a refund of the credit balance?

Yes, the customer can request a refund of the credit balance. The utility company will review the account to ensure that the credit balance is not a result of incentive credits. If the credit balance is not a result of incentive credits, the customer will be eligible for a refund. In order to receive a refund of the credit balance the account will be removed from PIPP Plus. The utility company should inform the customer of the availability of a more suitable payment plan option. (**See PIPP Plus Re-enrollment Section**).

33. Does the account have to be removed from PIPP Plus if the customer requests a refund of the credit balance?

Yes, if the customer requests a refund of the credit balance, the company will remove the account from PIPP Plus. **(See PIPP Plus Re-enrollment Section**)

34. Can the customer re-enroll on PIPP Plus after the credit balance has been refunded?

Yes, as long as the customer meets the income guidelines for PIPP Plus he/she can re-enroll on PIPP Plus. However, if the customer re-enrolls on PIPP Plus within 12-months he/she will be required to make up installment payments. **Please see PIPP Plus Re-enrollment Section.**

GRADUATE PIPP PLUS and POST PIPP PLUS

35. What is Graduate PIPP Plus?

Graduate PIPP Plus allows customers who are no longer eligible to participate in PIPP Plus as a result of an increase in the household income or a change in the household size to continue to receive a reduction in their outstanding arrearages in return for making timely payments. PIPP Plus customers who choose to no longer participate in PIPP Plus can also join Graduate PIPP Plus. Customers must be current on all PIPP Plus payments to enroll in Graduate PIPP Plus. **Graduate PIPP Plus is a 12-month payment plan.**

36. What are the benefits of Graduate PIPP Plus?

- Graduate PIPP Plus customers will receive arrearage reduction for on-time and in-full payments.
- Customer will earn $1/12^{th}$ credit on the arrearage.
- Graduate PIPP Plus customer bills will be adjusted for the difference between the required installment payment and the current month's utility charges.
- No deposit or late fees will be applied to the account.

37. How much is a Graduate PIPP Plus customer required to pay?

Graduate PIPP Plus customers will be placed on a Transition Installment Amount (TIA). The TIA payment is based on the customer's most recent PIPP Plus installment plus a budget plan amount (established by the utility company) divided by two.

Example: $ 30 (PIPP Plus installment)
$ 110 (Budget Plan Amount)
$ 140/2 = $70 (Monthly Graduate PIPP Plus installment (TIA))

38. How does a customer enroll on Graduate PIPP Plus?

A customer who is income ineligible (or no longer wishes to participate) and has an arrearage will automatically be enrolled (via a nightly file sent from OCA to the utility company) on Graduate PIPP Plus at the time of reverification. A customer must be current on all PIPP Plus payments to enroll in Graduate PIPP Plus. Customers who are not current with PIPP Plus payments will have one billing cycle to make up any missed PIPP Plus payments; otherwise he/she will be removed from the Graduate PIPP Plus program.

39. What happens if the customer does not make up the required PIPP Plus payments within one billing cycle to enroll in Graduate PIPP Plus?

A customer can enroll in Graduate PIPP Plus within 12 months from being removed from PIPP Plus. The customer must pay any defaulted PIPP Plus installments and current bills for the months the customer received service but was not on Graduate PIPP Plus (less any payments made by the customer after being dropped.

40. Does a customer have to be income ineligible for PIPP Plus to enroll in Graduate PIPP Plus?

No, a customer may elect to terminate participation in PIPP Plus and enroll in Graduate PIPP Plus at any time. However, customers must be current on all PIPP Plus payments to enroll in Graduate PIPP Plus. The customer must contact the utility company to enroll.

41. What is the maximum amount of time a customer can remain on Graduate PIPP Plus?

Graduate PIPP Plus is offered for a period of 12 months that begins when the customer is removed from PIPP Plus due to being over income or when the customer voluntarily removes themselves from PIPP Plus.

42. Is a customer eligible for Graduate PIPP Plus if he/she moves outside of the company's service territory?

No, in order to be eligible for Graduate PIPP Plus, the customer must remain a customer of the same utility in which he/she was enrolled in PIPP Plus. **(See Post PIPP Plus question 46**).

43. How can a customer who has been removed from Graduate PIPP Plus for non-payment get reinstated?

The customer must make up any missed graduate PIPP Plus payments to get reinstated on graduate PIPP Plus. Graduate PIPP Plus ends 12 months from the date of the customer's initial enrollment on Graduate PIPP Plus. At the end of twelve months the customer can enroll on an extended payment for the remaining arrearages. **(See question 123 for extended payment plan).**

44. Can a Graduate PIPP Plus customer choose a supplier (CRNGS or CRES)?

No, Graduate PIPP Plus customers can not choose a supplier (CRNGS, CRES) on an individual basis. Graduate PIPP Plus accounts remain as part of the PIPP Plus pool. **(See question 25).**

45. How much does a PIPP Plus/Graduate PIPP Plus customer have to pay if he/she moves out of the utility company's service territory or no longer need utility service?

Customers who are currently enrolled on PIPP Plus or Graduate PIPP Plus and owe an arrearage are eligible for Post PIPP Plus if they move out of the service territory or no longer need utility service in their name. **(See question 46).**

46. What is Post PIPP Plus?

Post PIPP Plus is a 12 month payment plan for former PIPP Plus or former Graduate PIPP Plus customers who are no longer customers of the utility but still have an arrearage. Post PIPP Plus is only available in the 12 months immediately after a PIPP Plus account is closed. Post PIPP Plus is offered by electric and gas companies.

47. Who is eligible for Post PIPP Plus?

PIPP Plus or Graduate PIPP customers who contact the utility company to close their account for the following reason(s):

a. Moving beyond the utility companies service territory

b. Transferring to a residence where utility service is not in the former PIPP Plus or Graduate PIPP Plus customer's name.

c. Moving to a master-metered residence.

48. How does a customer enroll on Post PIPP?

The utility company may offer Post PIPP on the final bill or the company may automatically enroll a customer on Post PIPP when contacted by the customer to close his/her account. **(See question 46).**

49. How much does a customer pay on Post PIPP?

The customer enters into a payment plan to pay at least $1/60^{th}$ of the finaled account arrears for 12 months. For each payment made, the utility will credit $1/12^{th}$ of the customer's arrears.

Example: A customer whose total arrearage is $2400 would be required to make a minimum payment of $40 each month ($1/60^{th}$ payment equals $2400/60=$40). Arrearage credit adjustment on outstanding debt is $200 ($1/12^{th}$ arrearage credit equals $2400/12=$200). At the end of 12 months, the outstanding debt will be credited.

50. Does the customer have to be current with PIPP Plus or Graduate PIPP Plus payments to enroll on Post PIPP Plus?

Yes, customers are required to be current (in good standing) with his/her PIPP Plus or Graduate PIPP Plus installments in order to enroll on Post PIPP Plus.

51. How long does a customer have to enroll on Post PIPP Plus?

Customers can join Post PIPP Plus within 12 months from when the account is finaled. The time period is not extended if the customer does not join or bring the account current right away.

52. Can a customer be enrolled on Post PIPP and PIPP Plus at the same time?

Yes, a customer can be enrolled on Post PIPP Plus with the former utility and enroll on PIPP Plus (must be income eligible) with the new utility company.

53. Is the former utility company required to send a bill each month?

The former utility company is not required to send a monthly bill to customers who are enrolled on Post PIPP Plus. However, some utility companies may provide a monthly statement. Customers should discuss the terms of Post PIPP Plus with the utility company.

APPLICATION PROCESS

In order for a person to qualify for the Percentage of Income Plan Plus (PIPP), he/she must 1) be a customer of a regulated gas or electric utility, 2) be income eligible, and 3) apply for all public energy and weatherization assistance programs for which the household is eligible.

54. What is the difference between a customer and a consumer?

A ***customer*** is any person who enters a contractual agreement with the company to receive electric or gas service. A ***consumer*** is any person who is the ultimate user of electric or gas service. In other words, a customer has the account in his or her name.

55. May the company require that the PIPP Plus applicant also be the household member with income?

No, provided the PIPP Plus applicant is a household member, he or she need not provide a source of income to the household.

56. May a PIPP Plus customer have more than one account?

Yes, a customer may have an account at a different location; however, only **one** account may be a PIPP Plus account. The PIPP Plus account must be at the primary residence.

57. What happens if a PIPP Plus customer is determined to be fraudulently enrolled in PIPP Plus?

The utility company or ODSA will terminate a customer's participation in PIPP Plus when it is determined that the PIPP Plus customer was fraudulently enrolled in the program. The customer will be required to pay the utility the actual bill for energy consumed during the period in which the customer was fraudulently enrolled. In addition, the customer will be prohibited from re-enrolling in PIPP Plus or Graduate PIPP Plus for twenty-four months. The arrearage credits which accrued to the customer's account will be reversed.

58. What happens if a PIPP Plus customer is charged with tampering?

The customer must pay the tampering charges which may include damages, investigation fees, and unauthorized usage prior to re-enrolling on PIPP Plus. The arrearage credits which accrued to the customer's account will be reversed.

59. What happens if a PIPP Plus customer writes a bad check?

The customer must pay the amount of the returned check, and the company's approved tariff returned check charge(s). Any arrearage credits applied to the customer's account will be reversed.

60. When two meters of the same type (i.e., two gas and/or two electric) are situated at one household/family dwelling, how should the utility company determine the PIPP Plus payment (e.g., a duplex unit that has been converted into a single family dwelling)?

The utility company should divide the customer's PIPP Plus installment between the two accounts.

61. What if the utility service is not in the PIPP Plus applicant's name?

If the service is not in the applicant's name, the applicant is ineligible for PIPP Plus. The applicant must first become a customer before he or she can go on PIPP Plus; however, the applicant can still apply for energy assistance for the household.

62. When a customer with an account balance moves out, how much must a consumer who lived with that person pay to obtain or to maintain service and get on PIPP Plus?

The consumer will be asked to provide proof that the customer has left the residence in order for the consumer to establish service in his/her name. The consumer is almost never responsible for the customer's bill if the household has changed. The consumer will need to apply for PIPP Plus at the HEAP Provider who will then determine if the consumer is income eligible.

63. What criteria are used to define income?

The household income is the gross income amount before taxes (minus exclusions) for all household members 18 years or older. Income earned by a dependent minor (less than 18 years old) in the household is excluded from the total household income calculation. Any questions regarding unusual situations should be brought to the attention of Office of Community Assistance at 1-800-282-0880. **(Please see Energy Assistance income guidelines in Appendix B.)**

64. Is a minor's income included in household income?

All wage or salary earned by a dependent minor (less than 18 years old) in the household is excluded from calculation. Only an emancipated minor may be considered a head of household. **(Please see Energy Assistance income guidelines in Appendix B.)**

65. How long does someone have to be at or below 150% of the federal income guidelines to qualify for PIPP Plus?

To be eligible for PIPP Plus, the total household eligible income for the last 30 days or 12 months from the date of the application must be equal to or less than 150% of the federal income guidelines. Seasonal and self-employed households must provide 12 months of income documentation.

- The lowest poverty level for either 30-day or 12 month period will be used to determine the benefit amount and threshold.

66. What if the customer disagrees with the PIPP Plus installment amount?

The PIPP Plus installment amount is calculated by the HEAP Agency or ODSA based on the income documentation provided by the customer. If a customer disagrees with the calculated amount of the PIPP Plus installment, the customer can contact ODSA or the local HEAP Agency to appeal. The customer may be required to provide additional documentation to support his/her dispute.

67. What information should be provided to verify income?

See Appendix B for Documentation and Calculation of Income

68. What if the household income is zero?

A customer whose household has no countable income is eligible for PIPP Plus. A zero-income customer must be able to explain why he/she is not on an entitlement program or, if the customer expects to receive benefits on such a program, when the benefits are due. The customer must be able to document how the household has existed. All applicants who claim zero income must apply for assistance in person at the local HEAP agency. **Mailed in applications will not be accepted.**

69. How often must zero-income PIPP Plus customers re-verify their income?

Customers who are zero-income must re-verify their household income no less than once every 12 months (within 60 days of the reverification date on the utility bill) or when there is a change in income/or household size or when requested to do so by the utility company. All applicants who claim zero income must apply for assistance in person at the local HEAP agency. **Mailed in applications will not be accepted.**

70. How much does a current PIPP Plus customer who is in default and is found to have zero income have to pay to enroll on zero-income PIPP Plus?

A customer who is currently on PIPP Plus and is reverified at zero income must cure any previous PIPP Plus default. When the customer's default is cured, the customer will then begin paying $10 per month minimum installment.

71. How should income be calculated when someone living in the unit pays rent to the customer?

Persons sharing a common kitchen and/or bath must be included as part of the household size and their income must be considered part of the household gross income.

72. Can Winter Crisis Program payments be applied as a PIPP Plus or Graduate PIPP Plus installment?

Yes, 2018-2019 Winter Crisis Program payments may be applied toward the current PIPP Plus/Graduate PIPP Plus default. To re-join PIPP Plus or Graduate PIPP Plus the customer must cure any remaining default over $175. **(See question 102).**

73. Can a Regular HEAP payment be applied as a PIPP Plus installment?

No. Regular HEAP payments may not be applied as monthly PIPP Plus payments. Energy assistance payments (winter, summer and Regular HEAP payments) will not be eligible for arrearage credits.

74. How are Energy Assistance payments applied?

- Regular HEAP- Payments are applied to the arrearages on the primary heating account, if any. If no arrearages are owed, the Regular HEAP payment will be applied as a credit balance on the primary heating account.

- Winter Crisis- Payments are applied toward the current PIPP Plus/Graduate PIPP Plus default balance. Winter Crisis payments can be applied toward both the primary or secondary heating source.

- Summer Crisis (Electric only) - Payments are applied toward the current PIPP Plus/Graduate PIPP Plus default balance. However, prior to receiving the credit/pledge the customer must pay the difference between the default and pledge amount.

- Utility Company Energy Assistance-Payments (i.e., Salvation Army, Neighbor to Neighbor, HEAT Share, and Fuel Funds) are applied toward the current PIPP Plus/Graduate PIPP Plus default balance. Any remaining credit is applied toward the arrearages.

75. What types of assistance must a customer apply for in order to go on PIPP Plus?

The customer must apply for and accept all ODSA energy assistance and weatherization programs for which he/she is eligible.

76. Does a customer have to apply for weatherization programs?

Yes, customers must apply for and accept assistance from all ODSA sponsored weatherization programs for which he/she is eligible.

77. Can a customer be removed from PIPP Plus if the customer refuses weatherization services?

Yes, the account can be removed from PIPP Plus if the customer refuses weatherization services offered by ODSA.

78. Does a HEAP Agency have to verify an applicant's income?

All electric and large gas PIPP Plus customers are reverified through the local HEAP Provider. Gas companies may not demand that a customer go to the HEAP Agency for verification unless they have established specific reverification procedures with ODSA. Some small gas companies may verify income at their local office for PIPP Plus.

79. Is the customer required to apply for non-energy assistance programs (i.e., Temporary Assistance for Needy Families (TANF)) to enroll on PIPP Plus?

No, the customer may be advised of these public assistance programs. However, customers **are required** to apply for all public energy and weatherization assistance.

REVERIFICATION DATE AND ANNIVERSARY DATE

80. What is the reverification date?

The reverification date is the actual date on which the customer completed documentation of household income. Reverification must occur no less than once every 12 months from the previous reverification date. A customer has a 60-day grace period to re-verify income before being removed from the program. The customer is required to re-verify whenever there is a change in household size and income. The customer's reverification date may change from year to year.

81. When must a customer re-verify the household income?

Any time there is a change in household income or size, the customer must re-verify his/her income. If there is no change in household income or size, customers are required to re-verify once every twelve months. The utility company may also request that the customer reverify his/her income. When a customer goes to the HEAP Provider to apply for energy assistance, his or her income will be reported to the company by the HEAP Agency or the ODSA.

82. How does a customer reverify his/her income for PIPP Plus?

A PIPP Plus customer must re-verify his/her income no later than the reverification date which is printed on the bill.

- Customers who need to reverify their household income and size can do so the following ways:
- Online at www.energyhelp.ohio.gov

- Download and complete an Energy Assistance application by going to www.development.ohio.gov

  Mail completed applications with documentation to:
  Ohio Development Services Agency
  P. O. Box 1240
  Columbus, OH 43216
- Mailed applications could take up to twelve weeks for processing.
- If applying by mail, customers must submit proof of income documentation as required by ODSA (See Appendix B for income documentation).
- Mailed applications will not be accepted for households claiming zero income. All applicants who claim zero income must apply for assistance in person at the local HEAP agency.
- For the mail-in application process, companies may also require that every adult member of the household sign a statement affirming that the information on the application is true and giving the company permission to verify the information provided.

83. What happens if a PIPP Plus customer does not re-verify his or her income on the reverification date?

A PIPP Plus customer must re-verify his/her income no later than the reverification date which is printed on the bill. A customer has a 60-day grace period to re-verify income before being removed from the program. A customer who does not re-verify his/her income when requested to do so, will be removed from PIPP Plus. The customer will be responsible for the total account balance if the account is removed from PIPP Plus.

84. What is a PIPP Plus anniversary date?

The PIPP Plus anniversary date is the date by which a PIPP Plus customer must make up any missed PIPP Plus installments in order to continue PIPP Plus. If the customer has missed payments in the past 12 months, the 1/24th arrearage credit will be recalculated at the anniversary date. (If the customer has made the past 12 installments on time the arrearage will not be recalculated).

85. What happens if the customer can not pay his/her missed installments by the anniversary date?

A customer who does not cure the missed installments at the anniversary date will be removed from PIPP Plus. Customers will have one billing cycle to make up the missed installments before being removed from PIPP Plus.

86. How will the customer be aware of his/her PIPP Plus anniversary date?

The anniversary date is shown on the customer's bill.

87. Is the customer required to go to the HEAP Provider at the anniversary date?

No, the customer is not required to return to the HEAP Provider at the anniversary date unless he/she is in default on PIPP Plus and is seeking energy assistance to cure the missed installments.

DISCONNECTION AND RECONNECTION

88. How much is a PIPP Plus customer required to pay if service is disconnected for non-payment?

A PIPP Plus customer must pay the amount sufficient to cure the PIPP Plus default (as stated on the disconnection notice) in order to reconnect service. The defaulted amount may include actual bill charges and PIPP Plus installments for those months the customer's service was disconnected, minus payments made, up to the customer's arrearage. The customer will also be charged a tariffed reconnect fee. (**See Special Reconnection Procedures Section**).

*During the winter heating season, PIPP Plus customers may utilize the winter reconnect order to have service restored for a maximum payment of $175, plus a tariffed reconnect fee (no more than $36 up front).

89. If a customer defaults on PIPP Plus, how much would he or she have to pay to avoid shut-off?

The customer can maintain service by paying the defaulted PIPP Plus installments as stated on the disconnection notice. During the winter heating season, PIPP Plus

customers may utilize the Winter Reconnect Order to maintain service for a maximum payment of $175.00**. (See Special Reconnection Procedures).**

90. What does a customer have to pay to avoid disconnection when the total account balance is less than the PIPP Plus default?

To remain on PIPP Plus and avoid disconnection, the customer is required to pay the PIPP Plus default amount. If the customer no longer wants to be on PIPP Plus but wants to avoid disconnection, he/she can have the account removed from PIPP Plus and pay the total account balance or go on another payment plan with the utility company.

91. Is the PIPP Plus installment amount due shown on the bill or disconnection notice?

Yes, the PIPP Plus installment amount is shown on the bill. Also, the company must state on the disconnection notice the minimum amount required to avoid disconnection.

92. If a customer misses a PIPP Plus installment, is the company allowed to shut service off without further notice?

No, the company must give the required notice of disconnection prior to terminating service. The company may begin the notice process the day after the payment was due provided there is a 30-day account arrearage.

93. What is the earliest date a company may terminate service after the customer has defaulted on PIPP Plus?

During the ***non-heating season***, the earliest date a company may terminate service is the date stated on the 14-day disconnection notice unless payment or payment arrangements are made before this date.

During the ***heating season*** (Nov. 1 through April 15), the company must give a 14-day notice ***and*** an additional 10-day notice. The ten-day notice will extend the date of disconnection, as stated on the fourteen-day notice. Utility companies may send the 10-day notice by regular U.S. mail; however, the companies must allow three calendar days for mailing.

If the customer has selected both the electronic bill and notice option, the notices will be delivered electronically to the customer.

94. What are the reconnection requirements?

If the service has been disconnected for **10 business days or less**:

(1) The customer must provide proof of payment to the utility no later than 12:30 p.m. in order to guarantee reconnection of service the same day.

(2) If payment is not received by 12:30 p.m., the utility company will reconnect service by the close of the following regular utility company working day.

(3) Customers may request reconnection of service after normal business hours, **if the company offers such service**. The Company may require the customer to pay the approved tariff rate for this service prior to reconnection.

If the service has been disconnected for **more than 10 business days**, regardless of the time of day the customer payment is made:

(1) The company may treat the customer as a new customer.

(2) Gas service will be reconnected within **three** business days.

(3) Electric service will be reconnected within **three** business days.

(4) The utility company may assess a reconnection charge and a security deposit (Non-PIPP Plus account) to reestablish service.

PIPP PLUS RE-ENROLLMENT

95. Re-enrollment on PIPP Plus if service has been disconnected for non-payment

A PIPP Plus customer must pay the amount sufficient to cure the PIPP Plus default (as stated on the disconnection notice) in order to reconnect service. The defaulted PIPP Plus amount may include actual bill charges and PIPP Plus installments for those months the customer's service was disconnected, minus payments made, up to the customer's arrearage. Once the default amount is paid, the customer can re-

enroll on PIPP Plus. The customer will also be charged a tariffed reconnect fee. (**See Special Reconnection Procedures Section**).

*During the winter heating season, PIPP Plus customers may utilize the winter reconnect order to have service restored for a maximum payment of $175, plus a tariffed reconnect fee (no more than $36 up front). However, to re-enroll on PIPP Plus/ Graduate PIPP Plus customers must pay the balance of the default on or before the due date of the next bill to re-enroll on PIPP Plus/Graduate PIPP Plus.

96. What must a former PIPP customer (enrolled prior to November 2010) pay to establish service and then enroll on PIPP Plus?

During the winter heating season, a customer who has never been enrolled on PIPP Plus and is income eligible for PIPP Plus can re-establish service by paying up to $175 or, his/her first PIPP Plus installment (whichever is less). Any remaining balance will be added to the arrearages and will be eligible for 1/24th arrearage credits.

Customers who wish to enroll in PIPP Plus at any other time of the year will be required to pay the delinquent amount as stated on the final bill to re-establish service. After the service has been re-established the customer may enroll on PIPP Plus if eligible.

97. Re-enrollment on PIPP Plus if dropped for failure to re-verify (still has active service)

The customer must re-verify his/her household income. The customer must pay any defaulted PIPP Plus installments owed prior to being dropped and full bills for the months the customer received service but was not on PIPP Plus (less any payments made by the customer after being dropped). This includes PIPP Plus payments for any months in which the customer was disconnected. The amount owed shall not exceed the amount of the customer's arrearages.

98. Re-enrollment on PIPP Plus if dropped at the anniversary date (still has active service)

The customer must pay any defaulted PIPP Plus installments owed prior to being dropped and full bills for the months the customer received service but was not on PIPP Plus (less any payments made by the customer after being dropped). This

includes PIPP Plus payments for any months in which the customer was disconnected. The amount owed shall not exceed the amount of the customer's arrearages.

99. Re-enrollment on PIPP Plus after being on Graduate PIPP Plus (active service)

If a customer who was on Graduate PIPP Plus becomes income eligible for PIPP Plus the customer must cure any Graduate PIPP Plus default amount prior to re-enrollment on PIPP Plus. During the winter months the customer can apply for the Winter Crisis Program (WCP) for assistance up to $175. The customer must cure any remaining default over $175 before the account can be re-enrolled on PIPP Plus.

100. Re-enrollment on PIPP Plus after receiving a refund of the credit balance

After receiving a refund of the credit balance, if the customer requests to re-enroll on PIPP Plus within a twelve-month period the customer must pay the difference between the amount of previous PIPP Plus installments and customer payments during those months the customer was not enrolled on PIPP Plus.

Note: Returning to PIPP Plus within a twelve-month period after receiving a refund of the credit balance could result in the customer having to pay more than the actual account balance.

101. Re-enrollment on PIPP Plus if default is higher than total account balance

If the PIPP Plus default is higher than the total account balance and the customer wants to re-enroll on PIPP Plus within a twelve-month period, the customer must pay the difference between the amount of PIPP Plus installments owed and customer payments during those months the customer was not enrolled in PIPP Plus.

Note: This could result in the customer having to pay more than the actual account balance to remain on PIPP Plus.

102. Re-enrollment on PIPP Plus or Graduate PIPP Plus after using the Winter Reconnect Order

To re-join PIPP Plus or Graduate PIPP Plus, the customer must cure any remaining default over $175 by the due date of the next bill issued. Once the default amount is paid, the customer can begin paying his/her PIPP Plus or Graduate PIPP Plus installment. *The time period (twelve months) is not extended to participate in Graduate PIPP Plus.*

The customer should contact the utility company to determine the exact amount of the remaining balance and the due date by which the bill needs to be paid to get the account re-enrolled on PIPP Plus/Graduate PIPP Plus.

103. Re-enrollment on PIPP Plus within twelve months after voluntary drop (customer request)

A PIPP Plus customer who voluntarily leaves **with no outstanding arrearages** and then **within** twelve months re-enrolls in PIPP Plus must pay the PIPP Plus payments due for the months the customer received service but was not on the program, less payment made by the customer during the same time period.
Note: This could result in the customer having to pay more than the actual account balance to remain on PIPP Plus.

A PIPP Plus customer who leaves **with outstanding arrearages** and then **within** twelve months re-enrolls in PIPP Plus must pay the PIPP Plus payments due for the months the customer received service but was not on the program, less payment made by the customer during the same time period.

104. Re-enrollment on PIPP Plus after twelve months after voluntary drop (customer request)

A PIPP Plus customer who leaves the program with **no outstanding arrearages** and then **after** twelve months re-enrolls in PIPP Plus would be required to pay his or her first PIPP Plus payment to re-join the program.

A PIPP Plus customer who leaves the program with **outstanding arrearages** and then **after** twelve months re-enrolls in PIPP Plus would be required to pay the missed PIPP Plus payments for the number of months that he/ she was not enrolled in PIPP Plus, less any payments made by the customer up to the amount of the arrearages.

MEDICAL CERTIFICATES

105. When can a medical certificate be used?

If a residential customer or consumer who is a permanent resident in the household is facing a situation where disconnection of service would be especially dangerous to his/her health, a medical certificate may used to maintain service or reconnect utility service within 21 days after the disconnection.

*PIPP Plus customers will not be eligible for any arrearage crediting for the months the customer uses the medical certificate unless on time and in full payments are made.

106. Who may request a medical certificate?

Upon request of any residential consumer, or a licensed physician, physician assistant, clinical nurse specialist, certified nurse practitioner, certified nurse mid-wife or local board of health physician the utility company must provide a medical certificate form. The medical certificate is available via the Public Utilities Commission of Ohio website (www.puco.ohio.gov).

107. How long does a utility company have to reconnect service after a medical certificate is presented to the utility company?

If certification is provided to the utility company prior to 3:30 p.m., the utility company must restore the customer's service the same day. If certification is received after 3:30 p.m., the company shall reconnect service by the earliest time possible on the following business day. If the certification is received after 3:30 p.m. on a day that precedes a non-business day, the utility company shall make an effort to restore service by the end of the day.

108. How often can a medical certificate be used?

The total certification period is not to exceed 90 days in any 12-month period. Medical certificates are valid for 30 days each, for a maximum of three times.

NOTE: If a medical certification is used to avoid disconnection, the customer must enter into an extended payment plan prior to the end of the medical certification period or be subject to disconnection. The initial

payment on the plan shall not be due until the end of the certification period. ***PIPP Plus customers must make-up these missed installments at the Anniversary Date*** **(See question 84).**

109. Can a company disconnect service for non-payment if life-support equipment is in operation?

Yes, unless the customer uses a medical certificate.

110. Can a medical certificate be denied based on the customer's medical condition?

No, if a licensed physician, physician assistant, clinical nurse specialist, certified nurse practitioner, certified nurse mid-wife or local board of health physician signs the medical certificate.

111. Can a medical certificate be used for a cooking only account?

Yes, a medical certificate may be used for a cooking only account as long as the medical condition is certified by a licensed physician, physician assistant, clinical nurse specialist, certified nurse practitioner, certified nurse mid-wife or local board of health physician calls, writes or faxes the company and confirms to the company that the denial of service would be especially dangerous to the health of someone living in the household (within 21 days after the termination of service), the company *must* restore service or cancel the termination order.

MASTER METERED ACCOUNTS

112. What accounts are considered master metered?

An account is master metered if two or more residential premises share a common gas and/or electric meter.

113. Can a consumer who lives in a master metered residence enroll on PIPP Plus?

The consumer is not eligible for PIPP Plus for the main heating source if it is master-metered; however, the consumer ***may*** still be eligible for PIPP Plus for the secondary heating source.

114. Are master-metered accounts eligible for HEAP/Winter Crisis?

Yes, if the household is responsible for paying utility costs separately from his/her rent costs, he/she is eligible for an energy assistance benefit.

NOTE: Master-metered accounts are eligible for Weatherization Assistance.

115. Is the company required to issue a disconnect notice to the tenants of a master-metered premise?

Yes, the utility company must provide a 10-day notice to the tenants prior to disconnect. The company must make a good faith effort to provide this notice to each unit of a multi-unit dwelling and to post it in a conspicuous place.

116. What should the tenant do who has received such a notice or whose service has been disconnected?

A tenant who has received such a notice or whose service has been disconnected should immediately contact the utility company for further information or Ohio State Legal Services Association at 1-866-529-6446 for information about tenants' rights and landlord/tenant provisions.

SPECIAL RECONNECTION ORDER PROCEDURES FOR THE WINTER OF 2019-2020

117. What is the Winter Reconnect Order?

The Winter Reconnect Order (WRO) is issued by the PUCO. The WRO allows a customer to pay less than what he/she owes to avoid disconnection or reconnect service. A customer may pay a maximum of $175.00 to maintain service. If the customer's service has already been disconnected, the customer must pay the $175.00 and a tariffed reconnection fee of no more than $36 up front to restore service. The company will bill the remainder of the reconnect fee, if applicable.

118. Who offers the Winter Reconnect Order?

All regulated electric and gas companies must offer the Winter Reconnect Order.

119. Who is eligible to use the Winter Reconnect Order?

There is no income eligibility requirement to use the Winter Reconnect Order. Any residential customer who is served by a regulated utility company may use the Winter Reconnect Order to maintain or restore his/her service **one time** during the winter heating period.

120. When can the Winter Reconnect Order be used?

The Winter Reconnect Order may be used **once** from Monday, October 14, 2019 through Wednesday, April 15, 2020 (close of business).

121. How much is a customer required to pay with the Winter Reconnect Order?

Customers are required to pay no more than $175 to maintain service under the reconnection order. If the customer's service has already been disconnected, the customer must pay the $175 and a tariffed reconnection fee of no more than $36 up front to restore service.

NOTE: If paying at an authorized agent, the customer will need to call the company with the receipt number to report the payment. Some companies may require that the customer notify them that the Winter Reconnect Order is being used.

122. How does a customer sign up for the Winter Reconnect Order?

There is no sign up required. The Winter Reconnect Order is not based on any income requirements. Anyone, (regardless of income) can use the Winter Reconnect Order if service has been disconnected or is being threatened with disconnection.

123. What if a customer owes more than $175 to the utility company?

Customers who use the Winter Reconnect Order are required to enroll on a payment plan for the remaining balance. Regulated gas and electric companies are required to offer the following payment plans:

- **One-Sixth Payment Plan (offered year-round)**-A plan that requires either six equal monthly payments on the arrearages in addition to full payment of current bills; **or**

- **One-Ninth Payment Plan (offered year-round)**-A plan that requires nine equal monthly payments on the arrearages in addition to a budget payment plan (established by the utility company); **or**

- **One-Third Payment Plan (offered from November 1 through April 15)**-A plan that requires payment of one-third of the balance due each month (arrearages plus current bill).

- **PIPP Plus/Graduate PIPP Plus** customers must pay the balance of the default on or before the due date of the next bill to re-enroll on PIPP Plus/Graduate PIPP Plus.

NOTE: The customer or the HEAP Agency must contact the utility company to enroll the customer in a payment plan other than PIPP Plus.

124. When does the remaining PIPP Plus default have to be paid after the $175 payment/pledge?

The remaining balance of the PIPP Plus default must be paid by the due date of the next bill that is issued.

125. Can the $175 payment be split between the gas and electric utility companies?

Yes. If the customer is served by two regulated utility companies (gas and electric) and is facing disconnection or service has been disconnected the utility companies involved may split the $175 (either by apportionment based on the arrearages or in half). For customers who are eligible for the Winter Crisis program the split will be calculated by the HEAP agency.

126. Can the $175 payment be split between the gas and electric utility companies to begin new service?

Yes, if the customer is served by two regulated utility companies the WRO can be split in order to establish new service with both companies.

127. When is the Winter Reconnect Order applied?

The Winter Reconnect Order allows customers to pay less than what they owe to maintain service or reconnect service. Therefore, the WRO is invoked only when customers pay less than the amount owed to prevent a disconnection or reconnect their service.

Example: If a customer receives a disconnection notice in the amount of $150 and the customer receives assistance through an agency for $150, the WRO should **not** be applied because the agency payment covered the amount needed to avoid disconnection. The customer could invoke the WRO using his/her own funds at a later time.

128. Will the $175 payment maintain service?

Yes, the $175 payment/pledge will maintain service for a minimum of thirty days. Non-PIPP Plus customers are required to enroll on an extended payment plan for the remaining balance. PIPP Plus/ Graduate PIPP Plus customers must pay the balance of the default on or before the due date of the next bill to re-enroll on PIPP Plus/Graduate PIPP Plus. **(See question 123 for payment plan options).**

129. Will the $175 payment reconnect utility service?

Yes, the customer may be required to pay a tariffed reconnection charge of no more than $36 up front to restore service. The remaining amount of the reconnection fee will be billed on the next bill issued.

130. What is a tariffed reconnection charge?

A tariffed charge is one which has been approved by and is on file with the Public Utilities Commission of Ohio (PUCO). The Winter Reconnect Order procedures do not allow companies to charge more than they otherwise are allowed in their tariff as a reconnection charge. Any company that doesn't have a tariffed reconnection charge may not assess one.

131. What if the company's tariffed reconnection charge is more than $36, what happens to the difference between the $36 paid and the tariffed amount?

The company can bill the difference between the $36 and the tariffed reconnection charge on the customer's next monthly bill or the company may bill the entire tariffed reconnect fee on the customer's next monthly bill.

132. Can the $175 payment be made by an agency?

Yes, the $175 may be paid by any agency providing energy assistance (i.e., Salvation Army, HEAT Share, Neighbor to Neighbor, Fuel Funds, etc.).

133. Can the utility company disconnect service if the customer has a pending appointment with a HEAP Provider for the Winter Crisis Program?

No, the utility company will delay disconnection if the customer has a confirmed appointment with a local HEAP Agency for the winter crisis program and the customer has not already utilized the WRO with their own funds. The utility company will delay the disconnection until five business days after a customer's confirmed appointment.

The utility company is only required to hold a disconnection for an appointment **once** per heating season.

134. Can the utility company require a security deposit before reconnecting service?

Yes, customers who are not eligible for PIPP Plus may be assessed a security deposit. However, the total amount the company may require a customer to pay, including the security deposit, may not exceed the Winter Reconnect Order ($175) amount for reconnection.

135. Can the Winter Reconnect Order be used in lieu of paying a security deposit?

Yes, in lieu of paying the required security deposit customers who are requesting new service with no previous balance may establish new service upon payment of $175. The company may add the remaining balance of the required security deposit to the customer's next bill**.** ***NOTE: Customers who are enrolled in PIPP Plus will not be charged a security deposit.***

136. Can a customer transfer service using the Winter Reconnect Order?

Yes, a customer who requests service at a new address and has an outstanding balance greater than $175 can transfer service upon payment of $175. The customer **must** contact the company and enter into a payment arrangement on the remaining balance. If a PIPP Plus/Graduate PIPP Plus customer has reverified his/her income within the last 12 months, the company shall transfer service upon payment of $175.

137. What happens if a customer uses the Winter Reconnect Order using his/her own money and later goes to an agency for assistance?

If a customer pays the $175 with his/her own funds and later (during the winter) goes to an agency for assistance, the customer **must** immediately pay the difference between the default amount and the $175 that the agency is willing to pledge to avoid disconnection.

138. Is the utility company required to reconnect service the same day under the Winter Reconnect Order?

See question 94 for reconnection procedures.

139. Can a customer with multiple residential accounts use the Winter Reconnect Order?

Customers with multiple residential accounts who wish to utilize the winter reconnection order to maintain or reconnect service may do so only at the property where the customer resides.

140. Can a customer who is with a supplier (CRNGS or CRES) use the Winter Reconnect Order?

Yes, customers who have a supplier may use the Winter Reconnect Order to stop a disconnection or reconnect their utility service. All provisions of the winter reconnect order would apply to customers that have a supplier.

APPENDIX A

ENERGY ASSISTANCE PROGRAMS OVERVIEW

Home Energy Assistance Program (HEAP) (also called 'Regular HEAP' or State HEAP) – is a federally funded program designed to help income-eligible Ohioans with their winter heating bills. The program runs from November 1 through March 31. Eligible customers receive a benefit in the form of a direct payment toward their energy heating bill. HEAP benefits are typically credited directly towards the eligible customer's energy heating bill beginning in the month of January. Applications that are mailed into the Office of Community Assistance (OCA) may take 12 to 16 weeks for processing. Applications may also be processed at the local HEAP Agency.

The total household income of an applicant must be at or below 175% of the federal income guidelines. **See income guidelines question 3**.

Winter Crisis Program (WCP) (also called 'Emergency HEAP' or E-HEAP) – provides financial assistance to income-eligible households that are threatened with disconnection of their heating source; have already had service disconnected; need to establish new service or pay to transfer service; or in the case of bulk fuel customers, have 25 percent or less of the tank's fuel capacity on hand. The WCP program year runs from November 1 to March 31. Agencies have until April 15 to finish processing incomplete or pending applications for the current year's program.

Households whose gross income is at or below 175% of the federal income guidelines are eligible for the Emergency Program. **See income guidelines question 3**.

Summer Crisis Program (SCP) (also called 'Summer Cooling) - provides financial assistance to income-eligible Ohioans to help with their summer cooling costs. Income-eligible individuals age 60 or older or with a certified medical condition are eligible. The SCP program year runs from July 1 to August 31. Agencies have until September 15 to finish processing any incomplete or pending applications for the current year's program.

Percentage of Income Payment Plan (PIPP) Plus – helps income-eligible Ohioans manage their energy bills year-round. The program allows eligible Ohioans to pay their energy bill based on a percentage of their monthly household income. To be eligible for the program, a customer must receive his/her electric or gas service from a company regulated by the Public Utilities Commission of Ohio (PUCO), must have a total household income which is at or below 150 percent of the federal income level, and must apply for all ODSA energy assistance programs for which he or she is eligible.

Home Weatherization Assistance Program (HWAP) - Ohio's Home Weatherization Assistance Program (HWAP) is a federally funded low-income residential energy

efficiency program. The HWAP program reduces low-income households' energy use, thus creating more affordable housing for those in most need. HWAP services may include attic, wall, and basement insulation; blower door guided air leakage reduction; heating system repairs or replacements; and health and safety testing and inspections. All measures are provided based on an on-site energy audit and cost-effective guidelines developed using the National Energy Audit Tool (NEAT) energy audit software program. Individualized client education is an important component of the HWAP program.

Households at or below 150% of the federal income guidelines or households participating in Home Energy Assistance Program, Temporary Assistance for Needy Families, or Supplemental Security Income qualify for this no cost program.

Electric Partnership Program (EPP) - is a no-cost program designed to improve the electric energy efficiency of households who participate in, or who are eligible for, PIPP Plus. The goal of EPP is to reduce the customer's electric usage by installing energy efficient items and creating a customized action plan. The program provides: A snapshot of how electricity is used in the client's home, an energy consumption analysis of all refrigeration appliances, suggested actions that the consumer can take to reduce electric usage without sacrificing comfort, installation of cost-effective energy efficient items and a report of the projected energy and dollar savings for the installed measures and actions. To be eligible the customer must have a regulated electric utility, be a PIPP Plus participant or PIPP Plus eligible, have a minimum annual electric baseload usage of 5,000 kWh and have lived at the residence for one year.

APPENDIX B
Documentation and Calculation of Income

Countable Income Types:		
Category:	**Type:**	**Acceptable Documentation of Income:**
Fixed Countable Income	☐ Supplemental Security Income (SSI) ☐ Social Security Disability Insurance (SSDI) ☐ Social Security Administration (SSA) ☐ Pension ☐ Widow/Widower's benefit ☐ Alimony ☐ Black Lung Pension	☐ Award/Benefit Letter ☐ Payment Printout/statement from issuing agency ☐ Copy of Check or Bank Statement showing deposit ☐ Most recent IRS Form 1099 ☐ Most recent filed copy of IRS Form or Tax transcript
Earned Countable Income	☐ Wages	☐ All pay stubs received 30 days from the date of the application that include gross and year-to-date amounts received ☐ Completed and signed Employment Verification Form (Appendix VI)
	☐ Active Military Pay	☐ Check Stub/Pay Statement
Other Earned Countable Income	☐ Seasonal Employment (includes construction workers, teachers, landscapers, etc.)	☐ Pay stubs indicating amount received within the previous 12 months from the date of the application ☐ Seasonal income will be determined by dividing the 12-month amount by 12 to arrive at a monthly average (Appendix VII)
	☐ Self-employment (includes owning own business, babysitting, home party sales, odd jobs, Ohio Electronic Child Care etc.)	☐ Most recent filed copy of IRS Form 1040 and Schedule 1 using the amount listed on line 12, 17, and/or 18 ☐ Most recent IRS Form 1099 Misc. ☐ Most recent IRS Record of Account Transcript ☐ Self-Employment Income Form (Appendix V) for the previous 12 months and
Supplemental Countable Income	☐ Unemployment	☐ Copy of check ☐ ODJFS documents/Eligibility letter with amounts and dates ☐ Most recent IRS Form 1099
	☐ Utility Assistance	☐ Housing Authority Documentation, ☐ Lease/Rental Agreement
	☐ Workers' Compensation	☐ Award letter issuing agency (BWC) ☐ Copy of check or bank statement
	☐ Ohio Works First (Temporary Assistance for Needy Families (TANF). Aid to Dependent Children (ADC))	☐ Award/Benefit Letter, or ☐ Payment Printout/statement from issuing agency, or ☐ Copy of Check or Bank Statement showing deposit

Countable Income Types Continued:		
Category:	**Type:**	**Acceptable Documentation of Income:**
Other Countable Income	☐ Cash withdraws from: IRA, Annuities, Other investments ☐ Lump sum payout from: SSI, SSDI; Estate & Trust settlements, Divorce settlements, insurance payout, lottery winnings ☐ Interest Income ☐ Other	☐ Statement from Financial Institution ☐ Copy of Check or Bank Statement showing deposit ☐ Most Recent IRS Form 1099 ☐ Calculate lump sums received by dividing the total amount by 12 months
No Income		☐ Self-Declaration of Income Worksheet (Appendix IV) ☐ An IRS tax transcript or an IRS Verification of Non-Filing Letter may be provided by the customer at the discretion of the LDA

Deductions:		
Category:	**Type:**	**Acceptable Documentation of Income:**
Deductions	☐ Health Insurance Premiums (Dental and Vision Insurance) ☐ Short-and Long-Term Disability Premiums (AFLAC, supplemental, etc). ☐ Prescription plans ☐ Health Care Spending Accounts ☐ Medicaid Spend Down (deductibles) ☐ Medicare Part B ☐ Medicare Part D (RX premium)	☐ Copy of Premium Statement showing payment ☐ Proof of Payment i.e. cancelled check or paystub
	☐ Child Support paid-out	☐ Proof of Payment i.e. cancelled check or paystub identifying garnishment
	☐ Attorney fees for estate or trust settlements	☐ Proof of Payment i.e. cancelled check
	☐ Self-employment IRS allowable business expenses	☐ Most recent filed copy of IRS Form 1040 ☐ Self-Employment Income and Expense Form and IRS Verification of Non-Filing Letter (if applicable
	☐ Reimbursement for work expenses (i.e. travel, mileage, meals, etc.)	☐ Pay Statement

Excluded Income:		
Category:	**Type:**	**Acceptable Documentation of Income:**
Excluded Income* *Only documented if the household's total Eligible Income (Countable Income – Deductions) is below the required threshold.	☐ Gifts	☐ Signed statement from provider of gift indicating amount and frequency, provider name, address and phone number
	☐ Loans ☐ Education assistance (grants stipends for tuition/books)	☐ Official notification of loan on institution letterhead including loan amount and repayment terms from issuing financial institution ☐ Signed statement from lender indicating amount and payment terms, lender's name, address and phone number ☐ School documentation demonstrating education assistance amount
	☐ Child Support Received ☐ Stipends for foster care ☐ Adoption Assistance	☐ Award/Benefit Letter, or Payment Printout/statement from issuing agency, Pay Statement or copy of canceled check or bank statement
	☐ Agent Orange Pension	☐ Payment Printout/statement from issuing agency
	☐ Service Connected Veterans Disability, VA Compensation/Dependent Indemnity Compensation (DIC)	☐ Statement from Issuing Agency ☐ Award Letter with Benefit Amounts ☐ Bank Statement (if income type is specified) ☐ Special Monthly Compensation (SMC), Person Care Services/Caregiver Stipend Program
	☐ Work programs for people with disabilities (i.e., work programs for the blind or disabled) ☐ Transportation allowances (WIOA) ☐ Volunteers in Service to America Stipend (VISTA) ☐ Work allowances (work requirement to receive OWF assistance) ☐ Title V wages (i.e. senior employment programs) ☐ Ohio waiver program (Medicaid benefit for caregiver)	☐ Award/Benefit Letter, or Payment Printout/statement from issuing agency, Pay Statement

Excluded Income Continued:		
Category:	**Type:**	**Acceptable Documentation of Income:**
Excluded Income	☐ Income earned by dependent minors	☐ All pay stubs received 30 days from the date of the application that include gross and year-to-date amounts received ☐ Completed and signed Employment Verification Form (Appendix VI)
	☐ Tax refunds/rebates	☐ Most recent IRS Form
	☐ Military allowances for subsistence	☐ Award/Benefit Letter, or Payment Printout/statement from issuing agency
	☐ Prevention retention and contingency (i.e. emergency services, rental asst.) ☐ FEMA, cash payments ☐ Title III Disaster relief emergency assistance	☐ Award/Benefit Letter, or Payment Printout/statement from issuing agency
	☐ Proceeds from reverse mortgage	☐ Payment Printout/statement from issuing agency
	☐ Fair market value of service in lieu of rent	☐ Signed statement from the Landlord ☐ Lease/Rental Agreement

APPENDIX C
SMALL GAS COMPANIES PIPP

	Grandfathered PIPP (10% of monthly household income)	PIPP Plus 6% monthly household income	Will accept new Enrollees	Re-enroll on Grandfathered PIPP	Alternative Arrearage Credit Program
Arlington Natural Gas	Yes	No	No	No	No
Brainard Gas Company	Yes	No	No	No	No
Eastern Natural Gas	No	Yes	Yes	No	Yes
Glenwood Energy of Oxford*	No	Yes	Yes	No	Yes
Northeast Ohio Natural Company	No	Yes	Yes	No	Yes
Ohio Cumberland Gas	Yes	No	No	No	No
Ohio Gas Company	No	Yes	Yes	No	Yes
Ohio Valley Gas**	No	Yes	Yes	Yes	Yes
Orwell Natural Gas Company	Yes	No	No	No	No
Piedmont Gas Company	Yes	No	No	No	No
Pike Natural Gas	No	Yes	Yes	No	Yes
Sheldon Gas Company	Yes	No	No	No	No
Southeastern Natural Gas	No	Yes	Yes	No	Yes
Waterville Gas and Oil Company	Yes	No	No	No	No

APPENDIX D
DEFINITION OF TERMS

Anniversary Date – The calendar date by which the PIPP Plus customer must be current on his/her installment payments to remain on the PIPP Plus program for the next year. The customer will have one billing cycle to make up any missed installment payments to remain on the program. Additionally, the customer's 1/24th credit will be recalculated at this time. The amount will not change if the customer has made on-time and in-full payments the previous 12 months. This date will be on the monthly utility bill.

Reverification Date- The actual date on which the customer completed documentation of household income. Reverification must occur no more than 12 months from the previous reverification date. Since the customer is required to re-verify any change in household size and income, the customer's reverification date may change from year to year.

PIPP Plus Annual Verification Date – The calendar date at or about 12 months from the customer's most recent reverification date.

PIPP Plus Default - The amount the customer owes in missed monthly PIPP Plus installments. (E.g., customer's PIPP amount is $50.00 per month and the customer has not paid for two months, the PIPP default is $100.00).

Graduate PIPP Plus Default - The amount the customer owes in missed monthly Graduate PIPP Plus installments. (E.g., customer's Graduate PIPP amount is $72.00 per month and the customer has not paid for two months, the Graduate PIPP default is $144.00). **The time period is not extended to participate in the Graduate PIPP Plus.**

PIPP Plus Arrears - The customer's arrearage as of the customer's PIPP Plus enrollment date. This amount will increase or decrease depending on the customer's future on-time payments. The customer is not obligated for the amount as long as he/she remains current on PIPP Plus. (E.g., customer owes the company $850.00, prior to going on PIPP Plus, the customer makes his/her first PIPP Plus payment of $50.00 the remaining $800.00 is the PIPP Plus arrears).

Total Account Balance - The full amount of the customer's bill, which includes all charges that the customer currently owes the company. If the customer remains current on PIPP Plus, at no time shall the total account balance become due. If the customer becomes ineligible for PIPP, due to a change in income or household size, he/she would then be eligible for the Graduate PIPP Plus program.

Total Balance Due - Utility companies may use this term interchangeably, as the total account balance or the total balance due to keep service on. (E.g., a customer's total balance could be $5,000; however, the total balance due to keep service on could be $200).

These definitions are to be used as a guide to help you understand the terms that are used interchangeably by utility companies when discussing account information. In all cases, please ask the company representative to explain the term that is being used to discuss the customer's account.

APPENDIX E
ELECTRIC COMPANIES RECONNECTION CHARGES
(Subject to Change Upon Commission Approval)

AEP Ohio	$ 53.00	
	$ 154.00	at pole
Cleveland Electric Illuminating	$ 35.00	at meter
	$ 60.00	same day after 12:30 p.m.
Dayton Power & Light (Electric)	$ 25.00	at meter
	$ 84.00	at service line
Duke Energy Ohio	$ 10.00	Remote meter
	$ 27.00	both electric and gas
Ohio Edison	$ 35.00	
	$ 60.00	same day after 12:30 p.m.
Toledo Edison	$ 35.00	
	$ 60.00	same day after 12:30 p.m.

APPENDIX F
GAS COMPANIES RECONNECTION CHARGES
(Subject to Change Upon Commission Approval)

Arlington Gas	$	21.00	
Brainard Gas	$	25.00	
	$	37.50	after hours
Columbia Gas	$	52.00	
Dominion East Ohio Gas	$	33.00	
Duke Energy Ohio	$	17.00	due payment problems
	$	27.00	both gas and electric
Eastern Natural Gas	$	30.00	
	$	35.00	after hours
Foraker Gas Company	$	25.00	
Glenwood Energy of Oxford	$	50.00	
Northeast Ohio Natural Gas	$	35.00	
Ohio Cumberland Gas	$	30.00	
Ohio Gas Company	$	40.00	
Ohio Valley Gas	$	80.00	
Orwell Natural Gas	$	30.00	
Piedmont Gas Company	$	50.00	
Pike Natural Gas	$	30.00	
Sheldon Gas Co.	$	25.00	

APPENDIX F
GAS COMPANIES RECONNECTION CHARGES
(Subject to Change Upon Commission Approval)

Suburban Natural Gas	$ 20.00
Swickard Gas Co.	$ 30.00
Vectren	$ 60.00
Waterville Gas & Oil	$ 50.00

The Public Utilities Commission of Ohio

180 E. Broad Street
Columbus, Ohio 43215
(800) 686-PUCO (7826)

Chairman
Sam Randazzo

Commissioners
M. Beth Trombold
Lawrence K. Friedeman
Dennis P. Deters
Daniel R. Conway

EXHIBIT JH-4

2014 STATE-BY-STATE RATEPAYER FUNDED LOW-INCOME ENERGY ASSISTANCE AND ENERGY EFFICIENCY			
State	Rate Assistance	Energy Efficiency	Total
Alabama	$1,733,283	$0	$1,733,283
Arizona	$51,514,973	$4,394,227	$55,909,200
Arkansas	$0	$275,564	$275,564
California	$1,403,200,000	$390,700,000	$1,793,900,000
Colorado	$10,675,168	$7,455,567	$18,130,735
Connecticut	$26,357,482	$29,396,267	$55,753,749
Delaware	$400,000	$400,000	$800,000
District of Columbia	$9,870,524	$6,099,890	$15,970,414
Georgia	$23,489,716	$2,750,000	$26,239,716
Idaho	$0	$2,255,097	$2,255,097
Illinois	$64,100,000	$11,668,214	$75,768,214
Indiana	$7,264,720	$6,996,341	$14,261,061
Iowa	$0	$6,210,739	$6,210,739
Kentucky	$2,982,799	$0	2,982,788
Maine	$8,121,857	$3,273,335	$11,395,192
Maryland	$62,300,000	$34,976,592	$97,276,592
Massachusetts	$123,969,642	$38,545,744	$162,515,386
Michigan	$50,000,000	$30,626,383	$80,626,383
Minnesota	$18,459,657	$8,190,253	$26,649,910
Mississippi	$850,000	$752,951	$1,602,951
Missouri	$0	$2,897,877	$2,897,877
Montana	$5,105,824	$3,090,679	$8,196,503
Nevada	$5,667,477	$3,076,218	$8,743,695
New Hampshire	$15,220,892	$5,016,103	$20,236,995
New Mexico	$0	$846,325	$846,325
New Jersey	$234,339,731	$31,700,000	$266,039,731
New York	$120,400,000	$59,325,256	$179,725,256
North Dakota	$0	$13,200	$13,200
Ohio	$334,638,817	$65,909,369	$400,548,186
Oklahoma	$12,000,000	$9,084,760	$21,084,760
Oregon	$21,063,985	$11,724,663	$32,788,648
Pennsylvania	$360,846,482	$48,619,871	$409,466,353
Rhode Island	$9,873,150	$21,192,491	$31,065,641
Texas	$392,409,318	$25,592,915	$418,002,233
Utah	$5,375,671	$1,040,345	$6,416,016
Vermont	$2,171,836	$932,679	$3,104,515
Washington	$44,558,252	$6,592,174	$51,150,426
West Virginia	$0	$1,485,264	$1,485,264
Wisconsin	$43,200,000	$36,836,700	$80,036,700
Total	$3,472,161,245	$919,944,053	$4,392,105,298
Source: https://liheapch.acf.hhs.gov/Supplements/2014/supplement14.htm			
Notes: Energy Efficiency totals for Missouri, New Mexico, North Dakota and West Virgnia are from NASCSP's Weatherization Assistance Program Funding Survey PY 2014. Mississippi and Oklahoma rate assistance are estimates for 2014.			

EVALUATION OF DUKE ENERGY'S HELPING HOME FUND

October 15, 2017

advanced energy

DUKE ENERGY®

Connect. Advocate. Innovate.
N.C. Community Action Association

LOCKHEED MARTIN

EXECUTIVE SUMMARY

Between 2015 and 2017, Duke Energy worked with the North Carolina Community Action Association (NCCAA) and Lockheed Martin to administer the Helping Home Fund, a program helping low-income customers improve their health and safety and manage their energy costs.

Duke Energy was the funding sponsor, with Duke Energy Carolinas and Duke Energy Progress providing a total of $20 million to support appliance replacement, health and safety measures, weatherization, and heating/cooling replacement and repair in participating homes. NCCAA was chosen as the program administrator and contracted with Lockheed Martin to assist with implementation.

In all, the Helping Home Fund reached 3,516 homes with an average of $5,151 in performed work per home. The Helping Home Fund was designed to leverage additional funding as well, including the State Weatherization Assistance Program (NCWAP), which consists of U.S. Department of Energy (DOE) Weatherization Assistance Program (WAP) and Low Income Home Energy Assistance Program (LIHEAP) funds, the PNC Home Beautification Fund, and funds from the North Carolina Housing Finance Agency (NCHFA). Without the Helping Home Fund, more than 40 percent of the participating homes would have been deferred due to funding limitations and program guidelines in the NCWAP. During the time period that the Helping Home Fund was operating, the program spent $20 million. Leveraged funding included:

- **NCWAP: $17 million**
- **PNC Home Beautification: $250,000**
- **NCHFA: $234,000**

Funds were also leveraged from other private funding sources, such as the City of Raleigh and City of Charlotte Urgent Repair Programs, but we were unable to obtain data on their funding levels.

Duke Energy had an interest in understanding the full impact of the program, including leveraging opportunities, and economic and non-energy impacts, such as health, safety and comfort. A number of approaches were taken for this effort. First, the team developed two surveys that were distributed to participating homeowners and service providers. The surveys gauged views of the Helping Home Fund and how people thought the program impacted the lives of families and the larger community. Second, a review of prior research evaluated the monetized values of potential energy and non-energy benefits associated with the program.

Results from the surveys demonstrated that both homeowners and service providers had a very favorable view of the Helping Home Fund. Homeowners noted that they felt safer, more comfortable and healthier in their homes, and reported financial savings that would allow them to pay for other necessities. Service providers applauded the program for its flexibility, staff and communication. Furthermore, the literature review of other low-income weatherization programs revealed that homeowners experienced a variety of non-energy benefits. Conservative estimates in the literature found monetized values for these benefits to be between $4,500 and $10,000 per home.

With the success of the program and the merger between Duke Energy and Piedmont Natural Gas, an additional $2.5 million will be used for a similar program to provide assistance to even more income-qualified families in North Carolina.

The Helping Home Fund reached 3,516 homes with an average of $5,151 in performed work per home.

INTRODUCTION

As a result of the Duke Energy North Carolina rate cases in 2013, Duke Energy allocated $20 million ($10 million from Duke Energy Carolinas [DEC] and $10 million from Duke Energy Progress [DEP]) to assist low-income customers. For both utilities, the $10 million was allocated in the following ways: $3 million was used for health and safety measures and appliance replacement (for DEP, some of these funds also went toward weatherization; DEC has a separate weatherization program), and $7 million was used for heating/cooling system replacement and repair. The actual breakdown of the funds at the time of this report can be seen in **Table 1**.

The program provided income-qualified customers with repairs and energy efficiency upgrades at no cost.

This program, known as the Helping Home Fund, ran from January 2015 to May 2017. The goal of the funding was to assist low-income customers. Duke Energy saw an opportunity to provide assistance that did not currently exist by providing health and safety repairs, new energy-efficient appliances, and heating systems to help homeowners manage energy costs and increase their disposable income. To meet this goal, the Helping Home Fund worked primarily through weatherization service providers as well as other non-profit agencies that serve families at or below 200 percent of federal poverty guidelines. The program provided income-qualified customers with repairs and energy efficiency upgrades at no cost.

The Helping Home Fund was funded by Duke Energy and administered by the North Carolina Community Action Association (NCCAA). NCCAA partnered with Lockheed Martin, who provided the database for data tracking and reporting, and quality assurance (QA) and quality control (QC). The Helping Home Fund was designed to leverage the State Weatherization Assistance Program (NCWAP) and other public/private funding sources. The funds were allocated to local North Carolina weatherization service providers and several non-profit agencies who completed the projects and were reimbursed once the work was completed. The program was allowed to use 10 percent of the funding for administrative purposes, with 5 percent going to the administrator and 5 percent to the service providers.

The monies were transmitted in total to the NCCAA to manage and deposited at PNC Bank. As a result, PNC Bank suggested that the NCCAA apply for a grant from their foundation, which ultimately provided another $250,000 for Helping Home Fund recipients for external beautification or maintenance, such as painting, roof repairs or landscaping.

TABLE 1 • HELPING HOME FUND BREAKDOWN

	DEC	DEP	TOTAL
APPLIANCE REPLACEMENT	$950,343	$620,399	$1,570,742
HEALTH & SAFETY	$1,765,387	$873,998	$2,639,385
HEATING/COOLING REPLACEMENT/REPAIR	$6,395,779	$6,388,239	$12,784,018
WEATHERIZATION TIER 1		$100,217	$100,217
WEATHERIZATION TIER 2		$1,018,932	$1,018,932
PROJECT TOTAL	**$9,111,509**	**$9,001,785**	**$18,113,294**
AVERAGE PER HOUSE			$5,151
ADMINISTRATION	$928,344	$928,344	$1,856,688
OVERALL TOTAL	**$10,039,853**	**$9,930,129**	**$19,969,982**

INTRODUCTION

Because of federal regulations, the NCWAP has a limited amount of funding it can use per house for health, safety and energy measures. If repair monies were not available from either federal or local sources, the home would be deferred. The Helping Home Fund filled this gap, allowing the NCWAP to serve customers who would have otherwise been deferred by service providers by providing the funding to make the needed repairs. Furthermore, North Carolina weatherization agencies' energy efficiency improvements waitlist had been experiencing lengthy delays, and customers were not getting work scheduled or completed. The funding provided additional services to customers and helped to leverage federal and state funds for maximum customer benefit and impact.

The Helping Home Fund focused on four main components:

01 Health and safety

02 Appliance replacement

03 Weatherization (in DEP territory only)

04 Heating/cooling system replacement and repair

In DEC territory, homes already had access to weatherization through the existing energy efficiency Weatherization Program.

LM Captures is Lockheed Martin's tracking and reporting system that service providers used to enter the individual home data for the program. The database required comprehensive data input for customer, home and project details to determine eligibility and track program expenditures and measure level detail by project type. All program activities, including QA/QC and reimbursement request/fulfillment, were also reported.

Funds for health and safety were originally capped at $800 per home, but due to customer needs learned throughout the program, the limit was later raised to $3,000. Health and safety measures included bath fans, vapor barriers, roof repairs, electrical/plumbing repairs, ingress/egress repairs, range repair and replacement, and water heater repair and replacement. Appliance replacement also started with an allotment of $800 per home, but this amount was increased to $2,000. This work included replacing inefficient appliances with ENERGY STAR® refrigerators, clothes washers, clothes dryers and room air conditioners.

Weatherization services were broken down into two tiers.

TIER 1

Tier 1 weatherization was for homes using < 7 kilowatt-hours (kWh) per square foot, < $0.23 per square foot oil/liquid propane (LP) gas heat, or < $0.38 per square foot oil/LP gas heat and water heating. Up to $600 was allotted for the following measures:

- Heating system tune-up and cleaning
- Heating system repair
- Water heater wrap and pipe wrap for electric water heaters
- Cleaning or replacement of electric dryer vents
- ENERGY STAR-certified compact fluorescent lamps (CFLs)
- Low-flow showerheads and aerators
- Weatherstripping doors and windows
- Energy education

INTRODUCTION

TIER 2

Tier 2 weatherization was provided to homes using ≥ 7 kWh per square foot, ≥ $0.23 per square foot oil/LP gas heat, or ≥ $0.38 per square foot oil/LP gas heat and water heating. Here, up to $4,000 was provided for the following:

- **Tier 1 services**
- **Attic insulation**
- **Air sealing**
- **Duct sealing/repair**
- **Wall insulation**
- **Crawl space insulation**
- **Floor insulation**

Since heating/cooling systems account for the majority of an energy bill, 70 percent of the monies were allocated to improve customers' heating systems. The intent was to decrease customers' energy use, thereby providing them with more disposable income. Existing electric furnaces, electric baseboards, and oil or propane systems were replaced with high efficiency heat pumps (minimum 14 Seasonal Energy Efficiency Ratio [SEER] and 8.2 Heating Seasonal Performance Factor [HSPF]). In addition, many homes were found to have elderly residents with wood stoves, and new heating systems and ductwork were installed in these situations as well.

A maximum of $10,000 could be used for heating/cooling system replacement and repair ($6,000 max for heating/cooling and an additional $4,000 to upgrade electrical and/or install new ductwork). Consistent with Tier 2 weatherization, heating/cooling system replacement and repair required energy usage per year to meet the following requirements:

- **≥ 7 kWh per square foot,**
- **≥ $0.23 per square foot oil/LP gas heat, or**
- **≥ $0.38 per square foot oil/LP gas heat and water heating.**

High efficiency mini splits were allowed when a home did not have a centrally ducted system or the duct repairs exceeded an estimated threshold. Funds could also be used to upgrade the electrical system or repair/replace duct systems. All of the ductwork had to be insulated and sealed with mastic. Homes also had to have been weatherized as part of the installation of a new heating/cooling system, requiring proper sizing of the system.

STUDY DESCRIPTION AND METHOD

As the Helping Home Fund was nearing completion, Duke Energy had an interest in understanding the impacts of non-energy benefits among program participants and implementation service providers. Non-energy benefits can include a wide variety of improvements, such as those to economics, health, safety, quality of life and comfort. Studying and documenting these benefits helps determine the true cost-effectiveness of home energy programs and interventions.

In performing the analysis, the first step was to narrow down the array of potential non-energy benefits to specific ones to evaluate within the Helping Home Fund. The team selected health, safety, comfort, improved disposable income, and economic sustainability/community impact.

To measure these impacts, two surveys were developed (see Appendix I). One survey went to participating homeowners, and a second survey was administered to the service providers that implemented the program measures and coordinated the work. To supplement the survey results and further characterize the outcomes of the Helping Home Fund, the team conducted a literature review to monetize the non-energy benefits. The results of this component of the program can be found later in the report.

NON-ENERGY BENEFITS

HEALTH

Health included measures such as the number of doctor's visits, decreased asthma symptoms and other homeowner health effects.

SAFETY

Safety included homeowners' accessibility or ability to move about their homes, as well as electrical and durability issues.

COMFORT

Comfort addressed whether occupants felt that their homes were more comfortable.

DISPOSABLE INCOME

Disposable income looked at whether the Helping Home Fund provided homeowners with additional income to spend on other necessities.

ECONOMIC SUSTAINABILITY

Economic sustainability/community impact included effects on service provider employment and home deferrals, among others.

PROGRAM SUMMARY

The Helping Home Fund served 3,516 homes with an average of two projects each (e.g., appliance replacement, heating/cooling system replacement/repair, health and safety measures). Homeowner incomes had to be below 200 percent of federal poverty guidelines to participate. The homes were assessed by local service providers serving low-income customers to determine what measures were most appropriate. The work was then completed by either service provider-based crews or subcontractors.

The homes were reported and tracked on a project level. Table 2 shows the average dollars spent per project category.

TABLE 2 • AVERAGE DOLLARS SPENT PER PROJECT

	APPLIANCES	HEALTH & SAFETY	HEATING/COOLING REPLACEMENT/ REPAIR	WEATHERIZATION TIER 1	WEATHERIZATION TIER 2	TOTAL
TOTAL SPENT	$1,570,742	$2,639,385	$12,784,018	$100,217	$1,018,932	$18,113,294
NUMBER OF PROJECTS	1,676	2,731	1,878	323	488	7,096
PROJECT TOTAL	**$937**	**$966**	**$6,807**	**$310**	**$2,088**	**$2,553**

Through the heating/cooling system replacements and repairs, more than 1,300 homes went from non-functioning to functioning heating systems (Table 3).

TABLE 3 • PRE-RETROFIT HEATING BREAKDOWN OF HOMES RECEIVING HEATING REPLACEMENT

EXISTING FUEL TYPE	NUMBER FUNCTIONING	NUMBER NON-FUNCTIONING	TOTAL
WOOD	7	26	33
ELECTRICITY	410	1,060	1,470
KEROSENE	9	9	18
NATURAL GAS	1	14	15
OIL/LP	107	222	329
NO HEAT	0	13	13
TOTAL	534	1,344	1,878

Note. All heating types converted to heat pumps with a SEER of 14 or greater.

The majority of homes (92 percent) were single-family detached and mobile homes. The remaining were multifamily units and townhomes or condominiums (Table 4).

TABLE 4 • BREAKDOWN OF HOMES SERVED BY THE HELPING HOME FUND

	SINGLE-FAMILY DETACHED	MOBILE HOME	MULTIFAMILY (5+ UNITS)	MULTIFAMILY (2-4 UNITS)	TOWNHOME/ CONDO	TOTAL
NUMBER OF HOMES	2,362	858	196	67	33	3,516

PROGRAM SUMMARY

The subset of customers that responded to the homeowner survey provided information regarding the number of children, elderly, and individuals with disabilities or respiratory illness (Table 5). With these varying degrees of vulnerability, it can be difficult for occupants to stay in their homes. The Helping Home Fund was able to provide services to populations that may not have otherwise been reached.

TABLE 5 • HELPING HOME FUND SURVEY RESPONSE

OCCUPANT CATEGORY	NUMBER OF OCCUPANTS
UNDER THE AGE OF 18	112
OVER THE AGE OF 60	275
IDENTIFY AS DISABLED	237
IDENTIFY AS HAVING A RESPIRATORY ILLNESS	171

Note. Included data from 317 survey respondents.

The Helping Home Fund spending on each participating home ranged from $114.32 to $19,825.31, with an average of $5,151. Additional funding sources were used on these homes as well, including the NCWAP, PNC Home Beautification and the NCHFA (Table 6). NCWAP funds were used for heating/cooling systems and weatherization, while PNC Home Beautification focused on exterior improvement, such as landscaping, painting and roofing. NCHFA funds were used for heating/cooling systems, weatherization and structural repairs. Therefore, although a house received an average of $5,151 through the Helping Home Fund, additional work may have been performed thanks to these other funding sources.

> **"We are no longer cold during the winter and hot in the summer."**

TABLE 6 • HELPING HOME FUND LEVERAGED FUNDS (2015-2017)

SOURCE	AMOUNT LEVERAGED
NCWAP (INCLUDES DOE WAP AND LIHEAP)	$17,321,491
PNC HOME BEAUTIFICATION	$250,000
NCHFA	$234,000

Note. Unable to obtain data for amount leveraged from other private funding.

To ensure that measures were installed correctly and funding was properly documented, randomly selected QC inspections were performed on completed jobs. At least 10 percent of homes with health and safety projects, appliance replacement or weatherization measures received QC, along with at least 25 percent of homes with heating/cooling system replacements and repairs.

QC inspectors conducted monitoring visits to evaluate effectiveness, safety, workmanship and compliance with program guidelines. They also addressed educational opportunities with local providers and customers during the on-site verification process. The process included a paper file review as well as an on-site visit with representation from a service provider. All measures installed with Duke Energy funds were verified to be present and compliant with work orders and materials invoiced. The quality of the workmanship was also evaluated, and QC inspection results were documented and discussed.

All QC documentation, on-site inspection details, reports and actions were uploaded into LM Captures. QC return visits were minimal, and all issues were addressed.

SURVEYS

The surveys sought to gauge the non-energy benefits and impacts of the Helping Home Fund. The full surveys, as well as responses from homeowners and service providers, can be found in Appendices I-III.

Homeowner Survey

The homeowner survey was designed to understand how the Helping Home Fund affected program occupants. Homeowners were randomly selected, and outbound calls were conducted by Duke Energy's call center for approximately one month. A total of 901 homeowners were contacted, with 317 completing the survey (a 35 percent completion rate).

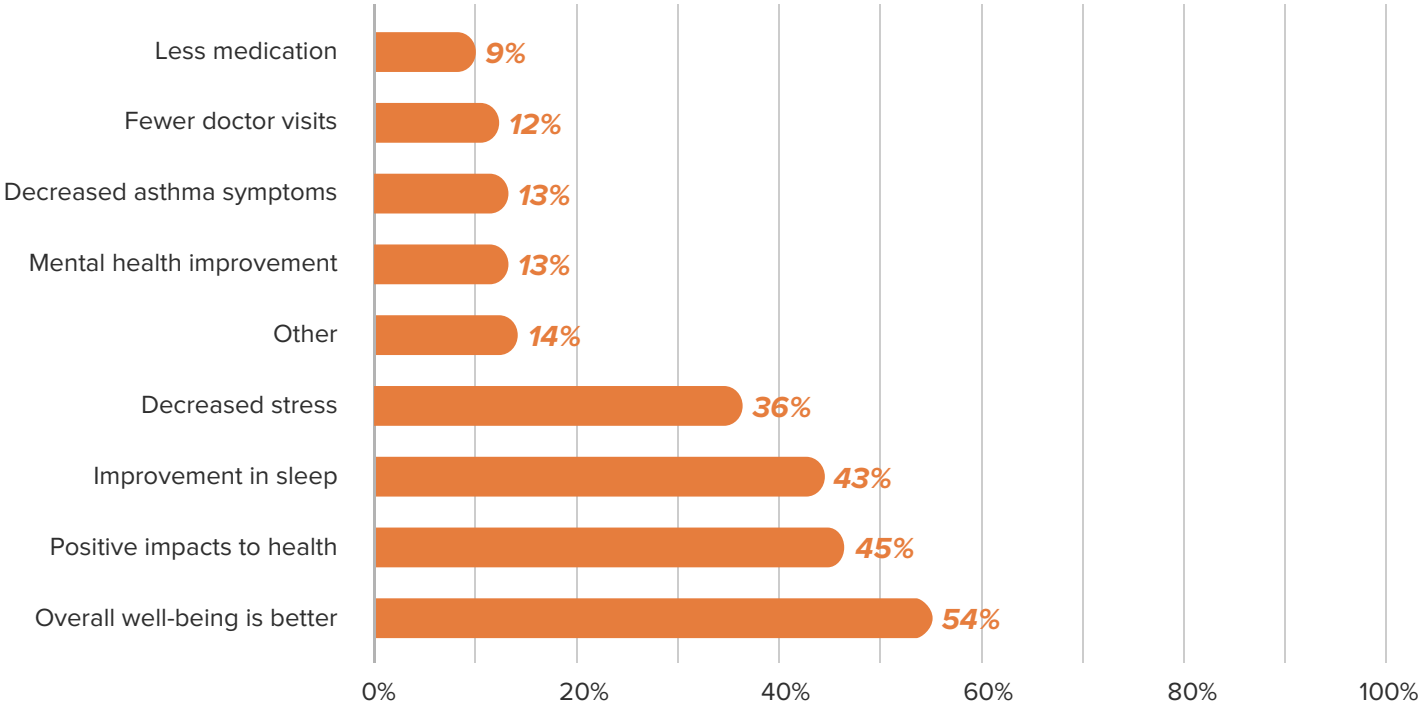
The homeowners overall had a highly positive view of the Helping Home fund. Ninety-two percent of respondents reported feeling safer in their homes, and 81 percent said they have better home accessibility (e.g., getting into and out of the home). Additionally, 91 percent said the improvements from the Helping Home Fund made it possible for them to stay in their current location, and 96 percent responded that their lives have been made easier in some form. "They did a good job and it really helped me a long way," said one homeowner. "They put windows in my home so it feels warmer and I truly appreciate everything that you all did."

> **"My light bill has been a lot lower, so that helps me have extra money. My water bill has been lower too. It has been a lot better than in years past."**

Forty-nine percent of respondents indicated that the Helping Home Fund upgrades definitely allowed them to have more money available to pay for other necessities, while an additional 29 percent said they somewhat did.

FIGURE 1 • HOMEOWNER SURVEY RESPONSES

Survey question: Have you (or any family members) noticed any positive health impacts due to the upgrades to your home? Check all that apply.

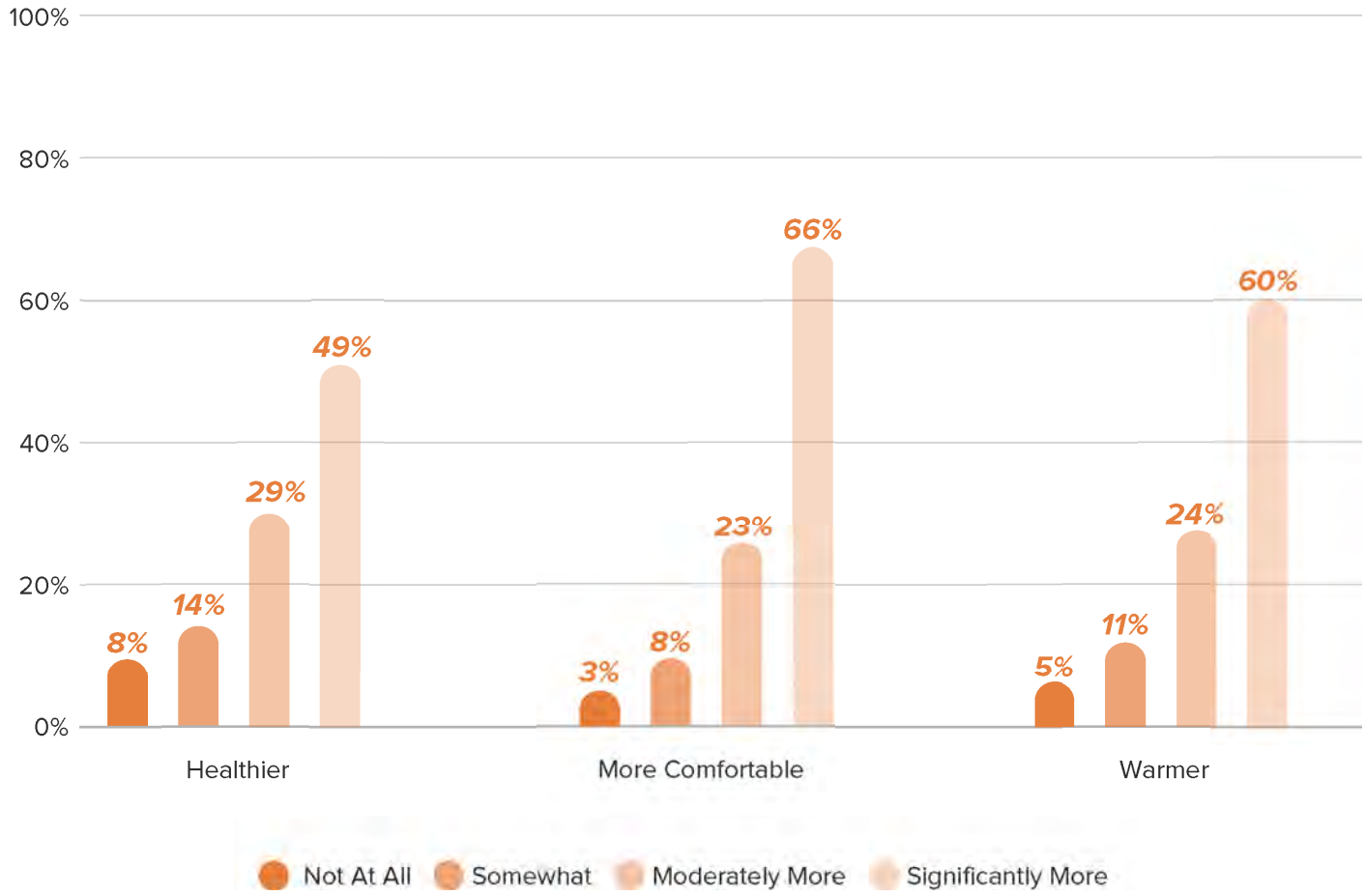


SURVEYS

Homeowners reported a number of positive health impacts for themselves and their families, including better overall well-being, sleep improvement and decreased stress (Figure 1). “If it wasn’t for Duke I could still be in the hospital. Heat affects me very bad with my medical condition so to feel cooling has made a world of difference. I am now able to keep my body temperature down,” reported one homeowner. Likewise, homeowners said they generally feel healthier, more comfortable and warmer as a result of

FIGURE 2 • HOMEOWNER SURVEY RESPONSES

Survey question: Are you healthier / more comfortable / warmer in your home because of the improvements made?



SURVEYS

Service Provider Survey

The service provider survey was developed to assess the effects of the Helping Home Fund on participating service providers, their crews and subcontractors, and the homeowners they served. Twenty-four participating service providers were sent the survey via email, and all responded. The service providers had a very positive view of the Helping Home Fund. They applauded the staff, communication, benefits to homeowners, flexibility and reimbursement process. According to one service provider, "Overall, (the) Helping Home Fund has been both impactful for the community and rewarding for our agency to serve others in need. We would love to be considered for future opportunities."

In particular, service providers praised the Helping Home Fund for its effect on low-income homeowners: Every provider responded that the program had a positive influence. They reported that an average of 44 percent of the homes they worked on through the Helping Home Fund would have otherwise been deferred.

Fifty-four percent of respondents felt there was a strong positive influence of the Helping Home Fund on the local community. In terms of service provider hiring, 46 percent of service providers indicated that the program affected staff employment, 4 percent said it somewhat did, and 50 percent said it did not.

The most commonly completed measures by service provider-based (i.e., agency-based) crews included insulation and air sealing, duct sealing and structural repairs to roofs, stairs, railings and windows (Table 7). Subcontractors also performed substantial work. Service providers reported that during 2015 and 2016, subcontractors were hired to help complete over 90 percent of jobs, which included electrical work, heating/cooling system repair or replacement, and plumbing (Table 7). All service providers noted that the quality of the contractor crews was either good or excellent, and most (83 percent) did not have difficulty finding contractors to work on homes. When there was difficulty, it was typically regarding electrical contractors.

> **"It has allowed us to serve more people in our counties that would not have gotten any service this fiscal year."**

The service providers reported receiving funding from a variety of sources in addition to the Helping Home Fund. As noted earlier, more than $17 million was leveraged from the NCWAP, NCHFA and PNC Home Beautification, as well as other undisclosed funding sources. Service providers noted some variability and uncertainty in funding over the last five years. One

TABLE 7 • SERVICE PROVIDER SURVEY RESPONSES

Survey question: What measures did you install with an agency-based crew? What measures did you install using subcontractors? Check all that apply.

MEASURE	NUMBER OF SERVICE PROVIDERS USING AGENCY-BASED CREWS	NUMBER OF SERVICE PROVIDERS USING SUBCONTRACTORS
PLUMBING	2	19
ELECTRICAL	2	23
HEATING/COOLING REPAIR/REPLACEMENT	2	22
INSULATION/AIR SEALING	13	13
DUCT SEALING	13	11
STRUCTURAL REPAIRS	11	13

SURVEYS

service provider stated, "With the support of (the) Helping Home Fund, we were able to expand service delivery to Duke Energy Progress customers. Our agency's primary funding source was limited for FY 2017; therefore, Helping Home Funds were leveraged and resulted in more customers receiving home improvements to support energy use reduction and for some improved health conditions. In addition, the opportunity to complete appliance replacement might not have happened without Helping Home Funds."

MONETIZING NON-ENERGY IMPACTS

To get a better understanding of the monetization of non-energy impacts of the Helping Home Fund, we examined prior studies and program analyses. We relied heavily on a study conducted by Tonn, Rose, Hawkins, and Conlon (2014), which monetized non-energy benefits from the DOE WAP. This study was relevant for a number of reasons, including its focus on low-income housing and the overlap in non-energy measures being explored. It also used a robust sample size, attributing results to more than 80,000 homes.

Tonn et al. (2014) used a variety of approaches to monetize the non-energy impacts. The researchers evaluated pre- and post-weatherization survey data, relied on objective cost data from existing databases where available, and then performed monetization exercises to calculate the lifetime benefit over 10 years. The researchers categorized their results into three tiers based on the reliability of the outcomes. Tier 1 estimates were the most reliable, followed by Tiers 2 and 3. Tonn et al. also considered the value of lives saved in their analyses.

We also included data from a literature review from Schweitzer and Tonn (2003). The researchers reviewed approximately 25 articles; some were reports that presented primary research from previous weatherization programs, and others used a meta-analytic approach to examine multiple studies. This effort led to a large set of non-energy benefits, many of which were not addressed by Tonn et al. (2014). Using the available data from the prior literature, Schweitzer and Tonn selected a point estimate for individual non-energy benefits to represent an average value that could be applied to nationwide weatherization programs. In this case, monetized values were calculated using a lifetime benefit over 20 years.

Tables 8 through 12 contain the relevant non-energy benefit monetization estimates from Tonn et al. (2014) and Schweitzer and Tonn (2003). We took certain steps to err on the side of caution with the data to avoid overestimating the monetized values. For Tonn et al., we de-rated their Tier 2 estimates (by 50 percent) and Tier 3 estimates (by 75 percent). We also did not take into account the value of lives saved. For Schweitzer and Tonn, when calculating the monetized value of all non-energy impacts, we only took into account the environmental benefit associated with natural gas, the lower value, and not electricity. All estimates were converted to 2017 dollars using historical consumer price index data.

MONETIZING NON-ENERGY IMPACTS

TABLE 8 • MONETIZATION OF ECONOMIC AND SOCIAL BENEFITS

Tonn et al. (2014) and Schweitzer and Tonn (2003)

NON-ENERGY BENEFIT	MONETIZED VALUE FROM TONN ET AL. (2014) *VALUES BASED ON 10-YEAR LIFETIME BENEFIT*	MONETIZED VALUE FROM SCHWEITZER AND TONN (2003) *VALUES BASED ON 20-YEAR LIFETIME BENEIFT*
INCREASED PROPERTY VALUE		$244.80
DIRECT AND INDIRECT EMPLOYMENT		$1,089.36
AVOIDED UNEMPLOYMENT BENEFITS		$159.12
NATIONAL SECURITY		$436.56
REDUCED MOBILITY		$378.08
LOST RENTAL		$1.36
IMPROVED WORKPLACE PRODUCTIVITY (SLEEP)	$512.17	
IMPROVED HOUSEHOLD PRODUCTIVITY (SLEEP)	$375.44	
FEWER MISSED DAYS AT WORKS	$227.62	
WATER/SEWER SAVINGS		$368.56
REDUCED NEED FOR SHORT-TERM LOANS	$39.99	
REDUCES TRANSACTION COSTS		$50.32
TOTAL	**$1,155.22**	**$2,728.16**

TABLE 9 • MONETIZATION OF HEALTH AND SAFETY BENEFITS

Tonn et al. (2014) and Schweitzer and Tonn (2003)

NON-ENERGY BENEFIT	MONETIZED VALUE FROM TONN ET AL. (2014) *VALUES BASED ON 10-YEAR LIFETIME BENEFIT*	MONETIZED VALUE FROM SCHWEITZER AND TONN (2003) *VALUES BASED ON 20-YEAR LIFETIME BENEIFT*
CO POISONING*	$4.19	
FEWER FIRES	$50.04	$92.48
FEWER ILLNESSES		$74.80
THERMAL STRESS (COLD)	$194.28	
THERMAL STRESS (HEAT)	$95.79	
ASTHMA RELATED	$2,270.09	
REDUCED NEED FOR FOOD ASSISTANCE	$940.16	
INCREASED ABILITY TO AFFORD PRESCRIPTIONS	$1,090.01	
REDUCED LOW-BIRTH WEIGHT BABIES FROM HEAT-OR-EAT COMPROMISE	$55.96	
TOTAL	**$4,700.52**	**$167.28**

*Note. *CO poisoning used a 5-year lifetime benefit.*

MONETIZING NON-ENERGY IMPACTS

TABLE 10 • MONETIZATION OF UTILITY SERVICE BENEFITS

Tonn et al. (2014) and Schweitzer and Tonn (2003)

NON-ENERGY BENEFIT	MONETIZED VALUE FROM TONN ET AL. (2014) *VALUES BASED ON 10-YEAR LIFETIME BENEFIT*	MONETIZED VALUE FROM SCHWEITZER AND TONN (2003) *VALUES BASED ON 20-YEAR LIFETIME BENEIFT*
CARRYING COST OF ARREARAGES		$77.53
BAD DEBT WRITE-OFF		$121.04
FEWER SHUTOFFS AND RECONNECTIONS FOR DELINQUENCY		$10.88
AVOIDED RATE SUBSIDIES		$28.56
INSURANCE SAVINGS		$1.36
REDUCED GAS SERVICE EMERGENCY CALLS		$137.36
FEWER NOTICES AND CUSTOMER CALLS		$8.16
TRANSMISSION AND DISTRIBUTION LOSS REDUCTION		$65.28
AVOIDED SHUTOFFS AND RECONNECTIONS		$23.12
TOTAL	**$0**	**$473.29**

TABLE 11 • MONETIZATION OF ENVIRONMENTAL BENEFITS

Tonn et al. (2014) and Schweitzer and Tonn (2003)

NON-ENERGY BENEFIT	MONETIZED VALUE FROM TONN ET AL. (2014) *VALUES BASED ON 10-YEAR LIFETIME BENEFIT*	MONETIZED VALUE FROM SCHWEITZER AND TONN (2003) *VALUES BASED ON 20-YEAR LIFETIME BENEIFT*
AIR EMISSIONS - ELECTRICITY		$1,324.64
AIR EMISSIONS - NATURAL GAS		$435.20
OTHER BENEFITS		$745.64
TOTAL	**$0**	**$2,505.48**

TABLE 12 • MONETIZATION OF ALL NON-ENERGY BENEFITS

Tonn et al. (2014) and Schweitzer and Tonn (2003)

NON-ENERGY BENEFIT	MONETIZED VALUE FROM TONN ET AL. (2014) *VALUES BASED ON 10-YEAR LIFETIME BENEFIT*	MONETIZED VALUE FROM SCHWEITZER AND TONN (2003) *VALUES BASED ON 20-YEAR LIFETIME BENEIFT*
ALL	**$5,856**	**$4,550**

Note. The total monetized value from Schweitzer and Tonn (2003) excludes air emissions associated with electricity.

MONETIZING NON-ENERGY IMPACTS

The two studies reveal that weatherization and other energy efficiency upgrades can produce a wealth of non-energy benefits with values in the thousands of dollars. At the same time, it is worth noting the lack of overlap in the impacts that Tonn et al. (2014) and Schweitzer and Tonn (2003) examined. Therefore, the overall value of non-energy benefits may be even higher than those reported here.

Given the similarities in the housing stock, occupants and measures installed in the Tonn et al. (2014) and Schweitzer and Tonn (2003) studies when compared to the Helping Home Fund, it is possible to assume that participants in the Helping Home Fund received a similar level of non-energy benefits. Even with our conservative estimates, the non-energy benefits associated with the Helping Home Fund, then, could approach an average of $10,000 per home (the sum of the total non-energy benefits from the two studies). Indeed, the homeowner survey results confirm that those participating in the program did receive non-energy benefits, from health improvements to enhanced comfort and increased ability to stay in their homes. These benefits can be particularly important for occupants who are children, elderly, or have disabilities, respiratory illness or asthma.

The Helping Home Fund was not designed to reduce overall energy use but rather to provide other benefits to low-income customers, such as improved health, comfort and safety. For example, approximately 35 percent of the homes had non-functioning heating systems and the program was able to provide new systems to these customers. The program also provided new washers, dryers and room air conditioning units, since other programs typically did not address this. However, because the program highly leveraged the NCWAP, we can assume that these customers would also receive energy benefits. Based on the literature review, DOE WAP achieves average lifetime energy savings of $4,890 per home (Tonn, Carroll et al. 2014).

Table 13 summarizes the average costs and benefits for participating homes based on total invested funds and estimated benefits from the literature review.

TABLE 13 • SUMMARY OF COSTS AND BENEFITS FOR HELPING HOME FUND

	AVERAGE PRESENT VALUE PER HOME	PRESENT VALUE FOR TOTAL HOMES
ENERGY BENEFITS (COST SAVINGS)[1]	$5,115.33	$17,985,500
NON-ENERGY BENEFITS[2]	$10,312.83	$36,259,910
ECONOMIC AND SOCIAL	$3,883.38	$13,653,964
HEALTH AND SAFETY[3]	$4,775.32	$16,790,025
UTILITY SERVICE	$473.29	$1,664,088
ENVIRONMENTAL[4]	$1,180.84	$4,151,833
TOTAL BENEFITS	$15,428.16	$54,245,410
TOTAL COSTS	$10,124.37	$35,597,294
HELPING HOME FUNDS	$5,151.68	$18,113,294
LEVERAGED FUNDS	$4,972.69	$17,484,000

1. Value based on Tonn, Carroll et al. (2014)
2. Value (and subcategories below) based on summed benefits of Tonn et al. (2014) and Schweitzer and Tonn (2003)
3. Uses the lower monetized estimate of fewer fires, from Tonn et al. (2014)
4. Excludes air emissions associated with electricity from Schweitzer and Tonn (2003)

CHALLENGES AND LESSONS LEARNED

- The NCCAA was the appropriate choice for administering these funds, forming a valuable relationship with Duke Energy. The NCCAA provided access to a network of service providers who were already intricately involved in low-income communities across the state. These service providers were able to quickly access homeowners who met the requirements for participation in the Helping Home Fund. The NCCAA also saw value in being involved with individual agencies throughout the implementation of the program, getting to know their particular challenges and strengths. With this experience and data, the NCCAA is able to provide recommendations to the NCWAP to improve overall performance.
- The NCCAA collaborated with Lockheed Martin to assist with the administrative duties of the program. Lockheed Martin is a strong partner, providing invaluable recommendations for program implementation, QC and data documentation. In addition, Lockheed Martin oversaw key communication and training with service providers that kept the program running smoothly. The ability to adapt and be flexible with service providers, who had varying degrees of experience with implementing programs, was essential.
- Funding levels for individual measures (health and safety - $800 and appliances - $800) were initially too low, resulting in huge requests for exceptions. As a result of these requests, funding for health and safety was increased to $3,000 per home and appliances to $2,000 per home in 2016.
- Funding allocation for administrative costs (5 percent) was insufficient for some of the service providers; however, this could not be changed due to the regulatory filing.
- Delays in obtaining contracts and funding between the service providers and the NCWAP caused issues with completing projects in a timely manner.
- While the data collection process was thorough, some data was not collected during this initial spending cycle but was later learned through the customer surveys. In the future, the Helping Home Fund may consider including the following in data collection:
  - **Number of occupants by age group (to capture number of elderly/children)**
  - **Number of occupants with asthma or disabilities**
  - **Tracking of leveraged funds per home**
  - **Tracking of when measures are installed**
  - **Pre-retrofit survey of homeowners**
- Now that the service providers have been oriented and trained to the program, it should be less costly for them to support the program.
- Based on some of the homeowner surveys, it was determined that they did not realize Duke Energy had funded some of their repairs. While a brochure was developed and available for the agencies to provide homeowners, its use may have dwindled over time. There is an opportunity for better marketing of the program to both homeowners and local communities.
- There were mixed reviews of LM Captures, which is understandable when working with a network of providers with varying degrees of experience with technology and availability of local resources. Role-based dashboard reports provided updates for status and planning. The NCCAA and Lockheed Martin worked closely with service providers to provide one-on-one customer service and support during program launch

CHALLENGES AND LESSONS LEARNED

and throughout the program. Feedback from service providers has resulted in ongoing updates to LM Captures, including easily identified required fields, less data entry on the home page, additional options in drop-down selections and revisions to heating/cooling data entry fields.

- Programs such as the Helping Home Fund are not designed to pass energy efficiency tests. Therefore, the utility only receives funds in special cases, such as during rate cases or mergers. However, evaluating non-energy benefits in addition to traditional energy benefits can help determine the true cost-effectiveness of these programs, and allow the utility to capture the benefits such a program can offer.
- Weatherization service providers are limited in the funds they can spend on health and safety measures, causing many homes to be deferred each year. Working closely with service providers ensured that they used the Helping Home Fund monies in the anticipated manner. This funding source, along with others such as the NCHFA's Single Family Rehab program, works well with WAP so that homes can be retrofit, and homeowners benefit from access to multiple programs that can address different needs. As one example, the Macon County Housing Department "was able to use the monies from the Helping Home Fund in conjunction with other programs such as the Urgent Repair Program, LIHEAP Heating and Air Repair and Replacement Program (HARRP), Single Family Rehab Program and the Weatherization Program."
- Leveraging other programs, while a benefit, was also a challenge for some service providers. It took time for providers to learn how to effectively use different funding sources on the same homes. To help them get up to speed, the Helping Home Fund used multiple methods to train service providers, including webinars, on-site training and ongoing mentoring. Overall, they found that one-on-one training was more effective than group training. The QC field visits were an additional training opportunity for service providers.

NEXT STEPS

The Helping Home Fund recently received an additional $2.5 million when Duke Energy merged with Piedmont Natural Gas. This money will go toward a similar program and will be used in the following ways: $800 for heating/cooling repair and/or maintenance, $3,000 for health and safety, and $2,000 for appliance replacement (refrigerators, washers, dryers, room air conditioners and dehumidifiers). Duke Energy decided to reduce the allocation toward heating/cooling systems due to the limited funding, and to allow the funds to be available over a 12-18 month period.

With the success of the Helping Home Fund, the team is sharing its experience with stakeholders around the country so that others may learn from it and build upon it.

REFERENCES

- LM Captures database, developed and maintained by Lockheed Martin.
- Schweitzer, M., & Tonn, B. (2003). Non-energy benefits of the US Weatherization Assistance Program: A summary of their scope and magnitude. Applied Energy, 76, 321-335.
- Tonn, B., Carroll, D., Pigg, S., Blasnik, M., Dalhoff, G., Berger, J., Rose, E., Hawkins, B., Eisenberg, J., Ucar, F., Bensch, I., & Cowan, C. (2014). Weatherization Works - Summary of Findings from the Retrospective Evaluation of the U.S. Department of Energy's Weatherization Assistance Program. Retrieved from http://weatherization.ornl.gov/Retrospectivepdfs/ORNL_TM-2014_338.pdf
- Tonn, B., Rose, E., Hawkins, B., & Conlon, B. (2014). Health and household-related benefits attributable to the Weatherization Assistance Program. Retrieved from http://weatherization.ornl.gov/Retrospectivepdfs/ORNL_TM-2014_345.pdf

ABBREVIATIONS AND ACRONYMS

DEC	Duke Energy Carolinas
DEP	Duke Energy Progress
DOE	Department of Energy
HHF	Helping Home Fund
HSPF	Heating Seasonal Performance Factor
LIHEAP	Low Income Home Energy Assistance Program
LM Captures	Database developed and maintained by Lockheed Martin
kWh	Kilowatt-hours
LP	Liquid Propane
NCCAA	North Carolina Community Action Association
NCHFA	North Carolina Housing Finance Agency
NCWAP	North Carolina (State) Weatherization Assistance Program
PNC Home Beautification	Fund offered by PNC bank
QA	Quality Assurance
QC	Quality Control
SEER	Seasonal Energy Efficiency Ratio
WAP	Weatherization Assistance Program

APPENDIX I • SURVEYS

HOMEOWNER SURVEY

Intro Section: (Provide context and explain the value of participating in the survey)

Hello, my name is _____ and I am calling on behalf Duke Energy. I'm calling today because your household participated in a program to receive free home improvements through the XXX Weatherization Agency. As part of this program, a contractor would have come into your home and installed free energy saving products and made home improvements. We would like to take just a few minutes to ask you a few questions.

Are you the person in your household who is most familiar with the improvements that were made to your home?

- ▫ Yes
- ▫ No
- ▫ Don't know
- ▫ Refused

We're speaking with customers who have participated in the program to complete a short survey to learn about their experience and satisfaction with the program. This is not a sales call, and all of your responses will be kept confidential.

Homeowner questions

1. How many children under the age of 18 currently live in the home?
2. How many people over the age of 60 currently live in the home?
3. How many residents in your household identify as disabled?
4. How many residents in your household identify as having a respiratory illness (e.g., asthma)?
5. Can you recall any of the weatherization improvements that were specifically made to your home?
6. Are you aware that the Duke Energy Helping Home Funds were used in your home?
7. If yes, do you know which improvements were paid for by HHF?

8-10. Are you healthier / more comfortable / warmer in your home because of the improvements made?

- ▫ Not at all
- ▫ Somewhat
- ▫ Moderately more
- ▫ Significantly more

11. Have the upgrades to your home allowed you to have more money available to pay for other necessities?

- ▫ Definitely
- ▫ Somewhat
- ▫ No

12. Have you (or any family members) noticed any positive health impacts due to the upgrades to your home? Check all that apply.

- ▫ Positive impacts to health, Less doc visits, overall well-being is better, mental health improvement, improvement in sleep, decreased stress, less medication, decreased asthma symptoms, Other (fill in the blank)

13. Have the improvements made on your house made it possible for you to remain at home (as opposed to needing to move to another location)?

- ▫ Yes
- ▫ No

14. Has your life been made easier through these upgrades?

- ▫ Yes
- ▫ No

15. Do you have better accessibility or access to your home because of these upgrades (e.g., ability to get in and out of your home)?

- ▫ Yes
- ▫ No

16. Do you feel safer in your home (e.g., from injury due to durability issues)?

- ▫ Yes
- ▫ No
- ▫ Somewhat

(If yes or somewhat, please describe)

17. Any other comments regarding Duke Energy's Helping Home Fund you would like to share?

That is all the questions I have today. Thank you so much for your time and have a great day.

APPENDIX I • SURVEYS

Service Provider Survey

Duke Energy launched the Helping Home Fund in North Carolina in January 2015. This fund was designed to assist low-income customers with managing their energy costs while also addressing health and safety. As the first round of funding comes to a close, we are reaching out to participating Weatherization Agencies to hear your feedback. We want to learn about your experience with the program, as well as gather data on how the program impacted local communities. We sincerely appreciate you taking the time to provide responses to the following questions.

Service provider questions

1. Contact Info:
   - ▫ Name
   - ▫ Agency
2. Has the Helping Home Fund had a positive impact on the low-income homeowners that you serve?
   - ▫ Yes, Somewhat, No
3. Have you noticed any positive effects on the local community (beyond the occupants of the homes) from your participation in the Helping Home Program?
   - ▫ Yes, Somewhat, No
4. What % of homes were you able to work on that would have been deferred because of the Helping Home Fund?
5. Did the Helping Home Program have an impact on how many staff your agency employed during the program years?
   - ▫ Yes, Somewhat, No
6. What types of funding does your agency receive on an annual basis? Check all that apply.
   - ▫ LIHEAP
   - ▫ NCHFA
   - ▫ DOE Weatherization
   - ▫ Utility Funds
   - ▫ PNC Beautification Funding
   - ▫ Private Funds
   - ▫ Other (_____)
7. Has that funding varied over the last five years? If yes, please explain to what degree it has varied.
8. What measures did you install with an agency-based crew?
   - ▫ Plumbing
   - ▫ Electrical
   - ▫ HVAC Repair or Replacement
   - ▫ Insulation/Air Sealing
   - ▫ Duct Sealing
   - ▫ Structural Repairs (Roof, Stairs, Railing, Windows)
9. Did the Helping Home Fund impact your ability to retain an agency-based work crew?
   - ▫ Yes, Somewhat, No
10. What measures did you install using subcontractors?
    - ▫ Plumbing
    - ▫ Electrical
    - ▫ HVAC Repair or Replacement
    - ▫ Insulation/Air Sealing
    - ▫ Duct Sealing
    - ▫ Structural Repairs (Roof, Stairs, Railing, Windows)
11. How was the overall quality of contractor crews?
    - ▫ Excellent / Good / Fair / Poor (If fair or poor, please explain what was lacking)
12. Did your agency have difficulty finding local contractors to work on homes?
    - ▫ Yes, Somewhat, No
13. If yes, any suggestions of what could help remedy this situation?
14. If yes, how did this affect what work was completed?

APPENDIX I • SURVEYS

15. If yes, what type of contractors did you having trouble finding?
    - ▫ Plumbing
    - ▫ Electrical
    - ▫ HVAC Repair or Replacement
    - ▫ Insulation/Air Sealing
    - ▫ Duct Sealing
    - ▫ Structural Repairs (Roof, Stairs, Railing, Windows)
16. What percentage of jobs did you hire subcontractors to help you complete the work in 2015 and 2016?
17. If the Helping Home Fund was to be continued as a program, what improvements / changes would you suggest?
18. What worked well about the program?
19. Were there any houses or families that stood out with regard to the impact you observed from participation in the program?
20. Is there anything you want to tell us about your experience with this program?
21. Can we contact you with additional questions? If yes, Name, email address, phone number.

APPENDIX II • HOMEOWNER RESPONSES

I really like the program. Years before I didn't know about different things to make my home efficient. I have told people about it too. I feel like Duke Energy really tried to help people. Thank you so much.

I am so amazed by all Blue Ridge took care of for me with my new ac, the insulation, the moisture barrier the sensor for carbon monoxide and the replacing of my duct work. I am also happy to learn that Duke Energy had a hand in this too. Kudos to Duke Energy. Keep doing what you all doing. I have a testimony about everything that was done for me. I am so grateful. Mr. Dale and his crew were amazing. They did an outstanding job. They gave me a sense of everything going to be alright. The inspector was also great and offered his number to if anything should go wrong with my unit to call him. They did everything they said and much much more. This program is great for older disabled people like me. Anytime you need live customer data or feedback, please call me because I have nothing but good things to say about Blue Ridge and Duke Energy.

I just want to say everybody was nice and good to me. I thank you all. I love my new ac unit. I didn't know Duke Energy was responsible for doing that. I don't have to worry about that being done anymore. This is a good thing to have and I am thankful.

It was very helpful and nice to know assistance is out there for people who may be in a struggle. This is wonderful program also for older customers or those with health issues. I was more concerned with the efficiency of my home and the insulation has been great since added. I'm not worried about how often my units cycles on and off.

Everybody was so kind that came out. Very polite and were courteous to take off their shoes and not track dirt into the home. They also cleaned up after themselves. Very thoughtful. I am thankful for the good Lord to make something like this available to me. The agency also helped replace the faucets and I got light bulbs. I am very thankful for this program. I'm not sure if anything can be done or if someone can direct me, but I am in need of windows. The windows I have now are terrible. I'm using duct tape and plastic to close them shut. I would just love if someone could help guide me to a agency or a program that can help me with my windows.

I thank God for the program. Really overwhelmed with joy and happiness that there was such a program available to help me.

Appreciate this program so much. Helped me because I would have had to find another job to have to done some of the things that were done, especially the new heat pump that was installed. I was blessed with this program and to be able to qualify. I am thankful. It didn't push me into anymore debt and although I am on a fixed income at 73 yrs. old I can still pay my bills and not scraping to make ends meet.

It's the best thing that happened to me, I couldn't afford to have these structure repairs done.... wonderful thing to happen to me it's highly blessing that fell on me!!! the best thing that could have happened for me! So grateful and thankful

All of them were very nice people. I am definitely appreciative of having an electrical heating system in my house. I feel safer now since I don't have to mess with the kerosene heating and worrying about it tipping over or not changing the filter or the possibility o hit burning down more house.

APPENDIX II • HOMEOWNER RESPONSES

Where the back porch was they built steps with a handrail... I was very appreciative, I needed the work done and had no idea how I was going to do it, I was so happy to qualify for the program.... it was a blessing.... I said my prayers and this happened... I really appreciate it....

I am so grateful.....when the contractors came out to my house - I cried.... I was so thankful..... I just want to thank everyone at duke energy from the bottom of my heart!! I don't have to worry about spinning my air unit by hand....it would freeze up and we would have to cut it off by the breakers.... old a/c unit finally stopped running... I had everyone in my family send a letter to the agency thanking them for everything....I send them Christmas cards, send them thank you notes.....

I thought my light bill would come down....but it hasn't.... put insulation in the roof, I appreciate all of the improvements that were done..... thankful for the help.... did a lot of work....

I appreciate the program and I would recommend it to anyone. You guys did such a wonderful job, from the bottom of my heart.

I'm so grateful...I. would like to say thank you from the bottom of my heart... it was getting to the crisis mode where I thought I would have to move..

They put insulation in attic, fixed heat ducts so heat would go down... it's a good thing to help people, it's a good fund if people don't have the income to put stuff in...it's good.

The contractors that were used were excellent, the approach, communication, they were a great group.

I would like to say thank you for the program, its been a life saver...

I think this is a great program. It helped me and my family. I hope more funding becomes available to help other families.

I must say that everyone who came out I was well pleased with. They were all kind mannered and promised to be here and was here at the time given. I am very happy with all things done and happy for my new ac unit. The guy who installed my new system explained everything to me very well.

The crew was great. I hope Duke will be about to continue this service. It has a lot of benefits to the community and I appreciate being able to have had the opportunity. I was out of work during the time my new system was installed so I am thankful. This program is one of the Best programs Duke offers and is an excellent service.

I am surprised that they were able to install my new heat and cool unit in my home because I have an old mill house so I am very grateful that they managed to install it. They did a great job. Everyone was nice and cleaned up after themselves. The inspectors were nice too. I wish I had money to contribute to this fund to help others in need because it is hard when you need improvements and don't have the money or means to pay for it. I am thankful Duke has a program like this and the weatherization agencies.

APPENDIX II • HOMEOWNER RESPONSES

I just think is Godsend. It is such a wonderful program for senior citizens, someone who is disabled that cannot afford to help themselves.

I'm on equalized payment and my bill went from 193 to 120 dollars per month... that extra savings can pay for another bill... I was flabbergasted when I qualified for the program, my heat pump was replaced, washing machine is great, (this machine wrings out clothes so less drying) replaced every light bulb... they were fabulous, couldn't believe it... I work at a non-profit organization, it was unreal, it I hadn't been worked there i wouldn't have known about the program.

Power bill has gone from 500 to 200 dollars per month. We were using space heaters to heat the home & a window unit to cool the home. I'm 100% satisfied that they helped me as much as they did!

My mother doesn't have to worry about buying oil this winter or using a space heater, which is dangerous. Many people do not know about this program and its because of the line of work I am in to why I found out. This has been a life saver. I do not live with my mother but my brother and I were there when everything was being done and I don't know what we would have done without this program because financially we don't have the money to have made these sort of upgrades. My mother is elderly and it gives her now a sense of being safer, warmer and saving money. She can also stay in her own home and not in a living facility. This program saved our lives and we thank you so much.

Having the new windows make me feel safer. Overall I feel better and I am grateful and thank you all.

It was just wonderful and I thank and appreciate it. It's fantastic that Duke can set aside funds to help people like myself that is on a fixed income and elderly. I am a widower and I can't thank you all enough for my new air conditioning system. I am very appreciative of everything and Duke.

The program has done a lot for a lot of people in the neighborhood. I hope that the program continues and help others. My light bill is very very good. I really enjoy the way it is. I hope they decide to do more of this program, especially for senior people who can't afford it. It really came in handy.

It's a great program to help people. I always worked and made it on my own and I have been very independent and then had a lot of medical issues. I have been in a pretty bad shape, and my stuff went out, so I was glad for that program.

I think is a great program for people who really need it. Sometimes is hard to make meets end, so anything that you can do to lower the electric bill, so I think you should do more of these programs.

I really want to thank you for having the program. It helped very much. I am in a lot of medications, so this helped me a lot. I have told people that Duke Energy helped me a lot and that's why I feel better. My bill also decreased and is very nice now.

The whole process was painless. I couldn't have asked for a better set of people. Mark and David were exception. They were great. Neat and courteous. I was so appreciative I cooked them a little something to say thanks.

APPENDIX II • HOMEOWNER RESPONSES

I never knew that Duke Energy was involved. The people that worked on the house they were some of the best people ever. The people that were hired were great people.

I think the program is amazing, for citizens who pay taxes like myself. These improvements allow me to tell others about this program. It's great. I am truly blessed.

They did so much!!! I think it's a real good program who need assistance.. when winter comes I'll really get the benefits.... appreciate the program, a really good program.... the people who administrated the program did a great job! They let me know all of the information.

I just think the program is wonderful. They did so much for us. Me and my sister live here and we are getting out there in age, fixed income, and we couldn't have done any of this without you guys. We don't have to worry about things breaking down. We know that we will be able to stay here for a long time. It is just wonderful!

They all did a fantastic job with the upgrades. After they finished my evaluation my refrigerator went out 4 days later, and it wasn't included.... thank the lord for that program and I was eligible for it. it's a great thing you do for people who can't afford those things, i don't know what i would have done... all the guys were very nice and friendly and everything I'm glad to be a duke energy customer.

Thanks a lot, if it weren't for the upgrades I don't know what me and my mom would do, keep the program going... most definitely... if you can help anybody else like you've helped us, please continue. It was amazing for us!! It was an amazing experience.. the people that did the work were very considerate of me and my home...

I think Duke Energy is good, everything is great, all the upgrades, I couldn't ask for anything any better thanks to duke power, what would we do without them.

Door is a lot more secure, windows are more secure.... previously on windy days you could actually hear the wind blowing inside, it was so bad the wind would move the blinks... there was a lack of sealing previously... I'm glad to know Duke Energy was behind a lot of it.... this place really needed it (public housing).

I think it is a good program for people that are on social security and can't afford big bills. Everyone who came out was really nice and I thank Duke Energy for helping me.

The little boys that the installed the equipment were really nice, they did a good job.. Ms. Cannon wanted to make sure everyone got involved with the installation got an A+ After my a/c was installed I told my girls "I believe I've went to heaven when I woke up."

It has made a world of difference... wasn't aware Duke Energy HHF was involved.. couldn't believe I was eligible for all this equipment... I want to thank Duke Energy for being a company that has helped a consumer, feels very very good!! Absolutely remarkable...

APPENDIX II • HOMEOWNER RESPONSES

Don't have to use plug in heat, feel safer now.... not worried about fires as much, fire/gas alerts system make customer feel safer... Duke Energy has done a wonderful job to help the seniors, a lot of customers can't afford a heating/cooling system, we didn't have the money to put in heating/cooling system. The people who installed the system did a good job, cleaned up before they left.... appreciate washer/dryer, appreciate that..... customer really appreciates everything to the highest..... they removed a lot of stuff from the bottom of the house and they had it all removed... can't complain about any of the services.

Feel safer in home because old heaters were bought from Walmart and they weren't as safe. The HHF has been a blessing, it has made our lives so much easier... Hopefully others can benefit from this program... our electric bills have been cut in 1/2...

I appreciate everything that was done. I appreciate it so much that I wrote thank you letters to everyone with Community Action Opportunities. I am very thankful. I used to burn oil and I didn't have to spend the money this year. They also upgraded my wiring to get the new heat pump in. They took good care in what they did and with me.

I am glad that Duke Energy had the funds to help and assist the disabled. It helped me tremendously. It has helped my bill a lot. It has decreased my bill for about $100 or so.

I am just glad that it was available and we qualified for it, for our HVAC. It was really expensive for us because of kerosene.

I am so thankful for everything that was done for me. Everyone who came out from each of the companies were very professional. Even the Inspectors were nice and not snobs. They assured me that all the electrical work was done correctly. They even installed a smoke and gas detector alarm.

I appreciate the new appliances, because they are more energy efficient. I know down the line they will help me with the electric bill. I greatly appreciate it.

Customer says he and his mother are on disability and it was blessing, and they really appreciated what Duke has done for them.

My personal opinion, I think this program is a blessing. I think that DE is one of the most wonderful companies to help people who are disabled. My husband passed away last year from cancer and this program helped me so much. I am so thankful.

I am greatly thankful for Duke Energy and this type of program. I was in shocked that I could apply and actually got accepted. They replaced my washer and dryer and my ac unit. They also gave me a refrigerator. My house was hot and moldy previous to the improvements and had deteriorated and had critters. I feel healthier overall. If it wasn't for Duke I could still be in the hospital. Heat affects me very bad with my medical condition so to feel cooling has made a world of difference. I am now able to keep my body temperature down. This is a mobile home so it isn't very efficient to begin with. Thank Duke and the weatherization Action Pathways for everything.

Everyone that was sent out was professional from start to finish. From the first inspector to the final inspection inspector. This was very convenient and mindful and everyone was friendly. Definitely keep

APPENDIX II • HOMEOWNER RESPONSES

this type of system around. I hope it can extend across the nation to others in need. I recommend it. Sad to hear that our fearless leader is trying to take programs away like this but I am grateful that it is available. Thank you so much for taking the time out to call to ask about my experience.

I would tell anyone that has the opportunity to do this to please do it immediately. Be careful who you said yes to, but if you know if it is a program that Duke Energy is responsible for, then they will take care of you.

I can breathe a lot better. You all did such a good job. Thank you all for doing this. I am so pleased. Everyone was so nice and the entire thing was enjoyable.

Keep program up. Elderly people need it. After you work all your life then to end up on a fixed income it's hard when things need to be fixed. Sometimes you have to choose to do without meds or maybe food depending on how bad it gets. I thank you all for doing this and keep it up.

Thankful for heat pump and thankful overall for everything that was done and is coming out to her home. During the winter customer feels a lot warmer and during the summer hot months she is a lot cooler. She has noticed breathing better although she doesn't have an issue breather. The quality of the air is better. In the past she has used fans but now feels better overall during the hot days.

If it wasn't for Duke Energy I don't know where I would have been this winter. With previously having to use a wood burner for heat which caused my sons breathing issues I am thank you to Duke for installing a new heat and cool system. I am tickled to death and so pleased of all the work that was done. I am so happy that Duke cares about people who need help and from the bottom of my heart I am thankful.

I was not aware Duke Energy money was used towards the improvements in my home so knowing this is great and I appreciate you all so much. I also like the tips you send out on think that can be done in the home to save money like hanging the clothes to dry instead of using the dryer.

I sure appreciate the things that were done because it helped to better the household. To have a better heating and cooling unit helped a greater deal. They also did the cracks and the bathrooms which was good too.

I have nothing negative to say about my experience. The air conditioning company (Mr. Richard) was awesome. Make note that Mr. Richard explained that this was one of the biggest jobs they have done. It was starting from scratch. No insulation in the attic, no central heat or cool. They also added vent in bathroom and a main breaker. I am so very grateful and thankful and happy to recommend this is anyone I know. I had to wait 2-3 years for this and I am thankful my home had all these improvements made. Tell the program manager that this was exceptional for Duke and the other workers to do.

They did a good job and it really helped me a long way. They put windows in my home so it feels warmer and I truly appreciate everything that you all did. One person in here asthma is as bad and overall we feel good and is comfortable. Thank you so much.

APPENDIX III • SERVICE PROVIDER RESPONSES

WARM was able to assist so many families with these funds. We are so grateful, and wish there were more funds to continue to help so many more families that are in need.

We worked very hard within a short time frame to spend the original allocation, plus the additional funds we requested and received. In about a two year period, we installed over 175 heating systems, a great many appliances, and health & safety and weatherization measures. In spite of all that was accomplished, the need exists for that much more to be done.

It has been an great program for all our eligible clients.

We look forward to continuing to work with Duke, it has been an outstanding opportunity for our agency as well as the customers that have been touched by this program. It has given us the opportunity to bundle services with other agencies to serve customers and provide additional measures in the home.

This was a great program, but the need is still great (10x).

The program support team was very helpful in assisting us from the start to finish and we were able to leverage the funding to provide needed services to the low-income folks CADA serves.

This was one of the best programs we have administered to assist homeowners with appliances. (2x).

The staff at NCCAA and the Martin group were very helpful and easy to work with. The requests for exceptions were processed quickly as were agency reimbursements. This program was a win-win for all involved.

Overall, HHF has been both impactful for the community and rewarding for our agency to serve others in need. We would love to be considered for future opportunities.

Joel Groce with NCCAA did an outstanding job administering the dollars.

This has been a great program. The Duke HHF staff were great and very knowledgeable. Payments were also processed timely.

The HHF program has helped offset many program expenses and has allowed us to continue working longer through the year until the new contract is completed and/or funding is released.

CONTRIBUTORS

Advanced Energy

Kelsy Green

Maria Mauceri

Matt Murray

Jonathan Susser

Duke Energy

Casey Fields

Lorrie Maggio

Lockheed Martin

Deborah Hill

North Carolina Community Action Association

Joel Groce

Sharon Goodson

advanced energy

www.advancedenergy.org
909 Capability Drive, Suite 2100 | Raleigh, NC 27606 | 919-857-9000

Testimonials

[redacted]

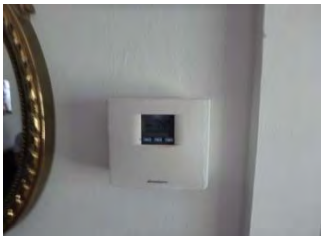
[redacted] is a Columbus County resident that applied for weatherization due to the high cost of heating and cooling her home. [redacted] qualified for the HVAC replacement program through Duke and was able to get an energy efficient heat pump installed. [redacted] stated, “I don’t have to seek assistance anymore with filling my tank to heat my home. I am very pleased with all of my services.”

Old Unit

New Energy Efficient Unit

Non-Functioning CO Detector

New CO Detector



Old Thermostat

New Energy Efficient Thermostat

Helping Homes Fund gives Hickory woman her first heating and AC system …

By KJ HIRAMOTO khiramoto@hickoryrecord.com
Sep 9, 2016

Janet Lutz of Brookford adjusts her thermostat to her new heating and cooling system from Duke Energy's Helping Home Fund.

Janet Lutz of Brookford has already started covering her new refrigerator from Duke Energy's Heling Home Fund with photos of her grandchildren.

HICKORY – The thermostat at Janet Lutz's house in Hickory has remained at exactly 72 degrees Fahrenheit throughout the summer. While Lutz insisted she is comfortable with the temperature setting in spite of some of the hottest and most humid days during previous summer, it was also due in part to her being overwhelmed by the technology.

"I'm scared to touch the buttons," Lutz said jokingly. "But it feels great around the house. ... My sister also told me to keep the fans in the living room going to keep the air flowing."

Before having the thermostat installed in her house, Lutz had never owned a heating and air conditioning system.

"I've always had my wood stove for over 40 years," Lutz said. "I made my boys go out buy a loaf of wood, stack a pile outside, bring some inside the kitchen and we'd heat it with a stove."

Thanks to the collaborative efforts between Duke Energy and Blue Ridge Community Action (BRCA), Lutz's days of making her grandsons gather wood to generate heat around the house is over.

Lutz was among the families selected by BRCA as one of the recipients of Duke Energy's Helping Home Fund.

Helping Home Fund is a program that offers free assistance for income-qualified Duke Energy customers with up to $10,000 in energy efficiency upgrades. After receiving a complete home energy assessment, they also receive assistance and counseling to help the families save on their future energy bills.

BRCA's role is to administer the home improvements for the chosen Duke Energy customers as soon as the non-profit organization receives the allocations from Helping Home Funds. They identify the clients who apply for the program, send out contracted auditors to test the home then the auditors send the reports back to BRCA, which then follows up with a select group of clients based on their eligibility scores.

BRCA Energy Director Shawna Hanes said the program operates in a team effort with all the contracted partners and Duke Energy all playing their own roles.

"We have qualified contractual partners that we had carefully selected which we are glad to have with us," Hanes said. "And we would not have been able to install the system (in Lutz's home) if it weren't for the funding received by Duke Energy."

In addition to assessment and counseling, chosen families like Lutz's receive services from the program such as health and safety repairs and installation of home ventilation systems.

And for Lutz's case, she received repairs on her home windows and a refrigerator as additional services provided by the program.

Lutz said ever since the installations for the series of home improvements were completed several months ago, she had been pleasantly surprised to see her house is a lot more energy efficient, evident by the noticeable difference in her monthly Duke Energy bills.

"When we used the wood around the house, it went around $200 a month," Lutz said. "Now it's between $120 to $140. ... Now I can spend the extra money on the boys' school supplies and (school) uniforms."

Lutz said the new heating system in the house has enabled her to give her two grandsons -- Daniel, 15, and Nick, 11 -- extra time in the evenings by not having to make them go out to gather wood for the stove. But as a result, she did add more chores around the house for the boys.

“They’re not going to sit around,” Lutz said jokingly. “Daniel likes to cook so I have his prepare the main dishes, and Nick likes to bake pastries and I get him to organize the Bible shelves.”

All jokes aside, Lutz said the series of home improvements and installations have helped the family immensely, especially for her two grandsons. They've struggled with asthma when their house was in its previous conditions.

“They’re nowhere near as affected by it now,” Lutz said. “I couldn't be more thankful for Helping Home Fund.”

Hanes said seeing the families experience improvements to not only their home utility systems, but also to the quality of their lives makes her job that much more fulfilling.

“It’s always exciting to see all the work get done,” Hanes said. “It keeps our staff motivated when they get a chance to see these families smile in-person.”

Application Process

Although BRCA is nearing the end of its Duke Energy HHF allocation period, Hanes said she encourage clients to apply for services since they will continue to provide weatherization services to low-income families. Hanes said if a client is unable to come to the BRCA office locations, our organization’s service workers could make a home visit when possible.

For more information on the weatherization services, visit their website at http://www.brcainc.org/weatherization. The Weatherization Services page provides more information about how weatherization helps low income families save energy and money and also informs clients on how to qualify for weatherization. Applicants must qualify for weatherization in order to qualify for the Duke funds.

Duke Energy's Helping Home Fund aides Lincolnton woman

MATT CHAPMAN
Staff Writer

Duke Energy launched its Helping Home Fund in January of last year and has since provided more than 2,000 families in North Carolina with up to $10,000 of energy efficiency upgrades at no cost to the customer.

The Helping Home Fund is a $20 million program funded by Duke Energy shareholders that was authorized through an agreement with the N.C. Public Staff and approved by the N.C. Utilities Commission in 2013. It serves families at or below 200 percent of federal poverty guidelines and helps income-qualified customers with upgrades that include the replacement of outdated washers and dryers, HVAC replacements, insulation and other weatherization benefits.

Duke Energy contracted the N.C. Community Action Association to administer the $20 million of funding through 28 agencies across the state. In Lincoln County, more than $58,000 from the Helping Home Fund has been administered through I Care Inc., a private non-profit that works to expand economic security for vulnerable families.

Patrenia Fair is one of the Lincoln County residents who has been helped by this collaboration between Duke Energy and I Care. She spent years living through sweltering summers and harsh winters in a home without a properly functioning heating and cooling system. Fair lacked the

disposable income to make the required fixes and the problems snowballed as the use of space heaters and window air conditioning units drove her energy costs through the roof.

“I thank God for these people who have helped me,” Fair said while fighting back tears. “I’m glad that they came by to see about me and cared enough to come check on me.”

Fair applied for the program through I Care and as a Duke Energy customer was eligible for assistance through the Helping Home Fund. Work began on her home in April as I Care replaced her electric baseboard heating and installed a brand new heat pump. In addition to the new heating system, Fair’s home also received weatherization upgrades and the fund provided her with a new, energy efficient refrigerator to help save additional money each month.

“I’ve been in this job for almost seven years and I’ll never forget the first home I went into,” Rick Stotts of I Care said. “It was a mobile home and it was in the winter time and it was freezing cold in there. I saw this young girl laying on the sofa with a bunch of blankets over her and I didn’t realize it right away, but she had a little baby under there trying to keep it warm. I have a real soft spot for older folks and kids. They’re so appreciative for what you do for them and you can see the difference it makes in their lives.”

The Helping Home Fund is a one-time program, meaning that once the $20 million has been spent the program is over. However, Duke Energy representatives are working on putting a similar initiative together sometime in the near future

“We are a very large company, but we want to try to reach out to everybody and have a conversation,” Duke Energy program manager Casey Fields said. ”If it means that we can make a big enough change in someone’s life that you get emotional or you feel good about it, it makes my job much, much better at the end of the day. This is a phenomenal program and this is the right thing that we’re doing and it’s what we should be doing.”

Image courtesy of Matt Chapman

The customer was in need of energy saving measures for his mobile home. He is disabled and has limited income, which made it difficult to get much needed measures done to his home. [redacted] was grateful for all the assistance that Action Pathways along with Duke Energy's Helping Homes Funding provided to his home. [redacted] was very pleased with all the services he received by from weatherization program and has already seen a change in the way his home feels.

[redacted]'s Home

Old System

New Energy Efficient System

No Vapor Barrier

Vapor Barrier

Old Bath Fan

New Bath Fan

Since the start of the Duke Helping Homes program we have helped over 125 families in Macon County addressing health and safety issues and installing energy efficient appliances and heating systems to reduce their energy usage and monthly bills.

The health and safety part of the program enabled us to install handicap ramps, grab bars and do much needed porch repairs so that our clients could stay in their homes. Also we were able to install new heating and air conditioning systems where they were non-existent or beyond repair. This was so very important to our clients on oxygen and with health issues.

[redacted] is one of our clients with health issues and cannot endure extreme cold or heat. She is very comfortable in her home now with her new heating and air system and does not have to go stay with relatives as she did in the past.

[redacted] is a client who is on oxygen and installing a new heating and air system to his home eliminated the wood burning stove. He could no longer lift the logs and a dangerous situation was eliminated.

[redacted] was in a nursing home and could not return home until a handicap ramp was installed. She is now able to be in her own home.

[redacted] was in desperate need of a handicap ramp and since his wife is on oxygen, we were able to replace the propane system with a heat pump and install the handicap ramp.

[redacted] was in need of porch repairs and a handicap ramp. He is now able to enter and exit his home safely and can stay there for many more years.

[redacted] **and his wife** are both disabled and have a young child. They are truly grateful for the handicap ramp and heating and air system.

[redacted] lives alone in a very rural area and was in need of a handicap ramp. She was in a nursing home and couldn't return home. We were able to install the needed ramp and also install a mini split heating system for her. She is now able to be at home.

So many of our clients have commented about how their lives have been changed for the good and how happy they are to see the reduction in their energy bills due to the appliance replacement program and HVAC replacement program.

Macon County Housing Department was able to use the monies from the Helping Home Fund in conjunction with other programs such as the Urgent Repair Program, HARRP, Single Family Rehab Program and the Weatherization Program.

We wish the program would be continued as there are many elderly, disabled and single parent families here who would benefit from being able to switch from wood burning stoves and the expensive propane heating to the energy efficient heat pumps.

Various Success Stories from Duke Energy's Helping Home Fund

[redacted]
Wilmington, NC

To Duke Energy Helping Home Fund:

How will I ever be able to thank you for kindness & generosity in helping us to get a new HVAC system put in. After living over a decade without heat and air, it had pretty much become a way of life for us to live in one room during cold and hot days. Using an electric heater to stay warm was neither safe or efficient. As students (trying to improve our lives) we would sit and do homework with hat, coat, & gloves on. For us, it was a normal way of life for many years. However, thanks to your Home fund and giving back to the community, Wilmington Area Rebuilding Ministry, Inc. was able to see to it that we were matched with you to be a recipient of your gift. It has changed our life overnight to have this new system in place. Thank you again and WARM for your kindness & especially for the volunteers at WARM for treating us with dignity & respect.

[redacted]
Durham, NC

[Received Air Sealing and Mechanical Ventilation]

This letter is to thank you for the amazing and wonderful maintenance work that was done to bring my home up to standard. I would never have been able to pay or save for the service that Your Company did for me. The company is a God Sent for Seniors.

I would like to thank the people (men) who performed the service, they were [redacted], the Auditor, [redacted], and the other two men from Charlotte, NC who did the electric work. They were very polite, friendly and respectable to me and my home. After the work was completed they checked to see if everything was working or performing correctly.

Again, Thank all of You.

[redacted] [HVAC Replacement]

To whom it may concern. We just wanted to thank you for all you did for us. We could not have afforded this ourselves. It's good to know that in this messed up world we live in today, there is still people with goodness in them. I believe God will bless and prosper your company for what you do. We appreciated all your crews that came out. God bless you and good luck in the future.

[redacted]
Willow Spring, NC
[HVAC Replacement – Mechanical Ventilation]

Thank you for the weatherization of our home. The things did have definitely made a difference in our electric bill. We are so appreciative for the services that you provided because they were needed so badly and we could not afford to have any of the work done.

The gentlemen from your organization and the service providers from Therma Direct, Carolina Weatherization, and Lowe's were so respectful and extremely courteous.

[redacted]
[Plumbing repairs & HVAC Repairs]

Wanted to say thank you so very much for help in facilitating all the repairs on my home. Already seeing a difference in energy bills. I have nothing but good things to say about your agency. Hope you all keep up the great work.

[redacted]
Zebulon, NC
[HVAC Replacement]

My deepest appreciation to all administrators of Wake County Weatherization and Duke Energy Progress Heat/AC Assistance Programs. Because of your programs, I was blessed to get my Heat and AC needs met for only 25% of the total cost which was paid by my landlady.

[redacted]
Henderson, NC

I would like to express my appreciation for this program. It has really helped me a lot. I would not have been able to have this work done without your help. My house has never been better.

The works were very professional and kept me informed on what was going on. They had to rework the duct work, install insulation, replaced attic steps, replaced roofing (ceiling tiles) and installation of the unit. There "wore" the best. Without this program, a lot of families would be without heat or air and a comfortable place to live.

[redacted]

Just wanted to thank you and let you know how much I appreciate all that you all have done for me. The heating and cooling unit works great, and the washer and dryer are great, makes doing laundry a pleasure. All who came to my house to install everything, were so very very nice. I have never had that many new things that I didn't have to make monthly payments on. What a blessing.

Homeowner serviced by Coastal Community Action in New Port, NC

[redacted] [Executive Director of Coastal Community Action] called this morning after receiving a call from a lady who had been helped through the Helping Home Fund. This lady was a retired teacher who because of sickness was no longer able to work. She had replaced the roof on her home before her funds ran out. She has been without heat for a very long time. The actual work will not be completed until tomorrow, but the lady was so overwhelmed with the kindness shown to her that she called [redacted] and talked for over an hour. She said that she had never been treated as kind and was so appreciative of the professional staff at Coastal.

[redacted]
Mount Airy, NC

Dear [redacted]/Weatherization and Duke Power,

Just a note to say THANK YOU, so much, All of you, for my new A/C unit and the free installation of same. I've worked hard all my life and it is so much appreciated. To find people willing to help me so much in my older, non-working time and age. And what a year to get such a blessing – So hot!

[redacted]
Fuquay Varina, NC

I just had to thank you and your company for caring about our community and seniors. I have been so afraid of falling "again" in the winter with 2 inches of ice on my stairs, not even able to get out of my home. Through the money you gave to Senior Weatherization I am now much safer going in and out of my home. I am more than grateful for your helping me! I will be praying for God's blessings to overtake you and your company and your family.

You truly have been used by God to answer my prayers to keep me safe Thank you one million times

[redacted]
Charlotte, NC

I wanted to take this time to thank you for your service in making sure I have received my new GE Appliances, what a difference it has made in my home. Having appliances that are not only brand new, but are updated and just simply beautiful.

Thank you for your Help and the Change it has made in my life.

[redacted]
Raleigh/Durham

Season Greetings,

I did not want another day to go pass without me giving you all this big appreciative love email!! I am speechless and so grateful for all the work that was done to my home! I came to you will lots of concerns and not to mention a $1200.00 light bills for two months. My family barely made it through the year because there was only money for the basics but God!!! There was no way I could have ever afford to do any of the work you all did! I am less stressed because my power bill has been cut down tremendously, we all sleep safe at night because you have installed smoke detectors and carbon monoxide detectors, I won't have animals crawling in the crawl space and it was fully insulated as well, and although it's not the last thing you all did but you all got rid of my 1980s refrigerator and blessed us with a new one. I am emotional right now just writing this email! If I ever was wavering in my faith, I am reminded every time I opened the front door and step inside my warm and cozy home 2 things-God has angels on earth and He is still performing miracles.

[redacted]
Boonville, NC

From the agency that served [redacted]

I had a delightful telephone call from [redacted] and wat to shar it. [redacted] is an elderly lady. She's an expressive person and has a jolly attitude and outlook about most things.

She called me to let me know Lowe's delivered her new refrigerator at 8:08am Tuesday morning. She said she "had no idea it would be so big and so pretty and so nice! That's a rich lady's refrigerator! I have never had a refrigerator I didn't have to buy on credit, make payments on, and do without, in order to get it. I'll be 83 next Wednesday and I think this is my birthday present from heaven! I don't know if other people call you to thank you for their refrigerators and let you know how nice they are, but I had to. I want to thank each one of you that had anything to do with helping me get my new refrigerator and heat pump. My house is nice and warm now!"

Success Story from Charlotte Area Fund

Good Afternoon [redacted],

I really did not know what I was going to do! For almost 5 years, my washing machine had been leaking, it took more than 2 hours for 1 load of clothes to dry, my refrigerator made a "humming" noise, and my oven door was broken.... the whole house was falling apart and honestly so was I!

I was barely making enough money to survive and just the thought of trying to replace worn out broken appliances was almost too much to bare. And then.... I read the article in the *Charlotte Area Fund Spring 2016 Newsletter* about the Charlotte Area Fund and Duke Energy Replacement Appliance Assistance Program and like an **angel** you helped a struggling resident obtain new appliances!

[redacted], you made the process so easy, you completed the paperwork quickly, and you were very professional. The contractor and the delivery personnel you sent to my home were extremely professional, courteous and completed the job in a timely manner. I thank the Good Lord for this program. I can now cook in a new modern oven, wash my clothes in an energy efficient washer and it only takes about ***15 minutes for a load to dry!!***!
I am so overjoyed at receiving these appliances words can hardly express my joy and gratitude!!

Thank you so much [redacted], the Charlotte Area Fund, and Duke Energy for this awesome program.

God Bless you once again.

POSTED ON SEPTEMBER 7, 2016 BY STOKES NEWS

Couple benefit from Duke Energy's Helping Home Fund

By Amanda Dodson - adodson@civitasmedia.com

Anthony and Lydia Prysock, a retired couple living in the Walnut Tree community, were the recipients of home upgrades through Duke Energy's Helping Home Fund.

Anthony and Lydia Prysock, a retired couple living in the Walnut Tree community, were the recipients of a new high efficiency heating and cooling heat pump, a washer and dryer, and safety measure upgrades to their home through the Helping Home Fund. The two-year initiative, launched in January of 2015 by Duke Energy, reduces the burden of energy costs and electricity for families in North Carolina. The $20 million community investment pays up to $10,000 per household for repairs, new appliances, retrofitting for efficiency, and other electricity costs based on household income.

Last winter, the Prysock's were paying nearly $400 a month using baseboard heating, a grueling amount for the couple who are on a fixed income. While they've slowly completed home renovations over the years, there was a mounting list of more to do.

"I noticed one of my neighbors down the street was having a heat pump put in and I asked the contractor to write up an estimate of how much it would cost at our house," Prysock said. "But as I was talking to the young lady, she told me about this program and I gave them a call."

After doing some research, Prysock realized he and his wife were eligible for Duke Energy's Helping Home Fund, and the program would easily cut his power bill in half.

"We applied and went through the process. I'm really thankful for this and for Duke Energy giving to our area. This is how you rebuild communities. What little money we did have we redid the cabinets and put on a new roof. It would have been a long time before we could have done anything like this."

The Helping Home Fund has invested over $175,000 in Stokes County and helped 55 families receive energy-saving upgrades at no charge to income-qualified customers.

"The Prysock's are one of more than 2,000 families we've helped all over North Carolina. We've spent almost $10 million dollars and we still have about another $10 million," explained Lisa Parrish, Duke Energy's Government and Community Relations Manager. "We have great organizations we work with like YVEDDI that just know how to get it done."

Tommy Eads, the weatherization director from YVEDDI, said the program has been flooded with applicants and said when considering homes, they look at household size, yearly kilowatts usage, and income.

"We've done several houses on this street and some others close by. There's 334 projects that we have either started or completed in homes from Stokes, Surry, Yadkin and Davie. We service all four counties with the state and the Duke Energy program," Eads said. "It's great to be able to help the community. I feel like we get to be a part of making a difference one homeowner at a time."

Amanda Dodson can be reached at 336-813-2426 or on Twitter at AmandaTDodson.

June 12, 2015

Governor Pat McCrory
Office of the Governor
20301 Mail Service Center
Raleigh, NC 27699-0301

Dear Governor McCrory,

My heating and air conditioner quit working in January. I purchased some little heaters that kept me warm. I was employed for many years and was a single parent of two children. Unfortunately, I had to retire sooner than expected and being independent made that a hard transition. I called several companies for estimates and realized faith was my only solution. My daughter contacted an agency by the name of Coastal Community Action Inc, specifically its Weatherization Assistance Program and the Heating and Air Repair and Replacement Program. It was an answer to prayer! I called and spoke with [redacted] *at Coastal Community, and she had me send in the necessary paper work to see if I qualified. She was very kind and helpful. My daughter had originally spoke with her boss,* [redacted] *and he talked with me and was very helpful, explaining the process that would take place. Next* [redacted]*, the auditor, came to my house to inspect my whole house to see what could be done to weatherize my home. He was very precise checking throughout my home, and he explained how different things would be beneficial. I called and talked with* [redacted] *who is in charge of the whole program. She told me something that really stuck in my heart. She had presented a three hour presentation to get the funds and grants to help people. I had much gratitude that she had accomplished receiving the grants that would be a gift to so many people. I have never received such help so I am very appreciative. Then they sent the crew out to weatherize my home and to put in an exhaust fan, to wrap my hot water heater, to put a new shower head on, and carbon monoxide detection. They also put insulation around the duct work. These guys were very mannered and it was obvious there was great team work. These guys were* [redacted]*, came to inspect their final job. These guys were awesome!*

Coastal Community Action Inc. used an electrician, [redacted]*, with For A Electric and he was a super gentleman. They selected McLeans Heating and A/C, owner* [redacted]*, whose workers were* [redacted] *and* [redacted]*. They installed a new unit and duct work. I was very pleased with their work and kindness.*

I wanted to express my gratitude and share the great blessing I received and felt you should be aware of this wonderful organization and the gracious grants offered by Coastal Community Action! I would be so happy if you could acknowledge my appreciation to each one that has made my life more comfortable and efficient. I want to thank Duke Energy for their assistance and the other donors at Coastal Community Action who made the grants possible.

Sincerely,

[redacted]

.cc Coastal Community Action, CEO Lynn Good (Duke Energy)

April 28, 2016

Blue Ridge Community Action Inc.
601 East Fifth Street Ste. 255
Charlotte NC 28202

To Whom It May Concern,

My name is [redacted]. I have been a life long resident of the Stanly County area. During this time I made choices in my life that did not reflected a thoughtful planned out success for my future. So I struggled financially. Unfortunately, I never qualified to receive any of the grant money that was allotted to Stanly County to help those who were in need of assistance.

During my life in Stanly County I was blessed to have a son with disabilities which required total care. This job was the love and joy of my life for twenty years. Within that time I was attending school to get a degree which would increase pay, so I can better provide for my children. I had to drop out of school and had to let go many jobs because of my responsibility at home. He passed in 2009, and life itself was a struggle. At one point of my I had no hope nor did it even matter whether I got it together or not. One day, God, just gave me a want- to- live spirit again. So I found jobs that lasted short term and applied for assistance many times. This was very embarrassing and degrading because the people made you feel you just wanted a hand-out. The workers made you feel like scum. After being rejected many times, you have a fear of even seeking help. When it was cold I would put cover up to block off rooms so we would stay in one area of the house, using a space heater. When it was too hot, we would visit someone or mess around in stores until it cool off to go home. I heard about you through a friend at the Community Action in Albemarle. At my wits end I fearfully applied at the Blue Ridge Community Action.

My vocabulary does not even extend far enough to express what my heart truly feels for the blessing you gave my daughter and I. For two years we have been without heat and air. As a single parent making minimum wage and not forty hours a week, I had to prioritize which bills got paid and I just couldn't seem to fit this in my budget during that time. Through Gods power we survived.

I truly thank God for this program, and especially to one of your workers [redacted]. The compassionate spirit and concern was of one I have never experienced. Never once did I feel as though I was being seconded guessed about any information, nor made me feel inferior concerning my needs. Out of all the rejections and mistreatments were worth the reward of compassion we received.

Our hats off to you guys and our hands up to God for his mighty acts he showed through you as workers. Continue to show his love and he will continue to bless this business and each one individually for what you do for others.

Thanks,

[redacted]

Team effort helps keep man in home

Tim Reaves
reporter@thefranklinpress.com

Kenneth Cruse stood proud on his porch on West Old Murphy Road on Thursday.

"You don't know how much I appreciate it, folks," he said to a group of people from the county who helped him stay in his home.

Cruse, 64, is the beneficiary of a number of emergency repairs, weatherization and energy efficiency upgrades to his 86-year-old home. Over the last two years, he's seen his house repainted, his roof replaced, electrical service upgraded and the installation of an HVAC system, water heater, oven and insulation.

Cruse said the equipment upgrades and weatherization improvements have cut his power bill is half.

"It's quieter, it's warmer, I enjoy it now," he said. "I don't have to sit around in a sweat suit."

Duke Energy contributed about $10,000 from its $20 million statewide Helping Home Fund fund for a new stove, the rails on the porch and various weatherization upgrades, said Lisa Parrish, government and community relations manager for the company. Other funding came from the North Carolina Housing Finance Agency. World Changers did much of the housework on Cruse's home, including the new porch.

"This is probably one of the best examples of a public-private partnership," said John Fay, housing director for Macon County Housing Department (MCHD). "It's really a melding of funds and effort by many different organizations. ... It was really great, because we got to do so much here."

Cruse is the third generation of his family to own the house, and he's lived there for 32 years. But propane expenses and electrical inefficiencies were pushing him to the breaking point.

"The way the house was set up before the intervention, there was no way," he said. "It's the only way I could've stayed in it."

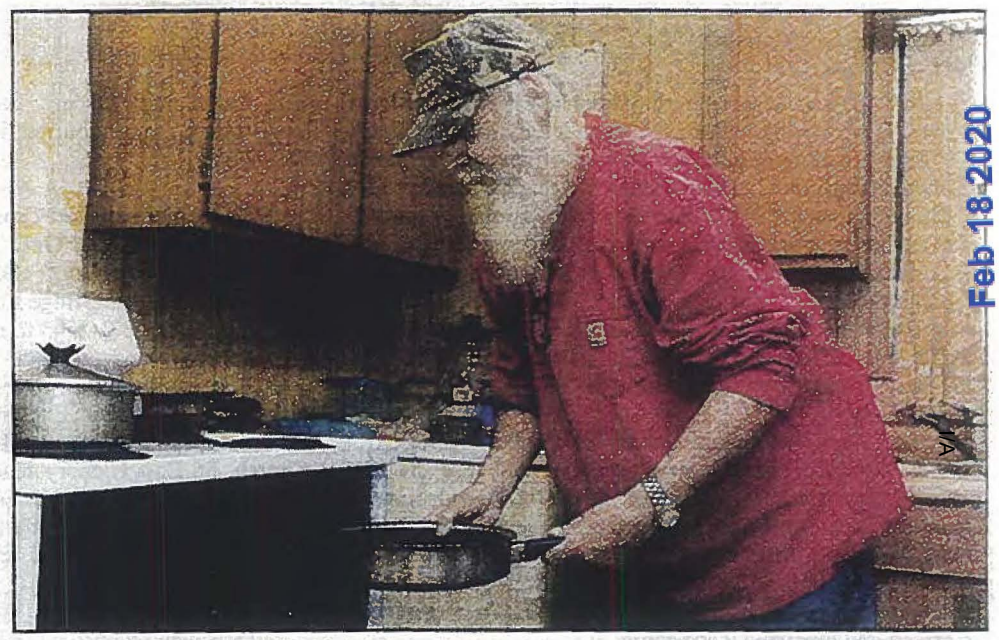
Cruse, who lives on Social Security Disability and Supplemental Security Income, said he had no insulation in his home and an old gas furnace that seemed ready to catch on fire.

"Over the years, things happened, things just deteriorated," he said.

He said a friend of his let him know about MCHD, so he filled out an application to see if he qualified for any of the funding. It's typical of most MCHD clients, Fay said. They usually hear about the agency and its programs from friends and family members or local medical or senior services. Then they come to the MCHD office on Old Murphy Road and fill out an application. Staff members look at a number of factors, including income level and problem severity to prioritize the work. MCHD has 250 homes that need some kind of repairs or weatherization upgrades

"We make that determination and match the work with the capabilities," Fay said. "And sometimes we don't have those. Sometimes we end up having to use, for instance, Habitat for Humanity, Macon Baptist Association, various people in the community that are volunteers."

The work on Cruse's home represents a broader philosophy that places value on letting seniors age in place, Fay said.



Press photo/Tim Reaves

Kenneth Cruse pulls a pan out of an oven, which he received as part of Duke Energy's Helping Home Fund.

"It's important for people to be able to be around the things that they have comfort with and to be able to feel at home and not have to worry about it falling in on them," he said.

MCHD is located at 1419 Old Murphy Road, Franklin. Housing help is available for those who qualify. For more information, call 828-369-2605.

I/A

Norlina, NC - Warren County

To whom this may concern,

I wanted to send this letter of appreciation to Franklin Vance Warren and all of the companies that contributed to helping us make our home energy efficient, as well as, safe and livable. For the 2 years that we have had our home, it did not have a heating source. We used kerosene to stay warm in the winter and it was awful. My four children and myself developed asthma and breathing issues that we never had prior to using kerosene. The smell of the kerosene was so strong sometimes that it made our eyes water. We couldn't afford to do anything else besides the kerosene at that time. We finally invested in propane as our heating source, but it didn't heat up the whole house, so we used electric heaters as well. I am so thankful and grateful for the FVW programs because with their help, we were able to qualify for a program that installed central heating and air in our home and a gas pump that has now been such a blessing. With all of the work that the electricians and heating and cooling guys did, we would've never been able to afford such quality work and installation of this system. Not only did they help us in regards to our new heating source, but they also installed more insulation, installed a carbon monoxide detector, installed new shower heads, fixed holes in our walls, sheet rocked around our windows all in effort to help save us from wasting money by making our home energy efficient. They did so much and worked hard to make sure it was done correctly and with love. I can't imagine how my children and I, health would be today,if FVW hadn't been there for us. The most frustrating thing as a parent, is to watch your kids get sick while trying to protect them from freezing to death. It was like torture, to know that you had to do what you had to do to keep us all warm, while sacrificing our extended health in the process. I had to give my children breathing treatments daily, they suffered from headaches, nausea, and low energy and I believe it was from that kerosene. But now, they don't complain about headaches, they haven't had any breathing treatments since, and they are full of healthy energy. We are all happier and warm throughout the entire house. I now have peace of mind and deep gratitude in my heart for the program that I believe saved my families life. Thank you again for all of your help and investments into making our living situation better. Miracles&Blessings.

With Love,

[redacted]

EXHIBIT JH-6

Duke Energy Carolinas
Response to
North Carolina Public Staff Data Request
Data Request No. NCPS 171

Docket No. E-7, Sub 1214

Date of Request: **January 28, 2020**
Date of Response: **February 10, 2020**

☐ **CONFIDENTIAL**

☒ **NOT CONFIDENTIAL**

Confidential Responses are provided pursuant to Confidentiality Agreement

The attached response to North Carolina Public Staff Data Request No. 171-4, was provided to me by the following individual(s): Max McClellan, Senior Rates & Regulatory Strategy Analyst, and was provided to North Carolina Public Staff under my supervision.

Camal O. Robinson
Senior Counsel
Duke Energy Carolinas

North Carolina Public Staff
Data Request No. 171
DEC Docket No. E-7, Sub 1214
Item No. 171-4

Request:

4. For each program identified in question 3 above, please provide:
a. The amount of ratepayer funds involved in providing and administering each program.
b. The amount of shareholder funds involved in providing and administering each program outside of ratepayer funds.
c. The total dollars spent for each program in 2018 and 2019.
d. The number of customers participating in each program for 2018 and 2019.

The Company's response should provide a comprehensive view of the activities, funding, and customer involvement associated with each program. If the information is not readily available or calculable, the Company's response should explain any proxy calculation each Company used to estimate the data being requested.

Response:

Energy Efficiency Programs:

Please see attachment PS DR 171-4 (EE).xlsx for specific information relating to DEC and DEP's income-qualified EE programs listed in response to PS DR 171-3(a). For detailed information regarding all of the Company's DSM/EE programs listed in 171-3(a), please see the Direct Testimony and Exhibits of Robert P. Evans in Docket Nos. E-7, Sub 1192 and E-2, Sub 1206.

Shareholder Programs:

Please see attachment PS DR 171-4 (Shareholder).docx for information relating to the programs listed in response to PS DR 171-3(d) and (e).

The Company will supplement this response with information relating to the programs listed in PS DR 171-3(b) and (c) as soon as possible.

4. For each program identified in question 3 above, please provide:

a. The amount of ratepayer funds involved in providing and administering each program.

b. The amount of shareholder funds involved in providing and administering each program outside of ratepayer funds.

c. The total dollars spent for each program in 2018 and 2019.

d. The number of customers participating in each program for 2018 and 2019.

	Item 4 a.		Item 4 b.		Item 4 c.		Item 4 d.	
Energy Efficiency Program [1]	2018 NC Ratepayer Funds	2019 NC Ratepayer Funds	2018 Shareholder Funds	2019 Shareholder Funds	2018 Total Dollars Spent (NC)	2019 Total Dollars Spent (NC)	2018 NC Participants [2]	2019 NC Participants [2]
DEC Neighborhood Energy Saver	$ 2,575,366	$ 2,594,041	$ -	$ -	$ 2,575,366	$ 2,594,041	7,074	6,625
DEC Weatherization	2,126,997	2,772,353	-	-	2,126,997	2,772,353	787	958
DEP Neighborhood Energy Saver	1,579,230	1,424,876	-	-	1,579,230	1,424,876	1,984	2,722
DEP Weatherization Pilot	-	23,321	-	-	-	23,321	-	1,308

[1] Please note that all residential energy efficiency programs target customers, which could include customers with affordability issues. The listed programs are those that were specifically designed to assist low income customers.

[2] Participants defined as number of measures.

4. For each program identified in question 3 above, please provide:

    a. The amount of ratepayer funds involved in providing and administering each program.
    b. The amount of shareholder funds involved in providing and administering each program outside of ratepayer funds.
    c. The total dollars spent for each program in 2018 and 2019.
    d. The number of customers participating in each program for 2018 and 2019.

Reponse: Shareholder Programs

DEC Shareholder Program: Helping Home Fund

	2018	2019
B. Administration Cost	$ 248,248.10	No Available Funds
C. Total Dollars Spent	$ 1,434,715.56	No Available Funds
D. Number of Participants	642	No Available Funds

DEP Shareholder Program: Helping Home Fund

	2018	2019
B. Administration Cost	$ 132,108.66	$ 177,825.82
C. Total Dollars Spent	$ 644,381.20	$1,135,275.65
D. Number of Participants	377	358

DEC Shareholder Program: Share the Warmth

	2018	2019
B. Administration Cost	$18,300	$18,300
C. Total Dollars Spent	$908,300	$1,068,300
D. Number of Participants	6167	6148

DEP Shareholder Program: Energy Neighbor Fund

	2018	2019
B. Administration Cost	N/A	N/A
C. Total Dollars Spent	$494,000	$534,000
D. Number of Participants	3300	3100

DEC Shareholder Program: Rate Case Settlement Funds[1]

	2019
B. Administration Cost	$6,100
C. Total Dollars Spent	$4,006,100
D. Number of Participants	10,261

[1] One-time payment of rate case settelement funds to local agencies distributed September 1, 2018.

Statement of Position and Comment Letter

Ms. M. Lynn Jarvis
Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, NC 27699-4300

RE: Docket No. E-7, Sub 1213
Duke Energy Carolinas, LLC's Petition for Approval of Prepaid Advantage Program

Dear Ms. Jarvis:

The North Carolina Justice Center (NCJC), and co-authors listed below, submit this comment letter regarding Docket No. E-7, Sub 1213, *Duke Energy Carolinas, LLC's Petition for Approval of Prepaid Advantage Program*, hereinafter Prepaid Program. After carefully reviewing the petition, we believe the Prepaid Program should not be approved.

We recognize that the Prepaid Program proposal has one design characteristic that would make it superior to similar programs in other jurisdictions; namely, it is our understanding, that Duke will not charge a fee for processing utility payments, nevertheless, due to other program aspects we do not believe the program should be approved.

Objections to the Prepaid Program Design

At its heart, to operate as proposed in the petition, the Prepaid Program institutes two significant changes over current payment methods;

1) rapid remote disconnection from electric service for non-payment; and,

2) coupled with a waiver of all rules and protections for disconnections provided by Rule R12-11 (a) (b) (f through n) as well as additional Rules R8-8, R8-20(b), (c), and (d), R8-44(4)(d), R12-8, R12-9(b)(c) and (d)

It is essential, especially for low-income customers that face frequent financial hardship, to maintain existing procedures and protections when dealing with disconnections. It is a significant and harmful policy change for any payment program to be allowed to operate without these procedures and protections.

Not only will elimination of current procedures reduce the time that low-income rate payers have to maintain electric service while dealing with a financial crisis, but if the customer is also

behind on payment for phone, email and/or texting services that are being used as an alternative to current notification requirements, the customer will not receive notice of pending shut-offs.

Data Accessibility, Alerts and other Benefits Should Be Made Available to All Customers

As regards the other aspects of the Prepaid Program, we believe that Duke should offer these program design elements to all customers regardless of the type of payment service they utilize. Most of the purported beneficial aspects of the Prepaid Program could be made available to all residential customers where technically possible, for example:

• See usage and electricity costs on a daily basis from anywhere via the web — even with their Smartphone;

• Set notification preferences, receive notifications and view the account information 24 hours a day, 7 days a week;

• Potentially avoid bill surprises at the end of an unusual weather month, or even be informed during the month of unusual weather or other circumstances that may be driving electric usage higher than they anticipate, such as an equipment malfunction; and

• Have service reconnected faster through remote capability if service is disconnected.[1]

In addition, other characteristics of the Prepaid Program can and should be offered to all residential customers regardless of the manner in which they pay for service. For example, every customer should if desired have:

1) Phone, text and/or email alerts when predesignated energy consumption levels and/or the cost of energy used has reached a certain level
2) Phone, text and/or email alerts with forecasts of anticipated energy consumption and/or the cost of associated energy consumed

The advantages of access to data alone should not be a basis for the adoption of a prepaid program as these elements where the meters and technology exist can and should be offered independent of payment options.

It's also important to point out that customers can prepay their accounts now if they so choose. There is nothing prohibiting customers from prepaying their account under current payment systems.

[1] Duke Energy Carolinas, LLC's Petition for Approval of Prepaid Advantage Program, Docket No. E-7, Sub 1213 at page 4.

Where remote disconnection technology exists, disconnection fees should be eliminated on all payment options since the true cost of disconnections is lower with remote disconnection technology.

Finally, there is the question of whether customers should earn interest on the funds held by the utility in a prepay program or whether customers should receive a lower rate when participating in a prepaid program. In any case, the utility should not be able to financially benefit from the proceeds related to holding customer funds, and instead, some tangible benefit should be given to participating customers if a prepaid program is approved.

Equal Payment Plans are Optimal Design for Low-Income Rate Payers

Many housing and consumer credit counselors in North Carolina recommend that their clients opt for Equal Payment Plans.[2] Equal Payment Plans, where anticipated energy costs are averaged over the year, provide customers with the significant benefit of a regular and predictable monthly utility payment. The optimal payment plan for low-income rate payers would be to combine Equal Payment Plans with access to real time energy consumption and cost data, as well as energy usage and cost alerts. Prepayment plans, however, if approved as proposed, will eliminate the current procedures and protections that help protect customers when dealing with disconnections and consumers will not have the predictive benefit of Equal Payment Plans.

Other Entities and Parties Recommending Consumer Protections in Prepay Programs or Objecting to Prepay Programs Generally

We are not alone in our concerns regarding the potential negative impacts and design of Prepaid Programs.

The National Association of State Utility Consumer Advocates, for example, has adopted a resolution, *Urging States to Require Consumer Protections as A Condition for Approval of Prepaid Residential Gas and Electric Service*, which proposes 12 consumer protections (see attached as exhibit 1), most of which are not part of this proposed Prepaid Program.[3]

The Office of Consumer Advocate, in the Commonwealth of Pennsylvania opposed a recent prepay proposal.[4]

---

[2] Louise Mack, President/CEO, Prosperity Unlimited Inc.

[3] National Association of State Utility Consumer Advocates, Resolution 2011-3.

[4] PECO Energy Company Pilot Plan for an Advance Payment Program and Petition for Temporary Waiver of Portions of the Commission's Regulations with Respect to that Plan, Commonwealth of Pennsylvania, Docket No. P-2016-2573023.

A recent Prepaid program proposal in Missouri, *Application for Approval of Flex Pay Program Pilot and Request for Associated Variances,* was withdrawn by the applicant.[5]

A prepaid program was rejected by the California Public Utilities Commission in part for the proposed program's inadequate disconnection notification procedures:

> "We also take note of Consumer Groups' logical inference that, depending on the communications means chosen (e.g., text message, automated phone message, or e-mail), customers on the proposed Prepay Program might receive no advance notice of termination at all since customers who are behind on their electric bills may also behind on their internet or phone bills. We find that such an outcome is unacceptable."[6]

Concerns Regarding Existing Prepayment Programs Impacts on Low-Income Customers

Relatively few studies examining prepayment programs exist, however, the Electric Power Research Institute (EPRI) has studied aspects of at least one prepaid program, M-Power, Arizona's Salt River Project prepayment program.[7] The study showed that between 2007 and 2010 the average median income of program participants was $27,600 in 2007 and dropped to $17,900 in 2010.[8] The average income was $33,200 in 2007 and dropped to $24,400 in 2010.[9] The study stated that "M-Power customers compared to all other residential customers were more likely to be relatively young, have families, be relatively low-income, be low electricity consumers, live in apartments, have been SRP customers for less than five years, and have unsatisfactory or "new" credit ratings."[10]

As stated, we are especially concerned with the potential negative impacts this proposed Prepaid Program would have on low-income rate payers that would not have existing protections against disconnections. The EPRI study demonstrates the distinct possibility that this proposed program, intentionally or not, could end up being used predominately by vulnerable low-income customers.

---

[5] Motion for Expedited Treatment and Request to Withdraw Application for Approval of Flex Pay Program Pilot and Request for Associated Variances, Before the Public Service Commission of the State of Missouri, File No. EO-2015-0055, April 24th, 2018.

[6] California Public utilities Commission, *Decision Addressing The Application And The Motions To Adopt Partial Settlements*, Application 11-10-002 (Jan. 23, 2014), at page 54, available at http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M086/K541/86541422.PDF

[7] *Paying Upfront: A Review of Salt River Project's M-Power Prepaid Program*, Electric Power Research Institute, October 2010 at v Abstract.

[8] Id at page 4-6 Table 4-3.

[9] Id at page 4-6 Table 4-3.

[10] Id at page 4-6.

Conclusion and Recommendations

We appreciate the opportunity to comment with regards to the proposed Prepaid Program and recommend that the Commission not approve the program or in the alternative, if a prepaid program is approved, that the commission maintain protections for program participants provided by existing Rules R12-11 (a) (b) (f through n), and other essential Rules and require Duke to adopt additional consumer protections including each of those contained in The National Association of State Utility Consumer Advocates, resolution, *Urging States To Require Consumer Protections As A Condition For Approval Of Prepaid Residential Gas And Electric Service.*

Sincerely;

Alfred Ripley
Director of the Consumer, Energy and Housing Project
North Carolina Justice Center
224 S. Dawson St.
Raleigh, NC 27611

Louise Mack
Executive Director
Prosperity Unlimited
1660 Garnet St.
Kannapolis, NC 28083

Samuel Gunter
Executive Director
North Carolina Housing Coalition
5800 Faringdon Pl.
Raleigh, NC 27609

Luis G. Martinez
Senior Attorney, Director of Southeast Energy
Natural Resources Defense Council
1152 15th Street NW
Suite 300
Washington, D.C. 20005

Todd Nedwick
Housing and Energy Efficiency Policy Director
National Housing Trust
1101 30th Street, NW
Suite 100 A
Washington, DC 20007

EXHIBIT ONE

NATIONAL ASSOCIATION OF STATE UTILITY CONSUMER ADVOCATES

RESOLUTION 2011-3

URGING STATES TO REQUIRE CONSUMER PROTECTIONS AS A CONDITION FOR APPROVAL OF PREPAID RESIDENTIAL GAS AND ELECTRIC SERVICE

Whereas, the National Association of State Utility Consumer Advocates ("NASUCA") has a long-standing interest in issues and policies that affect the access of residential consumers to essential gas and electric services; and

Whereas, some gas and electric utilities have sought to replace traditional credit-based service to some residential customers with prepaid service delivered through prepayment meters or digital meters with remote connection and disconnection capabilities; and

Whereas, prepaid gas and electric service requires customers to pay in advance for their service, with prepaid account balances decreasing as service is delivered; and

Whereas, automated and remote disconnection of service can and does occur when prepaid account balances are depleted; and

Whereas, experience in the United States and United Kingdom demonstrates that prepaid metering and prepaid billing (1) is targeted toward and concentrated among customers with low or moderate incomes that are facing service disconnections for nonpayment, (2) results in more frequent service disconnections or interruptions, and (3) is delivered at a higher rate than traditional credit-based service;1 and

Whereas, most of the current state consumer protection requirements regarding the disconnection of service were not developed in anticipation of prepaid services, and such protections may be bypassed or eliminated when services are provided on prepaid basis; and

Whereas, proponents of prepaid service have sought legislation in at least one state providing that automated, remote disconnection of service upon depletion of prepaid account balances be considered a voluntary termination of service by the customer and not a disconnection by the utility subject to consumer protection laws and regulations regarding the disconnection of service;2 and

Whereas, the proliferation of digital meters with remote connection and disconnection capabilities makes implementation of prepaid service more feasible economically for utilities; and

Whereas, prepaid utility service reduces or eliminates utility incentives to negotiate effective, reasonable payment agreements and to implement effective bill payment assistance and arrearage management programs; and

Whereas, increased service disconnections of vital gas and electric service that come with implementation of prepaid service and prepaid metering threaten the health and safety of customers, particularly those who are most vulnerable to the effects of a loss of service, including the elderly, disabled and low-income families, as detailed and documented in a companion resolution encouraging

state legislatures and state public utility commissions to institute programs to reduce the incidence of disconnection of residential gas and electric service based on nonpayment; and

Whereas, utilities offering prepaid service benefit financially from reduced cash working capital requirements, uncollectibles amounts and credit and collections risk; and

Whereas, utilities in at least one state require customers to pay deposits for a customer prepayment device or system;3 and

Whereas, providers of residential electric service in at least one state impose additional fees on customers choosing to make payments more frequently than once every thirty days and under other circumstances;4 and

Whereas, in at least one instance, a company has reportedly gone out of business after receiving prepayment funds from customers, resulting in large unpaid fines and more distressingly in an undetermined number of customers having lost their money;5

Now, therefore, be it resolved, that NASUCA continues its long tradition of support for the universal provision of essential residential gas and electric service for all customers;

Be it further resolved, that proposals by utility companies that seek to replace traditional credit-based service to some residential customers with prepaid service delivered through prepayment meters or digital meters with remote connection and disconnection capabilities should not be approved unless they guarantee that current consumer protections are not bypassed or eliminated and that adequate and comparable consumer protections are developed and in place. At a minimum, if prepaid services are offered, a utility should be required to satisfy each of the following conditions:

(1) All regulatory consumer protections and programs regarding disconnection limitations or prohibitions, advance notice of disconnection, premise visits, availability of payment plans or deferred payment agreements, availability of bill payment assistance or arrearage forgiveness, and billing disputes are maintained or enhanced;

(2) In the event that the billing credits of a customer receiving prepaid residential electric or natural gas service are exhausted, the customer shall be given a reasonable disconnection grace period, after which the customer shall revert to traditional, credit- based service, subject to all rules and customer protections applicable to such service;

(3) Prepayment households include no one who is

(a) income-eligible to participate in the federal Low Income Home Energy Assistance Program (LIHEAP); or

(b) protected under state law from disconnection for health or safety reasons;

(4) Prepaid service is only marketed as a purely voluntary service and is not marketed to customers facing imminent disconnection for non-payment;

(5) Utilities offering prepaid service also offer effective bill payment assistance and arrearage management programs for all customers, including customers with arrearages who choose prepayment service;

(6) Rates for prepaid service are lower than rates for comparable credit-based service, reflecting the lower costs associated with reduced cash working capital requirements, uncollectibles amounts and shareholder risk affecting a utility's return on equity;

(7) Utilities demonstrate the cost effectiveness of any proposed prepaid service offerings through a cost versus benefit analysis and reveal how costs will be allocated among various classes of customers;

(8) Prepayment customers are not subjected to any security deposits or to additional fees of any kind, including but not limited to initiation fees or extra fees assessed at any time customers purchase credits;

(9) Utilities ensure there are readily available means for prepayment customers to purchase service credits on a 24-hour a day, seven-day a week basis;

(10) Prepayment customers can return to credit-based service at no higher cost than the cost at which new customers can obtain service;

(11) Payments to prepaid accounts are promptly posted to a customer's account so as to prevent disconnection or other action adverse to the customer under circumstances in which the customer has in fact made payment; and

(12) Adequate financial mechanisms are developed and in place within the state to guarantee that funds prepaid by customers are returned to the customers who prepaid them if and when a company becomes insolvent, goes out of business or is otherwise unable to provide the services for which the funds were prepaid;

Be if further resolved, that the implementation of prepaid service programs should be monitored to ensure that it does not in practice result in an increased rate of service disconnections for non-payment;

Be it further resolved, that utilities implementing prepaid service programs should track and report to the state regulatory commission separately for credit-based and prepayment customers each of the data points delineated in the companion resolution urging the states to gather uniform statistical data on billings, arrearages and disconnections of residential gas and electric service;

Be it further resolved, that NASUCA authorizes its Executive Committee to develop specific positions and take appropriate actions consistent with the terms of this resolution. The Executive Committee shall advise the membership of any proposed action prior to taking action if possible. In any event the Executive Committee shall notify the membership of any action pursuant to this resolution.

Submitted by Consumer Protection Committee

Approved June 28, 2011
San Antonio, Texas
Abstention: Tennessee

[1] "SRP's prepaid electricity plan found to have higher rates," The Arizona Republic,(July 11 2010), www.azcentral.com/private/cleanprint/?1299004402750; Electric Power Research Institute, "Paying

Upfront: A Review of Salt River Project's M-Power Prepaid Program, (October 2010); Talbot, "Prepayment meters: A scourge penalizing the poor" (June 2009), http://www.energychoices.co.uk/prepayment-meters-a-scourge-penalising-the-poor.html; Centre for Sustainable Energy and National Right to Fuel Campaign, "Counting the Hidden Disconnected," (1998).

[2] See 2011 Iowa Proposed Legislation, House Study Bill158, http://coolice.legis.state.ia.us/Cool-ICE/default.asp?Category=billinfo&Service=Billbook&menu=false&hbill=hsb158.

[3] "Paying Upfront" A Review of Salt River Project's M-Power Prepaid Program," EPRI, Palo Alto, CA: (2010), http://www.srpnet.com/environment/earthwise/pdfx/spp/EPRIMPower.pdf.

[4] Biedrzycki, "New Fees On Residential Electric Bills Complicate Cost Comparisons For Consumers Shopping For A Better Deal And Penalize Those Who Save Electricity And Those Struggling To Pay Their Bill" (February 2011), http://www.scribd.com/doc/49467979/Fees-Report-FINAL-2232011.

[5]Texas Public Utility Commission, News Release, "PUC orders $3.7 million in penalties: two former retail electric providers fined millions (Jan. 14, 2010), http://www.puc.state.tx.us/nrelease/2010/011410.pdf; "Consumer group: Electricity companies have big fees hidden in small print," KHOU11 Houston (April 30, 2011) , http://www.khou.com/news/local/Consumer-group-Electricity-companies-have-big-fees-hidden-in-small-print–121014164html.

June 28th, 2011|Categories: Consumer Protection

EXHIBIT JH-8

Duke Energy Carolinas
Response to
North Carolina Public Staff Data Request
Data Request No. NCPS 171

Docket No. E-7, Sub 1214

Date of Request: **January 28, 2020**
Date of Response: **February 7, 2020**

☐ **CONFIDENTIAL**

☒ **NOT CONFIDENTIAL**

Confidential Responses are provided pursuant to Confidentiality Agreement

The attached response to North Carolina Public Staff Data Request No. 171-5, was provided to me by the following individual(s): Max McClellan, Senior Rates & Regulatory Strategy Analyst, and was provided to North Carolina Public Staff under my supervision.

Camal O. Robinson
Senior Counsel
Duke Energy Carolinas

North Carolina Public Staff
Data Request No. 171
DEC Docket No. E-7, Sub 1214
Item No. 171-5

Request:

5. For each Duke Energy affiliate outside of North Carolina (i.e Florida, Indiana, Kentucky, Ohio, and South Carolina), please provide:
a. A list of residential rate schedules/tariffs that address affordability, including those that offer any form of kWh usage or rate reduction to qualifying low income or elderly customers. Please include web links for each.
b. The eligibility requirements associated with each rate schedule/tariff that qualify customers for these discounts.
c. A brief history of each rate schedule/tariff indicating when they were originally approved and any changes to the programs since.
d. Web links or copies of the orders originally approving these rate schedules/tariffs.

Response:

DEC-SC

a) Residential rate schedules/tariffs that address affordability:

- DEC (South Carolina) does not address affordability programs within its regulated residential tariffs or schedules.

b) Eligibility requirements associated with each rate schedule/tariff:

- n/a

c) Brief history of each rate schedule/tariff:

- n/a

d) Web links or copies of the orders originally approving these rate schedules/tariffs:

- n/a

DEP-SC

a) Residential rate schedules/tariffs that address affordability:

- DEP (South Carolina) does not address affordability programs within its regulated residential tariffs or schedules.

b) Eligibility requirements associated with each rate schedule/tariff:

- n/a

c) Brief history of each rate schedule/tariff:

- n/a

d) Web links or copies of the orders originally approving these rate schedules/tariffs:

- n/a

DEF

a) Residential rate schedules/tariffs that address affordability:

- DEF does not address affordability programs within its regulated residential tariffs or schedules.

b) Eligibility requirements associated with each rate schedule/tariff:

- n/a

c) Brief history of each rate schedule/tariff:

- n/a

d) Web links or copies of the orders originally approving these rate schedules/tariffs:

- n/a

DEI

a) Residential rate schedules/tariffs that address affordability:

- DEI does not address affordability programs within its regulated residential tariffs or schedules.

b) Eligibility requirements associated with each rate schedule/tariff:

- n/a

c) Brief history of each rate schedule/tariff:

- n/a

d) Web links or copies of the orders originally approving these rate schedules/tariffs:

- n/a

DEK

a) Residential rate schedules/tariffs that address affordability:

- DEK does not address affordability programs within its regulated residential tariffs or schedules.

b) Eligibility requirements associated with each rate schedule/tariff:

- n/a

c) Brief history of each rate schedule/tariff:

- n/a

d) Web links or copies of the orders originally approving these rate schedules/tariffs:

- n/a

DEO

a) Residential rate schedules/tariffs that address affordability:

- Rate RSLI (electric), https://www.duke-energy.com/_/media/pdfs/for-your-home/rates/electric-oh/sheet-no-36-rate-rsli-oh-e.pdf?la=en
- Rate RSLI (gas), https://www.duke-energy.com/_/media/pdfs/rates/oh/sheetno34ratersliohgratecase1213.pdf?la=en
- Rate RFTLI (gas), https://www.duke-energy.com/_/media/pdfs/rates/oh/sheetno36raterftliohgratecase1213.pdf?la=en

b) Eligibility requirements associated with each rate schedule/tariff:

- Please see the links included in the response to DEC PS DR 171-5a.

c) Brief history of each rate schedule/tariff:

- Please see the case numbers included in the response to DEC PS DR 171-5d.

d) Web links or copies of the orders originally approving these rate schedules/tariffs:

- Please see the PUCO docket search at https://dis.puc.state.oh.us/. For gas, see Case 07-0589. For electric, see Case 08-0709.

P.U.C.O. Electric No. 19
Sheet No. 36.5
Cancels and Supersedes
Sheet No. 36.4
Page 1 of 2

Duke Energy Ohio
139 East Fourth Street
Cincinnati, Ohio 45202

RATE RSLI

RESIDENTIAL SERVICE – LOW INCOME

APPLICABILITY

Applicable to up to 10,000 electric customers who are at or below 200% of the Federal poverty level and who do not participate in the Percentage of Income Payment Plan (PIPP). Applicable to electric service other than three phase service, for all domestic purposes in private residences and single occupancy apartments and separately metered common use areas of multi-occupancy buildings in the entire territory of the Company where distribution lines are adjacent to the premises to be served.

Residences where not more than two rooms are used for rental purposes will also be included. Where all dwelling units in a multi-occupancy building are served through one meter and the common use area is metered separately, the kilowatt-hour rate will be applied on a "per residence" or "per apartment" basis, however, the customer charge will be based on the number of installed meters.

Where a portion of a residential service is used for purposes of a commercial or public character, the applicable general service rate is applicable to all service. However, if the wiring is so arranged that the service for residential purposes can be metered separately, this rate will be applied to the residential service, if the service qualifies hereunder.

For customers taking service under any or all of the provisions of this tariff schedule, this same schedule shall constitute the Company's Standard Service Offer.

TYPE OF SERVICE

Alternating current 60 Hz, single phase at Company's standard secondary voltage.

NET MONTHLY BILL

Computed in accordance with the following charges:

1. Distribution Charges
   (a) Customer Charge $2.00 per month

   (b) Energy Charge $0.031482 per kWh

2. Applicable Riders
   The following riders are applicable pursuant to the specific terms contained within each rider:
   Sheet No. 77, Rider ETCJA, Electric Tax Cuts and Jobs Act Rider
   Sheet No. 80, Rider ESRR, Electric Service Reliability Rider
   Sheet No. 83, Rider OET, Ohio Excise Tax Rider
   Sheet No. 84, Rider PF, PowerForward Rider
   Sheet No. 86, Rider USR, Universal Service Fund Rider
   Sheet No. 88, Rider UE-GEN, Uncollectible Expense – Electric Generation Rider
   Sheet No. 89, Rider BTR, Base Transmission Rider
   Sheet No. 97, Rider RTO, Regional Transmission Organization Rider

Filed pursuant to an Order dated December 19, 2018 in Case No. 17-0032-EL-AIR before the Public Utilities Commission of Ohio.

Duke Energy Ohio
139 East Fourth Street
Cincinnati, Ohio 45202

NET MONTHLY BILL (Contd.)

Sheet No. 101, Rider DSR, Distribution Storm Rider
Sheet No. 103, Rider DCI, Distribution Capital Investment Rider
Sheet No. 104, Rider DR-IM, Infrastructure Modernization Rider
Sheet No. 105, Rider DR-ECF, Economic Competitiveness Fund Rider
Sheet No. 108, Rider UE-ED, Uncollectible Expense – Electric Distribution Rider
Sheet No. 110, Rider AER-R, Alternative Energy Recovery Rider
Sheet No. 111, Rider RC, Retail Capacity Rider
Sheet No. 112, Rider RE, Retail Energy Rider
Sheet No. 115, Rider SCR, Supplier Cost Reconciliation Rider
Sheet No. 119, Rider EE-PDRR, Energy Efficiency and Peak Demand Response Recovery Rate
Sheet No. 122, Rider DDR, Distribution Decoupling Rider
Sheet No. 126, Rider PSR, Price Stabilization Rider

MINIMUM CHARGE

The minimum charge shall be the Customer Charge as stated above.

BILLING PERIODS

For purposes of administration of the above charges, the summer period is defined as that period represented by the Company's billing for the four (4) revenue months of June through September. The winter period is defined as that period represented by the Company's billing for the eight (8) revenue months of January through May and October through December.

LATE PAYMENT CHARGE

Payment of the total amount due must be received in the Company's office by the due date shown on the bill. When not so paid, an additional amount equal to one and one-half percent (1.5%) of the unpaid balance is due and payable.

The late payment charge is not applicable to:

- Unpaid account balances of customers enrolled in income payment plans pursuant to Section 4901:1-18-04(B), Ohio Administrative Code; and
- Unpaid account balances for services received from a Certified Supplier.

TERMS AND CONDITIONS

This rate is available upon application in accordance with the Company's Service Regulations.

The supplying and billing for service and all conditions applying thereto are subject to the jurisdiction of the Public Utilities Commission of Ohio and to the Company's Service Regulations currently in effect, as filed with the Public Utilities Commission of Ohio.

Filed pursuant to an Order dated December 19, 2018 in Case No. 17-0032-EL-AIR before the Public Utilities Commission of Ohio.