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November 2, 2020

VIA ELECTRONIC FILING

Ms. Kimberley A. Campbell, Chief Clerk
North Carolina Utilities Commission
Dobbs Building
430 North Salisbury Street
Raleigh, North Carolina 27603

*Re: DEC and DEP Late-Filed Exhibit No. 18
Docket Nos. E-7, Sub 1214 and E-2, Sub 1219*

Dear Ms. Campbell:

Per the request of the North Carolina Utilities Commission during the Duke Energy Carolinas, LLC (“DEC”) and Duke Energy Progress, LLC (“DEP”) evidentiary hearings, enclosed for filing on behalf of DEC and DEP in the above-referenced proceeding is DEC and DEP’s Late-Filed Exhibit No. 18.

Please do not hesitate to contact me should you have any questions. Thank you for your assistance with this matter.

Very truly yours,

/s/Mary Lynne Grigg

MLG:kma

Enclosure

Duke Energy Carolinas, LLC
Duke Energy Progress, LLC
Docket No. E-2, Sub 1219
Docket No. E-7, Sub 1214
Late Filed Exhibit No. 18
October 23, 2020

Narrative response to DEC and DEP Late-Filed Exhibit No. 18:

Please find attached the responsive documents. The 2011 Plant Retirement Comprehensive Program Plan (CPP) was developed prior to the Duke Energy/Progress Energy merger and therefore only contains information related to Duke Energy Progress. The subsequent plans include information for both Duke Energy Carolinas and Duke Energy Progress. The 2015 Plant Demolition and Retirement CPP and subsequent documents did not include information related to coal ash basins and therefore have not been supplied.

There are no similar documents that the Company has been able to locate for Duke Energy Carolinas prior to the merger with Duke Energy Progress.

- 2011 Plant Retirement CCP 09.21.2011
- 2012 Plant Retirement CPP 10.31.2012
- 2014 Plant Demolition and Retirement CPP 10.14.2013

2011

Plant Retirement Program Comprehensive Program Plan

Revision Number: 0

Revision Date: 9/21/11

Program Manager: Teresa Wilson

Member of: Power Generation Carolinas

Comprehensive Program Plan

Document ID

Revision Summary

Date	Revision Summary

Request for Approval

Purpose: ☒ Annual Review

☐ Revision

Authorization to spend \$ 1.8 million in 2011, and \$ 5.9 million in 2012*. Estimated total program cost \$88 million to \$120 million* (which includes cost for coal-fired unit dismantlement and ash pond closure). Execute commitments in 2012 that will obligate future year spending estimated at \$4 to \$8 million.

Next key annual approval expected in: 2012. Expected program final completion date: 2019.

Strategy: Coal-fired units will be decommissioned and demolished to grade-level.
Ash pond closure will incorporate a cap and monitor strategy.

Designated Sites: Weatherspoon, Lee, Cape Fear, and Sutton

Baseline Assumptions:

- Closure Dates: Weatherspoon (10/1/11), Lee (9/15/12), Cape Fear (6/1/13) and Sutton (12/1/13)
- No impacts to dismantlement and ash pond closure strategy due to new regulations
- Sites will be restored to a Brownfield state
- Preliminary cost estimates: Dismantlement (\$6M per site on average) and Ash Pond Closure (\$100K/acre)
- A portion of the demolition cost may be offset by investment recovery from scrap metal

Notes or Exceptions:

- CT Peaker units at designated sites will remain operational
- Cooling ponds will be maintained

* Financial View

Approval Required

This CPP requires approval by the: Senior Management Committee

Approvals

The parties signing below indicate by their signature that they, or the body they represent below, have reviewed the CPP and either recommend approval of or approve the above Request for Approval.




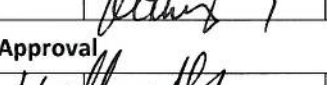

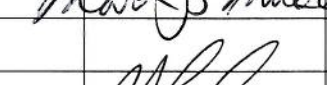

Action	Name [Type / Print]	Reviewing Position	Signature	Date
Recommend Approval	Teresa Wilson	Program Manager		9/21/11
Recommend Approval	Paul Draovitch	Program Sponsor		9/21/11
Recommend Approval	Paul Draovitch / Charlie Gates	Department Head [Of Program Manager]		9/21/11
Recommend Approval	Mitch Perry	Legal Entity Finance VP		9/21/11
Senior Management Committee Approval				
Approve	Bill Johnson	Chief Executive Officer		9/21/11
Approve	Mark Mulhern	Chief Financial Officer		9/22/11
Approve	John McArthur	General Counsel		
Approve	Jeff Lyash	Program Executive Sponsor		9/23/11

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1. Executive Summary

The Plant Retirement Program Comprehensive Program Plan (CPP) provides the overall plan for the retirement of coal-fired units and ash ponds at designated Progress Energy Carolina, henceforth referred to as Company, sites. The Program provides the benchmarking, planning and execution of the strategy for retiring coal-fired units and ensures alignment with corporate strategy. The Program is also conducting a PEC non-nuclear fleet-wide Dismantlement Study to support the Depreciation Study and rate case preparation.

The Plant Retirement Program assumes the following:

- Coal-fired units will be decommissioned and demolished to grade-level (Brownfield State).
- Environmental cleanup will include asbestos abatement, known hazardous and non-hazardous waste removal and chemical removal.
- The projects will include the restoration of existing CT functionality due to decoupling existing site interfaces which are presently integrated into the coal-fired units.
- Ash pond closure will incorporate a cap and monitor strategy.
- The investment recovery strategy incorporates investment from the sale of inventory, assets and scrap metal.
- The rate recovery approach is to include the recovery of dismantlement costs for non-nuclear generation assets as part of the overall depreciation expense that is included in the cost of service rate request during the planned 2012 rate case.
- The roadmap and processes established are modeled to incorporate additional plant retirements and ash pond closures as dictated by corporate strategy.
- Program will utilize designated plant resources for decommissioning tasks and ash pond closure where applicable.

2. Program Overview

In a report filed with the N.C. Utilities Commission in December 2009, the Company outlined its plan to close 11 coal-fired units, totaling nearly 1,500 megawatts (MW). The initial focus for the Plant Retirement Program is coal-fired units and ash ponds at Weatherspoon, Lee, Cape Fear and Sutton; however, the Program is not expected to be limited to these sites. As the need arises, other plant retirements and ash ponds may be added.

The designated coal-fired units are being retired to ensure compliance with state and federal regulations and as part of the Company's fleet modernization strategy. The designated coal-fired units are non-scrubbed units and would require additional environmental controls to meet operational compliance beyond 2015.

The schedule of proposed dates for plant retirements is below in Table 1.

Table 1 – Proposed Plant Retirement Dates

Plant	Summer Capacity (MW)	In-Service Date of First Unit	Proposed Retirement Date
Weatherspoon	171	1949	October 2011
Lee	397	1951	September 2012
Cape Fear**	316	1956	June 2013
Sutton	604	1954	December 2013

****The Cape Fear project will include the dismantlement of inactive units (Units 1 & 2 CC, Unit 3 & 4 turbines and the boilers 1- 8) on the site. The in-service date for the first unit on-site is 1923.**

The Plant Retirement Program provides the planning, design and execution of the scope and tasks necessary to restore the retired plant sites to a safe and environmentally neutral state. The Plant Retirement Program engages business units across the enterprise to ensure effective alignment of plant retirement initiatives with corporate strategy, public policy, legislative and regulatory initiatives and to identify gaps in a timely manner. These efforts provide Progress Energy with a proactive approach to managing the retirement of coal-fired units.

The Plant Retirement Program seeks concurrence to proceed with executing a retirement strategy for the designated coal-fired units and ash ponds on the basis of the following elements:

1. Coal-fired units will be decommissioned to a safe and environmentally neutral state,
2. Coal-fired units will be demolished to grade-level, and
3. Ash ponds will be closed with a cap and monitor strategy.

Proposed funding requirements are estimated at \$1.8 million for 2011 and \$5.9 million for 2012. Pending approval to proceed, a detailed project plan will be developed for each designated site.

3. Program Drivers

a. Legislative and Regulatory Expectations

Since 1990, federal and state environmental regulations have gradually been changing the landscape for coal-fired electric power generation. The Clean Air Act Amendments of 1990 brought the first 'cap and trade' program intended to significantly reduce emissions of NO_x and SO₂ through cascading limits on power plants. Other air emission reduction programs followed, including the North Carolina Clean Smokestacks Act that required the investment of over \$1 billion by the Company to retrofit additional air pollution controls on several facilities. Recently, the environmental regulations and new initiatives that will impact cooling water systems, wastewater discharge temperature and chemical content, coal combustion residuals management and air emissions are on the horizon. The collective effects of these regulatory changes represent significant additional costs to the affected facilities.

The Company has been tracking these developments for years, and has made a number of strategic decisions to prepare for the future, taking into account the capacity, age, regulatory uncertainty, cost of upgrades, potential for repowering and other site-specific factors at each facility. As a result, some plants were selected to receive upgraded air pollution control and/or wastewater treatment systems, some sites are being repowered with new natural gas-fired plants as part of the fleet modernization program and still others, smaller - older plants, have been slated for retirement. These actions are all part of building the Company's balanced solution and ensuring a state-of-the-art power system for the future.

In accordance with Commission Order Approving Plan dated January 28, 2010, in Docket No. E-2 Sub 960, PEC was ordered to "retire additional coal-fired generating capacity reasonably proportionate to the amount of incremental gas-fired generating capacity authorized by the Lee certificate above 400MW". The commitment to retire Weatherspoon, Lee, Cape Fear and Sutton coal-fired units represents about 30 percent of the company's coal-fired power generation fleet in North Carolina. It results in emission reductions, including carbon dioxide, sulfur dioxide, nitrogen oxides, mercury and other pollutants.

b. Environmental Expectations

In older plants, the removal of asbestos-containing material (ACM) in some areas will be a major effort, involving significant expense and requiring completion before workers can safely begin equipment salvage and demolition activities. If the ACM is not disposed of properly then ongoing cost associated with ACM management will increase significantly. During decommissioning other known chemicals and materials will be removed and disposed or recycled. Any laboratory chemicals or inventories of metal-cleaning chemicals, which cannot be completely used before shutdown, will be sent for reuse at other company facilities, sold, or disposed properly. Freon, batteries and residual oils (i.e., used lubricants, fuel, etc.) will also be reused, recycled, or disposed of. Older plants such as Weatherspoon, Cape Fear, Lee and Sutton have instrumentation and pressure-vapor lighting that contain mercury, or light ballasts and electrical equipment that contain polychlorinated biphenyls (PCBs) at regulated concentrations. The mercury and PCBs will be removed and disposed, or the equipment containing these compounds will be disposed properly. During decommissioning, light bulbs and florescent lighting will be removed and disposed per local and state regulatory requirements. Lead paint is an issue for many older plants. Identification and removal of lead contamination will be required before workers can safely begin

equipment salvage and demolition activities in some areas. All these and other solid, hazardous and universal wastes will need to be addressed during decommissioning to minimize environmental risks.

In addition to the above mentioned environmental drivers, clean up of fuel oil lines and addressing ash pond closure will also alleviate long term liability associated with Dam Safety, fugitive dust and ground water contamination.

c. Business Strategy – Fleet Modernization

The Fleet Modernization Program encompasses a range of strategic investment opportunities in fossil generation at Company sites and/or through partnerships with other companies. One driver for fleet modernization is the aging assets on the fleet, most of the units included in the initial Program scope are more than 50 years old. In addition to the age of the facilities, the Company considered the investments that would be needed to address known and expected regulations on carbon dioxide, nitrogen oxides, sulfur dioxide, mercury, particulates and other emissions; increasing costs of storing coal ash; and other factors. These retirements and new generation are part of a long-term strategy to modernize the fossil fleet with cleaner coal and natural gas, while continuing to invest in renewable and energy efficiency programs.

d. Recovery Mechanisms

Recovery of dismantlement costs for non-nuclear generation assets will be part of the overall depreciation expense the Company includes in its cost of service rate request during the planned 2012 rate case.

Terminal Net Salvage (TNS) for generation assets is the estimated cost for the dismantlement of the plant offset by the estimated salvage value to be recovered. In the case of PEC's generating assets, the TNS represents a net expense for the Company that will need to be recovered from rate payers. Dane Watson and Alliance Consulting, the partner and firm completing the PEC Depreciation Study, will include TNS as a direct input to the larger depreciation study for PEC's property, plant and equipment.

The net expense represented by TNS will increase the depreciation expense included in the cost of service rate request. There are other components to the overall depreciation expense that will also be included in the cost of service rate request, but those components of depreciation expense do not relate to TNS, or to the dismantlement costs of non-nuclear generation assets.

e. Initiatives and Study Projects

The Plant Retirement Program is structured to support initiatives and study projects on an on-going basis as the need arises. Currently the Program is supporting the study of the Robinson Coal Unit, which is scheduled for completion in October 2011 and the PEC non-nuclear fleet wide Dismantlement Study, which is scheduled for completion in December 2011. The Program also is supporting planning efforts for future Company ash pond closure at non-designated sites.

4. Program Strategy

The Plant Retirement Program strategy encompasses retiring the coal-fired units to a safe and environmentally neutral state by performing decommissioning activities on equipment and systems and demolishing the units to grade-level. The Program approach for ash ponds is to close the pond with a cap and monitor strategy. The Program approach is to establish a framework to ensure sustainability that is adaptable to the entire Energy Supply organization post merger.

The Plant Retirement Program strategy to demolish the units to grade-level was derived after a study to retire Lee Plant was conducted by URS Corporation in 2010. The Company approach was to utilize the Lee study as a roadmap to determine a plant retirement strategy to retire the designated units. The study researched three options for retiring the units and three options for closing the ash ponds. The three options for retiring the units were: (1) retire the units and perform the minimal scope of work to bring the units to a safe and environmentally neutral state, (2) retire the units by performing all tasks necessary to bring the units to a safe and environmentally neutral state and demolition the site to grade level or two-feet below grade (Brownfield) and (3) retire the units by performing all tasks necessary to bring the units to a safe and environmentally neutral state and demolish the site to a Greenfield state. The three options for ash ponds were: (1) do nothing and continue to maintain ponds, (2) cap the ponds and provide on-going monitoring and (3) close ash ponds to a Greenfield state by treating the ponds as a hazardous waste (empty ponds and dispose of waste at a landfill).

These options were reviewed with the PEC Utility Portfolio Strategy Team (UPST) on March 28, 2011. The options to demolish the designated sites to grade level and to cap and monitor the ash ponds were recommended and approval was granted to develop a charter for a program based on the recommended scope. The Plant Retirement Program charter (see Attachment A) was presented and approved at the April 26, 2011 Monthly Business Review (MBR) meeting. At the April 29, 2011 Finance Committee meeting, \$560 thousand was requested and approved to proceed with the fleet-wide non-nuclear dismantlement study. (Note: \$195 thousand will be charged to Capital Cost of Removal for design of the four designated sites and \$365 thousand will be deferred and charged to regulatory asset.

The expected results of the strategy are to minimize risk to the Company from safety and environmental concerns, minimize on-going O&M costs, and promote the company as a community and environmental steward.

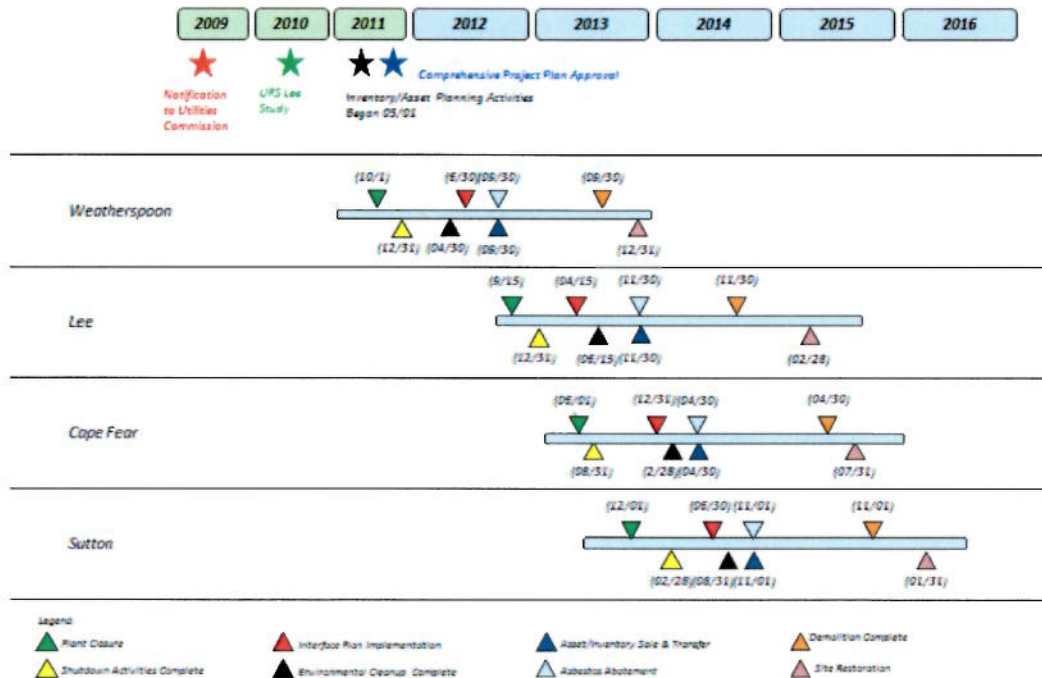
a. Coal-fired Units Retirement Strategy

The strategy to decommission and demolish was derived and recommended after review of the URS Lee Plant Demolition Study and benchmarking with the Bartow Dismantlement project and the EPRI Plant Closure Interest Group. The Program strategy was recommended as the best approach to minimize safety and environmental concerns such as hazardous and universal waste, ACM, chemicals, PCB, and lead-based paint. As ACM and lead-based paint deteriorates the cost for future abatement significantly grows. There is a regulation requirement for proper disposal of chemicals. If structures are allowed to remain on-site after retiring the units, on-going maintenance cost would be required to maintain the site in a safe and secure manner.

There is a three stage approach to implementing the strategy: (1) Decommissioning, (2) Demolition and (3) Site Restoration. The Decommissioning stage involves performing shutdown activities (such as washing boilers and precipitators, vacuuming and clinker blasting), environmental clean-up (such as removing hazardous waste, universal waste and chemicals and asbestos abatement), plant interface

modifications (such as relocating relays and rerouting piping and wiring) and transferring and selling inventory and assets. See the proposed Decommissioning schedule in Chart 1. The Demolition phase involves dismantling the site to a Brownfield state (deconstruction of equipment and buildings to grade level. The Site Restoration involves restoring the site to grade-level, filling in basements (based on site designs) and backfilling and seeding.

Chart 1: Proposed Plant Decommissioning Schedule



b. Ash Pond Closure Strategy

Over the next several years PEC will retire designated coal-fired units and close ash ponds. At non-designated coal-fired plants there is a strategy to transition from wet ash handling to dry ash handling systems. Table 2 below provides an outline of PEC ash ponds. Chart 2 below shows a proposed Ash Pond Closure schedule; however, until a design and schedule are approved durations cannot be confirmed. Currently federal and state regulatory programs do not specifically address the decommissioning and closure of ash ponds, but state regulations provide some options for closure framework.

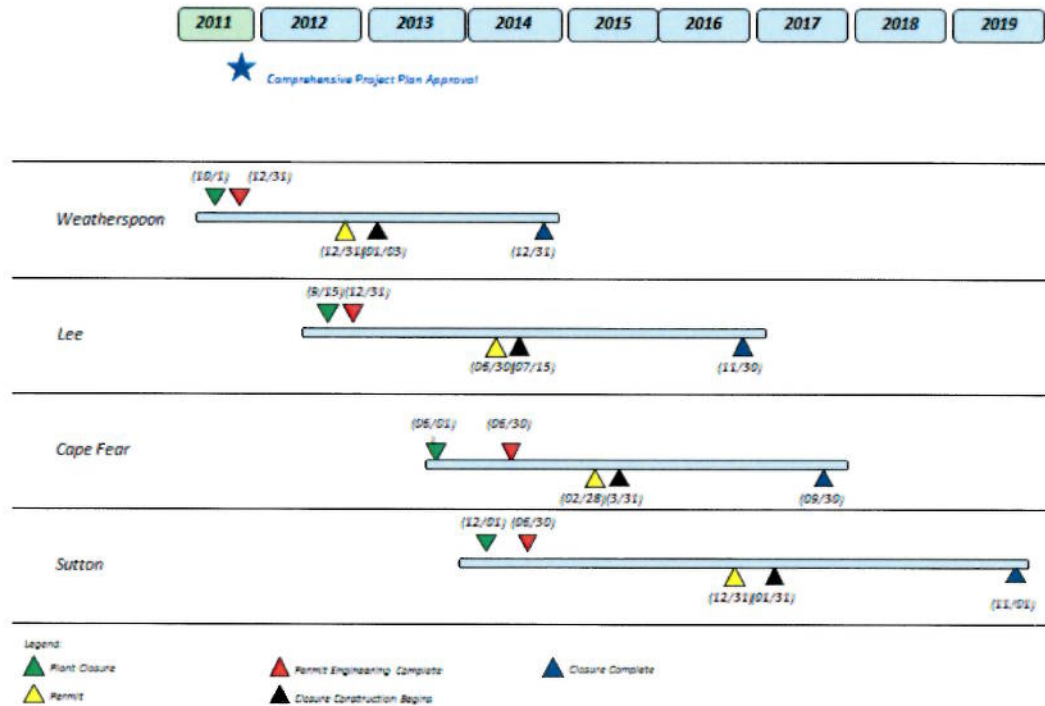
The recommended strategy is to cap the ash pond and monitor. The strategy does not address lay of land ash disposal areas. An engineering design is currently being conducted for ash pond closure at Weatherspoon based on the recommended strategy. The conceptual design will be utilized to further define scope, cost, and schedule of ash pond closures. After approval on the strategy from regulating agencies, design efforts will proceed for closing the Weatherspoon ash pond.

The ash pond closure activities will be self-performed utilizing trained fuel handling operations personnel and existing equipment. The closure projects will be supplemented with engineering, QA and liner/specialty contractors.

Table 2: Summary of Progress Energy Carolinas Ash Ponds

Facility	Ash Pond Date	Active?
Asheville	1964	No
	1982	Yes
Cape Fear	1956	No
	1963	No
	1970	No
	1978	No
	1985	Yes
Lee	Not Known	No
	Not Known	No
	Not Known	No
	1980	Yes
Mayo	1982	Yes
Robinson	Not Known	Yes
Roxboro	1973	Yes
Sutton	1971	No
	1983	Yes
	1984	Yes
Weatherspoon	1979	Yes

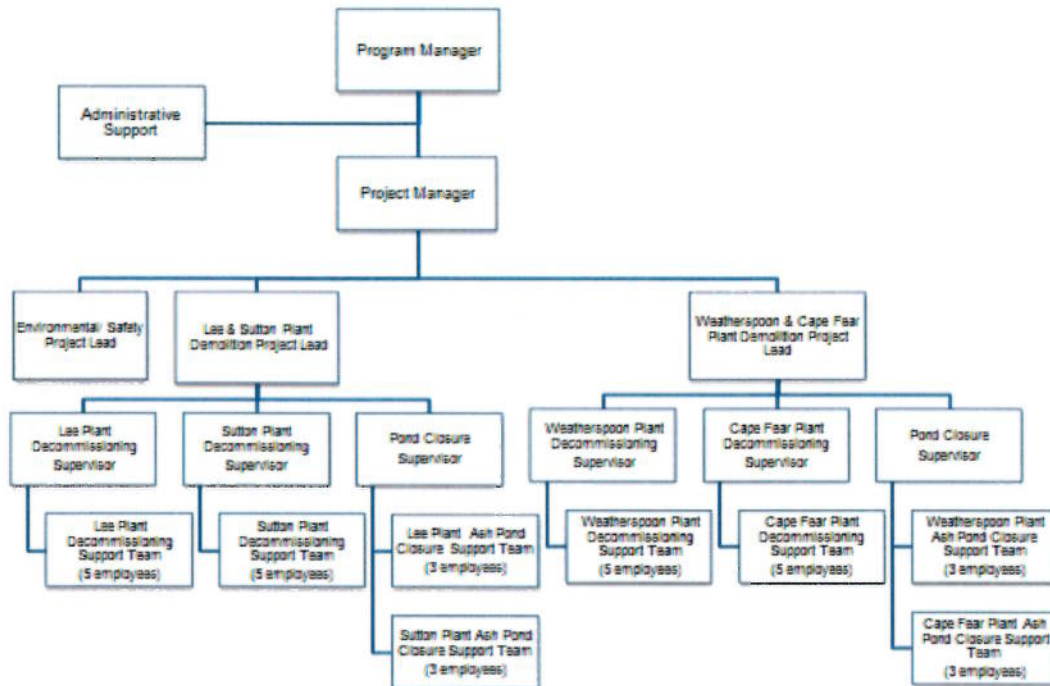
Chart 2: Proposed Ash Pond Closure Schedule



c. Organizational Design

The initial organizational design was developed based on benchmarking efforts and as a means to utilize the knowledge and technical skills of designated site personnel. Chart 3 below displays the Proposed Organization Chart. The Plant Retirement Program has established a Support Team that engages business units across the enterprise to ensure effective alignment of plant retirement strategies with corporate strategy, public policy, legislative and regulatory initiatives and identify gaps. The Program will allow flexibility to add additional designated sites subject to approval of associated CPP revisions.

Chart 3: Proposed Plant Retirement Program Organization Chart



d. Benchmarking Strategy

The Plant Retirement Program is participating in benchmarking efforts with the Bartow Dismantlement Project, the EPRI Plant Closure User Group, and the Fossil Decommissioning Network Group, where benchmarking is being conducted with other utilities. The benchmarking involves sharing strategy, best practices and lessons learned. The Plant Retirement Program will continue to support benchmarking efforts.

e. Permit Strategy

The permitting strategy is to retain site permits and plans, such as the Title V permit, the NPDES permit, and the SPCC plan and seek renewal for sites that currently are not slated for repowering. Regulatory agencies may question the renewal of full permits in light of retiring the coal units; however, if existing permits are renewed then on-going report submittals will be required regardless of the operating status of the units. A specific strategy and execution will be evaluated for each designated site based on on-going operational needs of the sites. The strategy also incorporates the requirements for permits and approvals that are needed for decommissioning and demolition activities.

f. Contract Strategy

The contracting and procurement strategy was designed to mitigate overall risks to the Program projects with particular focus on asbestos abatement and demolition contractors. The primary factors considered when developing the strategy were safety, cost, current market conditions, environmental concerns, resource availability (both internal and external), and overall risk. The Program will pursue opportunities to bundle contract services across multiple sites.

The current plan is for the Company to competitively bid the ash pond closure engineering, asbestos abatement, ash vacuuming/wash down and demolition contractors to qualified vendors.

g. Investment Recovery Strategy

The investment recovery strategy focuses on optimizing the use of inventory and assets at the designated sites. The Plant Retirement Program has collaborated with Supply Chain to develop and execute the investment recovery strategy. The initial focus for inventory is to ramp down the inventory levels prior to the retirement dates by evaluating min/max quantities and terminating automatic re-order and vendor managed processes. Inventory and assets will be marketed internally for redeployment options. Inventory and assets will be assessed for whether there is a business need to transfer them to other non-designated sites. Inventory and assets will be marketed externally if there is no need for internal redeployment.

Recovery Seeker, a web-based investment recovery product, provided by Pacific Exchange, will be utilized by the Company to list and market inventory and assets internally and externally. There is a public site and a private client site associated with the product. The Recovery Seeker tool provides the Program the opportunity to optimize value gained and traceability of decommissioned assets and inventory through use of the product.

The strategy for the sale of scrap metal is to incorporate the sale of scrap into the demolition contract. The demolition cost is primarily driven by the potential investment recovery from scrap metal. The amount of ferrous and non-ferrous will be assessed for each site. The Program will also evaluate options to market scrap metal (such as condenser tubes) directly. Due to variability in the market, the investment recovery amount from scrap metal may vary. Chart 4 below, shows how the steel scrap metal market has varied from January 2009 to June 2011.

Chart 4: American Metal Market Steel Scrap Price

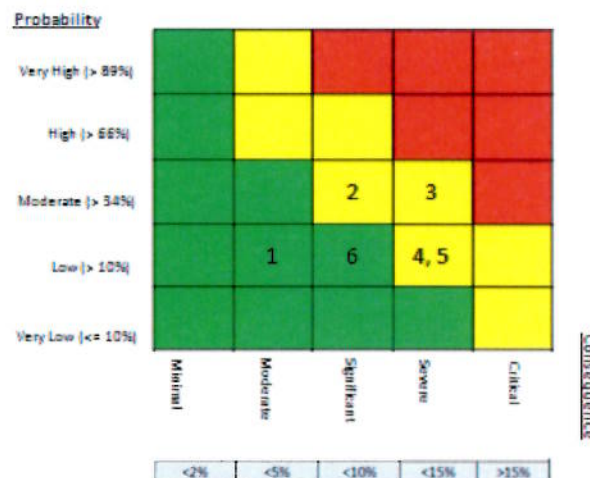


5. Program Analytics [Uncertainty, Sensitivity, Economics]

The Plant Retirement Program supports studies and initiatives that consider plants for retirement; however, the Program does not determine which sites are selected for retirement. The Program executes the necessary tasks to retire a plant once the selection has been approved. The Plant Retirement Program has utilized the URS Lee Study and benchmarking to assess the Program strategy and risks and to develop baseline assumptions for retiring plants. The Program strategy has been aligned with corporate strategy to minimize risk to the Company from safety and environmental concerns and to promote the Company as a community steward. Economic Analysis was not performed to arrive at the Program strategy as the least cost option due to factoring in the safety and environmental risk of abandoning the unit in-place. Future alternatives will be evaluated as needed on a project by project basis.

The identified risks and expected responses/plans are outlined below:

- Program Risk**
1. Asbestos Abatement
 2. Investment Recovery from Scrap Metal
 3. Regulatory (Ash Pond)
 4. Impacting Operations of Other Units/Systems On-Site
 5. Unforeseen Environmental Issues
 6. Cape Fear Boilers 1 - 6



1. Asbestos Abatement

Impact to:

Cost	<input checked="" type="checkbox"/>	Schedule	n/a	Performance	n/a	Environmental	<input checked="" type="checkbox"/>	Safety	<input checked="" type="checkbox"/>
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Risk:

Asbestos abatement is a major portion of the Environmental cleanup scope. The abatement includes the removal of ACM (such as thermal system insulation (TSI), transite and mastic/roofing material) and disposal. The quantity and type of ACM drives the scope and cost of abatement. If additional ACM scope is identified beyond estimated quantities the cost for abatement could be impacted significantly. State and federal regulations require proper disposal of ACM.

Trend: Current Ranking: Green Prior Ranking = N/A

Response/Plan: Asbestos mapping and surveying will be performed at each designated site. The asbestos surveying includes reviewing prior abatement records, identifying the types of ACM on-site and performing sampling. The asbestos mapping involves marking and estimating the quantity of ACM. The estimated quantities will be provided to bidders; however, bidders will perform site walk downs and develop their own estimates. (ACM) will be abated prior to demolition to address and alleviate risk associated with ACM.

2. Investment Recovery from Scrap Metal

Impact to:

Cost	<input checked="" type="checkbox"/>	Schedule	n/a	Performance	n/a	Environmental	n/a	Safety	n/a
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Risk: Demolition contractor cost is primarily based on the investment recovery potential from scrap metal. Over the past few years the steel scrap metal price has been volatile, ranging from \$140/Ton to current value of \$417/Ton (based on American Metal Market pricing 7/6/2011). The amount of recoverable ferrous and non-ferrous metals is also a variable. Investment recovery from scrap metal is based on the demolition contractor risk tolerance.

Trend: Current Ranking: Yellow Prior CPP Ranking = N/A

Response/Plan: The Program estimate for demolition contractor costs is based on the Bartow demolition extrapolation and from other recent demolition projects. Allowing the contractor a time period for the disposition of scrap metal will help alleviate some of their risk. The basis for the demo contractor estimates in the CPP is \$300/Ton of scrap ferrous metal. The strategy for the demolition contractor is to bundle the work for all impacted sites under one contract. This is anticipated to yield a 15% cost benefit. The plan is to go to contract by 3rd quarter of 2012. Given current trends in the scrap metals market, it is not anticipate that major price changes in the future markets will occur. The Program will continue to monitor price fluctuations and adjust risk accordingly.

3. Regulatory

Impact to:

Cost	<input checked="" type="checkbox"/>	Schedule	<input checked="" type="checkbox"/>	n/a	Performance	n/a	Environmental	<input checked="" type="checkbox"/>	n/a	Safety	n/a
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Risk: NC environmental regulations do not specifically address DENR's role regarding decommissioning/demolition of facilities; there are some permit or notification actions that may trigger DENR to assert oversight to a greater degree than supported by the regulations.

Response/Plan: DENR may exercise its option to become involved in the decommissioning/demolition process through minor permit modifications, notifications or assertion of jurisdiction over impacted groundwater, site contamination or changes to the operation of a permitted facility. Public

announcement of plant closures could also attract the attention of DENR, which may want to ensure that environmental issues are addressed before the Company permanently ceases operations. DENR oversight of decommissioning/demolition could significantly increase the time and cost required to complete environmental aspects of the work. A plan will be developed for communication with DENR regarding the decommissioning/demolition projects. A strategy of providing information without agreeing to oversight could satisfy DENR needs without triggering schedule/cost risks on this issue.

Risk: Federal and state regulations are pending for the disposition of ash ponds. Reclassification of ash as a hazardous material would significantly impact cost of closure. Any regulations that would require additional closure measures than the planned cap and monitor would have cost impacts.

Response/Plan: Monitor rulemaking and influence outcome to the extent possible. Collaborate with ESS on the proposal for the cap and monitor strategy. This is an issue for the entire company and industry, not just retiring plants.

Trend: Current Ranking: Yellow Prior CPP Ranking = N/A

4. Impacting Operations of other units/systems on-site

Impact to:

Cost	<input checked="" type="checkbox"/>	Schedule	n/a	Performance	<input checked="" type="checkbox"/>	Environmental	n/a	Safety	n/a
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Risk: This risk is associated with the existing Combustion Turbine (CT's) plants and Transmission at the designated sites. Currently most of the infrastructure (i.e. fire water, telecommunication, service water, potable water, power supply, waste treatment, instrument air, relays and breaker control and monitoring) associated with these CT's are interfaced through the designated coal fired units. If decentralization of the CT's is not performed completely, then there is possible impact on CT operations and additional project cost would be incurred in dealing with these issues.

Trend: Current Ranking: Yellow Prior CPP Ranking = N/A

Response/Plan: A support team is formed that encompasses IT, CT operations, Transmission, Plant operations, Supply Chain, and Engineering. This team is leading the effort in evaluating all the CT unit needs. Several engineering studies are underway to address all infrastructure separation concerns. All cost associated with identified work to support this effort are included in the CPP.

5. Unforeseen Environmental

Impact to:

Cost	<input checked="" type="checkbox"/>	Schedule	<input checked="" type="checkbox"/>	Performance	n/a	Environmental	<input checked="" type="checkbox"/>	Safety	n/a
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Risk: Site contamination associated with past operations may be discovered or exacerbated through decommissioning/demolition activities.

Response/Plan: Contamination of soil and/or groundwater from petroleum products, PCBs and/or coal storage areas is known or can be anticipated at each of the designated sites. Ground disturbance or excavation below grade could result in discovery of stained soil or other indicators of impacts. Such discovery would cause project delays and additional expense to investigate and manage the areas. To mitigate this potential impact, project plans reflect minimal below grade excavation, limited to removal of high risk elements such as underground fuel piping that will no longer be needed. An environmental plan will be developed for the demolition process and the plan will specify actions to be taken in the event of any unanticipated discovery, including suspect hazardous materials or products. Contractor personnel will be trained regarding project objectives and plans for minimization of site disturbance.

Risk: Legacy issues not fully addressed during site decommissioning/demolition may necessitate future expenditures for investigation and cleanup.

Response/Plan: There are active investigations and/or clean-up projects at three of the four sites to address site contamination from past operations. These investigations primarily involve petroleum contamination from leaking tanks or underground piping. The existing soil and groundwater contamination issues for which the agency notice has already been made will be coordinated with the Plant Retirement Program and funded through Remediation. If undocumented issues are discovered by the Plant Retirement Program then conditions will be reported to Remediation upon discovery. The Plant Retirement Program will be responsible for emergency response activities for undocumented soil and groundwater issues. At a mutually agreeable juncture assessment and/or corrective action would be transferred to Remediation.

In addition, ash ponds on the sites will no longer be needed for management of coal combustion residuals. Closure of the ash ponds will likely be required to address groundwater contamination issues being evidenced by recently required groundwater monitoring programs at the sites. If these legacy issues remain on site following decommissioning/demolition it is possible that ongoing investigation/remediation work will lead to discovery of additional issues on or under the demolition site (for example, contamination of groundwater beneath the coal storage area). There is risk that additional expenditures will be incurred in the future to resolve subsurface issues not addressed during demolition.

Trend: Current Ranking: Yellow Prior CPP Ranking = N/A

6. Annual Funding Requirements, Authorizations and Gate Reviews

The Plant Retirement Program, with concurrence of the strategic elements in this document, will develop required 2011 and 2012 annual funding requirements, authorizations and gate reviews.

The total Program cost includes cost for coal-fired unit dismantlement and ash pond closure and is estimated to be \$88 million to \$120 million*. The Program has requested authorization to spend \$1.8 million in 2011, and \$ 5.9 million in 2012.*

Table 3 below outlines the Program cost estimates for dismantlement and ash pond closure.

Table 3: Cost Estimates for Dismantlement and Ash Pond Closure
Dismantlement Cost (\$000)

Site	2011	2012	2013	2014	2015	2016	Total
Weatherspoon	\$1,328	\$4,265	\$3,498				\$9,091
Cape Fear		\$313	\$3,620	\$3,745	(\$1,089)		\$6,589
Lee		\$650	\$5,660	(\$2,043)	\$225		\$4,492
Sutton			\$276	\$5,886	(\$2,786)	\$609	\$3,985
All Site Study	\$195						\$195
Total	\$1,523	\$5,228	\$13,054	\$7,588	(\$3,650)	\$609	\$24,352

Ash Pond Closure Cost (\$000)

Site	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Weatherspoon	\$300	\$500	\$3,700	\$3,200						\$7,700
Cape Fear				\$200	\$5,000	\$12,000	\$4,000			\$21,200
Lee		\$200	\$5,050	\$13,000	\$10,000	\$4,000				\$32,250
Sutton					\$50	\$250	\$5,000	\$10,000	\$4,250	\$19,550
Total	\$300	\$700	\$8,750	\$16,400	\$15,050	\$16,250	\$9,000	\$10,000	\$4,250	\$80,700

7. Summary

The Plant Retirement Program CPP summarizes the overall plan for retiring coal-fired units and ash ponds at designated sites. The Program outlines the proactive strategy for Progress Energy to safely retire the designated units to a Brownfield, environmentally neutral state and close the ash ponds. The Program will continue to proactively and collaboratively engage various stakeholders to ensure effective alignment with corporate strategy, public policy, legislative and regulatory initiatives, and to identify gaps.

The Plant Retirement Program assumes the following:

- Coal-fired units will be decommissioned and demolished to grade-level (Brownfield state).
- Environmental cleanup will include asbestos abatement, known hazardous and non-hazardous waste removal and chemical removal.
- The projects will include the restoration of existing CT functionality to decoupling existing site interfaces which are presently integrated into the coal-fired units.
- Ash pond closure will incorporate a cap and monitor strategy.
- The investment recovery strategy incorporates investment from the sale of inventory, assets and scrap metal.
- The rate recovery approach is to include the recovery of dismantlement costs for non-nuclear generation assets as part of the overall depreciation expense that is included in the cost of service rate request during the planned 2012 rate case.
- The roadmap and processes established are modeled to incorporate additional plant retirements and ash pond closures as dictated by corporate strategy.
Program will utilize designated plant resources for decommissioning tasks and ash pond closure where applicable.

Appendix A: References – Charters, Project Plans and other Critical Documents

Plant Retirement Program Charter

Charter

[Plant Retirement Program]

Opportunity / Threat Statement:

In 2010 Progress Energy filed the integrated resource plan (IRP) with North Carolina Utilities Commission with plans to retire 11 coal-fired units at four North Carolina sites by the end of 2014. The Plant Retirement Program was developed to provide a structured approach for initiating, planning and executing the safe and environmentally neutral decommissioning and demolition of the units. The impacted sites are Cape Fear, Lee, Sutton and Weatherspoon.

Objective(s):

The Plant Retirement Program efforts include initiating and planning the strategy, cost estimates, and risk assessments associated with retiring a unit. Performing decommissioning and demolition of the units (existing components, equipment and structures) to grade-level and closing the ash ponds at impacted sites.

Scope: (Includes but not limited to)

1. Perform fleet-wide dismantlement studies.
2. Perform sites retirement assessments and risk evaluations (major areas include asbestos, hazardous and universal waste, and other environmental concerns).
3. Perform an ash pond closure engineering study (not including lay of land).
4. Perform engineering assessments as needed to support plant interface of existing CT units, Transmission and Distribution.
5. Prepare Project Execution plans for each site.
6. Prepare CPP and Governance Policy for approval.

Key Deliverables & Milestones

Due Date

Develop Plant Retirement Guidelines	6/30/2011
Submit Initial CPP and Governance Policy for Approval	8/30/2011
Prepare Model Project Execution Plan	9/1/2011
Issue Fleet-wide Dismantlement Studies	12/31/2011
Dismantlement Complete	12/31/2016
Ash Pond Closure Complete	12/31/2019

Comments

1. Ash Pond Closure – Based on cap (\$100K/acre) and on-going monitoring (\$250K annual cost)
2. Environmental Clean-up – Place facility in an environmentally neutral state. No impact on existing remediation efforts.
3. Investment Recovery – market risks associated with scrap metal market volatility.
4. Explore common contractors for demolition and asbestos.

Funding Limit: (\$K)

	Dismantlement	Ash Pond Closure
2011:	\$1,888	\$300
2012:	\$6,417	\$700
2013:	\$10,894	\$8,750
2014:	\$4,819	\$15,700
2015:	\$102	\$14,050
2016:	\$440	\$15,250
2017:		\$12,000
2018:		\$10,000
2019:		\$4,250
Total	\$24,560	\$81,000

Approved By:

Date Approved: 6/6/11

Accepted By:

Revision #: 1

2012

Plant Retirement Comprehensive Program Plan

Revision Number: 1

Revision Date: 10/31/12

Program Manager: Issa Zarzar

Member of: Outage And Maintenance Services

Comprehensive Program Plan

Document ID

Revision Summary

Date	Revision Summary
10/31/2012	Update program to include new retired facilities at legacy Progress Energy and legacy Duke Energy and incorporate best practices from both organizations.

Request for Approval

Purpose: ☒ Annual Review

☐ Revision

Authorization to spend \$35 million in 2013. Estimated total program cost is \$300 million to \$400 million* (which includes cost for fossil unit dismantlement and ash pond closure). Execute commitments in 2013 that will obligate future year spending estimated at \$7.5 to \$10 million.

Next key semi-annual approval expected in: May 2013. Expected program final completion date: 2020.

Strategy: Fossil units will be decommissioned and demolished to grade-level.
Ash pond closure will incorporate a cap and monitor strategy.

Designated Sites: Buck, Buzzard Roost, Cape Fear, Cliffside, Dan River, Lee (NC), Lee (SC), Morehead City, Riverbend, Robinson, Sutton, and Weatherspoon.

Baseline Assumptions:

- Closure facilities are listed in Table 1. Facilities in Florida and Midwest are not reflected at this time and could be added at a later date.
- No impacts to dismantlement and ash pond closure strategy due to new regulations
- Sites will be restored to an environmentally neutral state
- Preliminary cost estimates: Dismantlement (\$6M per site on average) and Ash Pond Closure (\$100K-300K/acre)
- A portion of the demolition cost may be offset by investment recovery from scrap metal

Notes or Exceptions:

- CT Peaker units at designated sites will remain operational
- Cooling ponds will be maintained





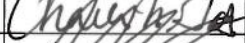
* Financial View

Approval Required

This CPP requires approval by the: Energy Supply Executive Governance Committee

Approvals

The parties signing below indicate by their signature that they, or the body they represent below, have reviewed the CPP and either recommend approval of or approve the above Request for Approval.

Action	Name [Type / Print]	Reviewing Position	Signature	Date
Recommend Approval	Issa Zarzar	Program Manager		11-29-2012
Recommend Approval	Randy Herrin	Department GM		11-29-2012
Recommend Approval	Paul Draovitch	Vice President		11-29-2012
Approval	Charlie Gates	Senior Vice President		11/29/12
Approval	Jeff Lyash	Executive Vice President		11/29/12

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1. Executive Summary

The Plant Retirement Comprehensive Program Plan (CPP) provides the overall plan for the retirement of coal-fired units, combustion turbine units, and ash ponds at designated Duke Energy Carolina, henceforth referred to as Company, sites. The Program provides the benchmarking, planning and execution of the strategy for retiring fossil units and ensures alignment with corporate strategy.

The Plant Retirement Program assumes the following:

- Fossil units will be decommissioned and demolished to grade-level.
- Environmental cleanup will include asbestos abatement, known hazardous and non-hazardous waste removal and chemical removal.
- The projects will include the restoration of remaining operating unit functionality due to decoupling existing site interfaces which are presently integrated into the coal-fired units.
- Ash pond closure will incorporate a cap and monitor strategy.
- The investment recovery strategy incorporates investment from the sale of inventory, assets and scrap metal.
- The rate recovery approach is to include the recovery of dismantlement costs for non-nuclear generation assets as part of the overall depreciation expense that is included in the cost of service rate request during the 2012 PEC and 2013 DEC rate cases.
- The roadmap and processes established are modeled to incorporate additional plant retirements and ash pond closures as dictated by corporate strategy.
- Program will utilize designated plant resources for decommissioning tasks and ash pond closure where applicable.

2. Program Overview

Designated units are being retired to ensure compliance with state and federal regulations and as part of the Company's fleet modernization strategy. The designated coal-fired units are non-scrubbed units and would require additional environmental controls to meet operational compliance beyond 2015. The Program is not expected to be limited to these sites. As the need arises, other plant retirements and ash ponds may be added.

The schedule of proposed dates for plant retirements is below in Table 1.

Table 1 – Proposed Plant Retirement Dates

Plant	Summer Capacity (MW)	In-Service Date of First Unit	Proposed/Retirement Date
Weatherspoon Units 1-3	171	1949	October 2011
Cliffside Units 1-4	198	1940	October 2011
Dan River Units 1-3	276	1949	April 2011
Buck Units 3 & 4***	113	1941	May 2011
Lee (NC) Units 1-3	397	1951	September 2012
Lee (NC) Old CTs	75		October 2012
Cape Fear**	316	1956	October 2012
Robinson Unit 1	177	1960	October 2012
Buzzard Roost CTs	196		October 2012
Buck Old CTs	62		October 2012
Dan River Old CTs	48		October 2012
Lee (SC) Old CTs	90	1968	January 2007
Riverbend Old CTs	64		October 2012
Cape Fear 2B CT	11		October 2012
Morehead City CT	12		October 2012
Sutton Units 1-3	575	1954	December 2013
Buck Units 5 & 6	256	1953	April 2015*
Riverbed Units 4 - 7****	454	1952	April 2015*
Lee (SC) 1-2 Coal Units and Material Handling	180	1951	April 2015

*Potential for early retirement

**The Cape Fear project will include the dismantlement of inactive units (Units 1 & 2 CC, Unit 3 & 4 turbines and the boilers 1- 8) on the site. The in-service date for the first unit on-site is 1923.

***The Buck project will include the dismantlement of inactive units (Units 1 & 2) on the site.

****The Riverbend project will include the dismantlement of inactive units (Units 1-3) on the site.

The Plant Retirement Program provides the planning, design and execution of the scope and tasks necessary to restore the retired plant sites to a safe and environmentally neutral state. The Plant Retirement Program engages business units across the enterprise to ensure effective alignment of plant retirement initiatives with corporate strategy, public policy, legislative and regulatory initiatives and to

identify gaps in a timely manner. These efforts provide Duke Energy with a proactive approach to managing the retirement of fossil units.

The Plant Retirement Program seeks concurrence to proceed with executing a retirement strategy for the designated coal-fired units and ash ponds on the basis of the following elements:

1. Coal-fired and CT units will be decommissioned to a safe and environmentally neutral state,
2. Coal-fired and CT units will be demolished to grade-level, and
3. Ash ponds will be closed with a cap and monitor strategy.

Proposed funding requirements are estimated at \$35 million for 2013. Pending approval to proceed, a detailed Project Execution Plan will be developed for each designated site.

3. Program Drivers

a. Legislative and Regulatory Expectations

Since 1990, federal and state environmental regulations have gradually been changing the landscape for coal-fired electric power generation. The Clean Air Act Amendments of 1990 brought the first 'cap and trade' program intended to significantly reduce emissions of NO_x and SO₂ through cascading limits on power plants. Other air emission reduction programs followed, including the North Carolina Clean Smokestacks Act that required the investment of over \$2.8 billion by the Company to retrofit additional air pollution controls on several facilities. Recently, the environmental regulations and new initiatives that will impact cooling water systems, wastewater discharge temperature and chemical content, coal combustion residuals management and air emissions are on the horizon. The collective effects of these regulatory changes represent significant additional costs to the affected facilities.

The Company has been tracking these developments for years, and has made a number of strategic decisions to prepare for the future, taking into account the capacity, age, regulatory uncertainty, cost of upgrades, potential for repowering and other site-specific factors at each facility. As a result, some plants were selected to receive upgraded air pollution control and/or wastewater treatment systems, some sites are being repowered with new natural gas-fired plants as part of the fleet modernization program and still others, smaller - older plants, have been slated for retirement. These actions are all part of building the Company's balanced solution and ensuring a state-of-the-art power system for the future.

In accordance with Commission Order Approving Plan dated January 28, 2010, in Docket No. E-2 Sub 960, PEC was ordered to "retire additional coal-fired generating capacity reasonably proportionate to the amount of incremental gas-fired generating capacity authorized by the Lee certificate above 400MW". The commitment to retire Weatherspoon, Lee, Cape Fear and Sutton coal-fired units represents about 30 percent of legacy Progress's coal-fired power generation fleet in North Carolina. It results in emission reductions, including carbon dioxide, sulfur dioxide, nitrogen oxides, mercury and other pollutants. Legacy DEC had similar agreements with the state for the issue of air permits for approval of Cliffside 6, Buck CC and Dan River CC. These agreements resulted in the required retirement of Cliffside 1-4, Buck 3 & 4 and Dan River 1-3.

b. Environmental Expectations

In older plants, the removal of asbestos-containing material (ACM) in some areas will be a major effort, involving significant expense and requiring completion before workers can safely begin equipment salvage and demolition activities. If the ACM is not disposed of properly then ongoing cost associated with ACM management will increase significantly. During decommissioning other known chemicals and materials will be removed and disposed or recycled. Any laboratory chemicals or inventories of metal-cleaning chemicals, which cannot be completely used before shutdown, will be sent for reuse at other company facilities, sold, or disposed properly. Freon, batteries and residual oils (i.e., used lubricants, fuel, etc.) will also be reused, recycled, or disposed of. Older plants such as Weatherspoon, Cape Fear, Lee and Sutton have instrumentation and pressure-vapor lighting that contain mercury, or light ballasts and electrical equipment that contain polychlorinated biphenyls (PCBs) at regulated concentrations. The mercury and PCBs will be removed and disposed, or the equipment containing these compounds will be disposed properly. During decommissioning, light bulbs and florescent lighting will be removed and disposed per local and state regulatory requirements. Lead paint is an issue for many older plants. Identification and removal of lead contamination will be required before workers can safely begin equipment salvage and demolition activities in some areas. All these and other solid, hazardous and universal wastes will need to be addressed during decommissioning to minimize environmental risks.

In addition to the above mentioned environmental drivers, clean up of fuel oil lines and addressing ash pond closure will also alleviate potential long term liability associated with Dam Safety, fugitive dust and ground water contamination.

c. Business Strategy – Fleet Modernization

The Fleet Modernization Program encompasses a range of strategic investment opportunities in fossil generation at Company sites and/or through partnerships with other companies. One driver for fleet modernization is the aging assets on the fleet, most of the units included in the initial Program scope are more than 50 years old. In addition to the age of the facilities, the Company considered the investments that would be needed to address known and expected regulations on carbon dioxide, nitrogen oxides, sulfur dioxide, mercury, particulates and other emissions; increasing costs of storing coal ash; and other factors. These retirements and new generation are part of a long-term strategy to modernize the fossil fleet with cleaner coal and natural gas, while continuing to invest in renewable and energy efficiency programs.

d. Recovery Mechanisms

Recovery of dismantlement costs for non-nuclear generation assets will be part of the overall depreciation expense the Company includes in its cost of service rate request during the 2012 and 2013 rate cases. Terminal Net Salvage (TNS) for generation assets is the estimated cost for the dismantlement of the plant offset by the estimated salvage value to be recovered. In the case of the Company's generating assets in the Carolinas, the TNS represents a net expense for the Company that will need to be recovered from rate payers. The net expense represented by TNS will increase the depreciation expense included in the cost of service rate request. There are other components to the overall depreciation expense that will also be included in the cost of service rate request, but those components of depreciation expense do not relate to TNS, or to the dismantlement costs of non-nuclear generation assets.

e. Initiatives and Study Projects

The Plant Retirement Program is structured to support initiatives and study projects on an on-going basis as the need arises. Currently the Program is supporting the study of the Crystal River 1 & 2 Coal Units Retirement. The Program is also supporting planning efforts for future Company ash pond closure at non-designated sites.

4. Program Strategy

The Plant Retirement Program strategy encompasses retiring the fossil units to a safe and environmentally neutral state by performing decommissioning activities on equipment and systems and demolishing the units to grade-level. The Program approach for ash ponds is to close the pond with a cap and monitor strategy. The Program approach is to establish a framework to ensure sustainability that is adaptable to the entire Energy Supply.

The Plant Retirement Program strategy to demolish the units to grade-level was derived after a study to retire Lee Plant was conducted by URS Corporation in 2010. The Company approach was to utilize the Lee study as a roadmap to determine a plant retirement strategy to retire the designated units. The study researched three options for retiring the units and three options for closing the ash ponds. The three options for retiring the units were: (1) retire the units and perform the minimal scope of work to bring the units to a safe and environmentally neutral state, (2) retire the units by performing all tasks necessary to bring the units to a safe and environmentally neutral state and demolition the site to grade level or two-feet below grade (Brownfield) and (3) retire the units by performing all tasks necessary to bring the units to a safe and environmentally neutral state and demolish the site to a Greenfield state. The three options for ash ponds were: (1) do nothing and continue to maintain ponds, (2) cap the ponds and provide on-going monitoring and (3) close ash ponds to a Greenfield state by treating the ponds as a hazardous waste (empty ponds and dispose of waste at a landfill).

These options were reviewed with the PEC Utility Portfolio Strategy Team (UPST) on March 29, 2011. The options to demolish the designated sites to grade level and to cap and monitor the ash ponds were recommended and approval was granted to develop a charter for a program based on the recommended scope. The Plant Retirement Program charter (see Attachment A) was presented and approved at the April 26, 2011 Monthly Business Review (MBR) meeting. At the April 29, 2011 Finance Committee meeting, \$560 thousand was requested and approved to proceed with the fleet-wide non-nuclear dismantlement study. (Note: \$195 thousand will be charged to Capital Cost of Removal for design of the four designated sites and \$365 thousand will be deferred and charged to regulatory asset.

The expected results of the strategy are to minimize risk to the Company from safety and environmental concerns, minimize on-going O&M costs, and promote the company as a community and environmental steward.

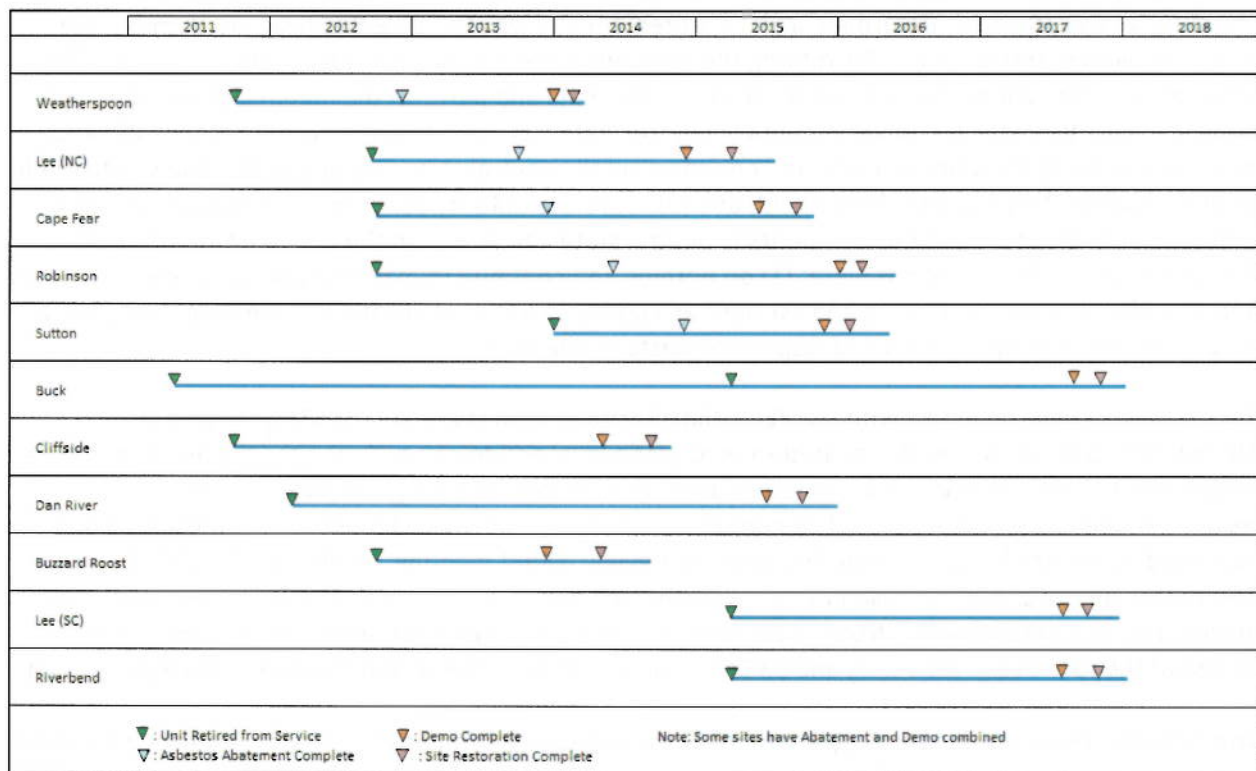
a. Fossil Units Retirement Strategy

The strategy to decommission and demolish was derived and recommended after review of the URS Lee Plant Demolition Study and benchmarking with the Bartow Dismantlement project and the EPRI Plant Closure Interest Group. The Program strategy was recommended as the best approach to minimize safety and environmental concerns such as hazardous and universal waste, ACM, chemicals, PCB, and lead-based paint. As ACM and lead-based paint deteriorates the cost for future abatement significantly grows. There is a regulation requirement for proper disposal of chemicals. If structures are allowed to

remain on-site after retiring the units, on-going maintenance cost would be required to maintain the site in a safe and secure manner.

There is a three stage approach to implementing the strategy: (1) Decommissioning, (2) Demolition and (3) Site Restoration. The Decommissioning stage involves performing shutdown activities (such as washing boilers and precipitators, vacuuming and clinker blasting), environmental clean-up (such as removing hazardous waste, universal waste and chemicals and asbestos abatement), plant interface modifications (such as relocating relays and rerouting piping and wiring) and transferring and selling inventory and assets. See the proposed Decommissioning schedule in Chart 1. The Demolition phase involves dismantling the site to an environmentally neutral state (deconstruction of equipment and buildings to grade level. The Site Restoration involves restoring the site to grade-level, filling in basements (based on site designs) and backfilling and seeding.

Chart 1: Proposed Plant Decommissioning Schedule



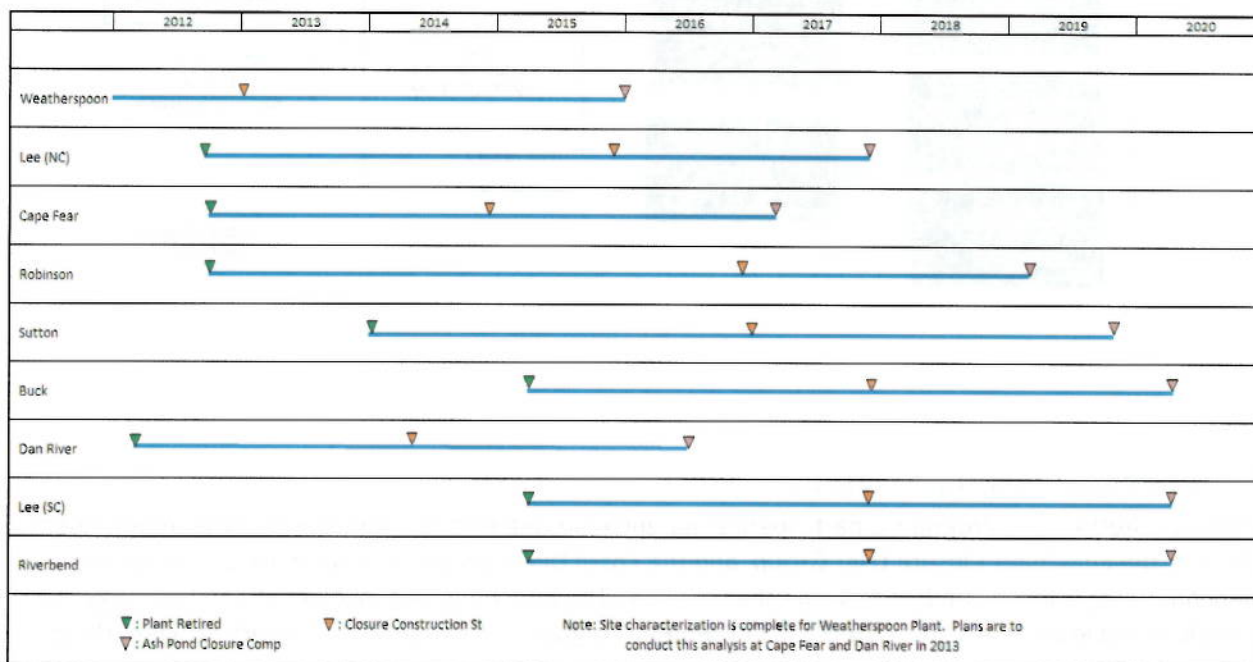
b. Ash Pond Closure Strategy

Over the next several years the Company will retire designated fossil units and close ash ponds. At non-designated coal-fired plants there is a strategy to transition from wet ash handling to dry ash handling systems. Chart 2 below shows a proposed Ash Pond Closure schedule; however, until a design and schedule are approved durations cannot be confirmed. Currently federal and state regulatory programs do not specifically address the decommissioning and closure of ash ponds, but state regulations provide some options for closure framework.

The recommended strategy is to cap the ash pond and monitor. The strategy does not address lay of land ash disposal areas. An engineering design is currently being conducted for ash pond closure at Weatherspoon based on the recommended strategy. The conceptual design will be utilized to further define scope, cost, and schedule of ash pond closures. After approval on the strategy from regulating agencies, design efforts will proceed for closing the Weatherspoon ash pond.

The Weatherspoon ash pond closure activities will be self-performed utilizing trained fuel handling operations personnel and existing equipment for pond grading. The project will be supplemented with engineering, QA and liner/specialty contractors. Future ash pond closures will be managed similar to Weatherspoon. However grading services may be contracted depending on in-house resource availability.

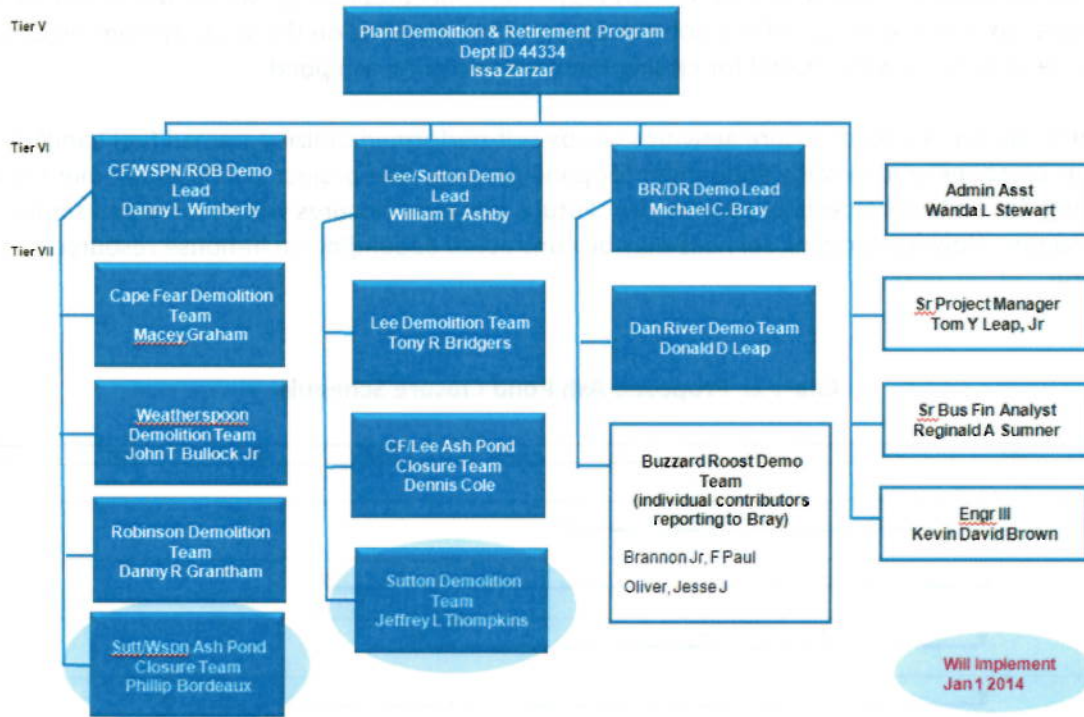
Chart 2: Proposed Ash Pond Closure Schedule



c. Organizational Design

The initial organizational design was developed based on benchmarking efforts and as a means to utilize the knowledge and technical skills of designated site personnel. Chart 3 below displays the Proposed Organization Chart. The Plant Retirement Program has established a Support Team that engages business units across the enterprise to ensure effective alignment of plant retirement strategies with corporate strategy, public policy, legislative and regulatory initiatives and identify gaps. The Program will allow flexibility to add additional designated sites subject to approval of associated CPP revisions.

Chart 3: Proposed Plant Retirement Program Organization Chart



d. Benchmarking Strategy

The Plant Retirement Program is participating in benchmarking efforts with the Bartow Dismantlement Project, the EPRI Plant Closure User Group, and the Fossil Decommissioning Network Group, where benchmarking is being conducted with other utilities. The benchmarking involves sharing strategy, best practices and lessons learned. The Plant Retirement Program will continue to support benchmarking efforts.

e. Permit Strategy

The permitting strategy is to retain site permits and plans, such as the Title V permit, the NPDES permit, and the SPCC plan and seek renewal for sites that currently are not slated for repowering. Once required the air permits will be closed and the any needed site NPDES permit or SPCC plan will be updated. Regulatory agencies may question the renewal of full permits in light of retiring the coal units; however, if existing permits are renewed then on-going report submittals will be required regardless of the operating status of the units. A specific strategy and execution will be evaluated for each designated site based on on-going operational needs of the sites. The strategy also incorporates the requirements for permits and approvals that are needed for decommissioning and demolition activities.

f. Contract Strategy

The contracting and procurement strategy was designed to mitigate overall risks to the Program projects with particular focus on asbestos abatement and demolition contractors. The primary factors considered when developing the strategy were safety, cost, current market conditions, environmental

concerns, resource availability (both internal and external), and overall risk. The Program will pursue opportunities to bundle contract services across multiple sites including engineering services.

The current plan is for the Company to competitively bid the engineering, asbestos abatement, ash vacuuming/wash down and demolition contractors to qualified vendors.

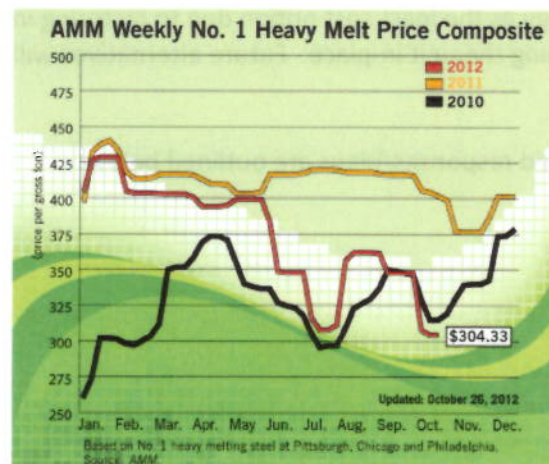
g. Investment Recovery Strategy

The investment recovery strategy focuses on optimizing the use of inventory and assets at the designated sites. The Plant Retirement Program has collaborated with Supply Chain to develop and execute the investment recovery strategy. The initial focus for inventory is to ramp down the inventory levels prior to the retirement dates by evaluating min/max quantities and terminating automatic re-order and vendor managed processes. Inventory and assets will be marketed internally for redeployment options. Inventory and assets will be assessed for whether there is a business need to transfer them to other non-designated sites. Inventory and assets will be marketed externally if there is no need for internal redeployment.

Recovery Seeker, a web-based investment recovery product, provided by Pacific Exchange, will be utilized by the Company to list and market inventory and assets internally and externally. There is a public site and a private client site associated with the product. The Recovery Seeker tool provides the Program the opportunity to optimize value gained and traceability of decommissioned assets and inventory through use of the product.

The strategy for the sale of scrap metal is to incorporate the sale of scrap into the demolition contract. The demolition cost is primarily driven by the potential investment recovery from scrap metal. The amount of ferrous and non-ferrous will be assessed for each site. The Program will also evaluate options to market scrap metal (such as condenser tubes) directly. Due to variability in the market, the investment recovery amount from scrap metal may vary. Chart 4 below, shows how the steel scrap metal market has varied from January 2010 to October 2012.

Chart 4: American Metal Market Steel Scrap Price



h. Communications Strategy

A comprehensive communication plan has been developed for the program. The scope of this plan includes a high-level communications template to follow as units retire, as well as general communications that should be considered at each site as decommissioning follows. Corporate Communications will work closely with the appropriate decommissioning project managers, station managers, district managers and others to coordinate this effort. Because each site and community is unique, more specific plans may need to be developed that follow this general outline.

i. Records Management Disposition Strategy

Records related to station decommissioning or retirement are governed by the various regulatory agencies as well as the operational needs of the Corporation. The objective of this document is to ensure the management of all records is based on regulatory requirements, industry standards and sound business practice. A Job Aid (FHG-ISC-JA-0007 Rev. 000) was developed to establish a standard process, provide direction, guidance and a framework to ensure records are effectively managed to final disposition. Disposition encompasses retaining records on-site, retaining records in off-site storage, retaining records electronically and/or destroying records. A "Records Disposition Template Action Plan" has been developed to capture focus areas for the disposition process. The final disposition of all records ensures compliance under the Plant Retirement Program Governance Policy PJM-SUBS-00055. The overall success of all records disposition is a shared responsibility within many workgroups and organizations.

5. Program Analytics [Uncertainty, Sensitivity, Economics]

The Plant Retirement Program supports studies and initiatives that consider plants for retirement; however, the Program does not determine which sites are selected for retirement. The Program executes the necessary tasks to retire a plant once the selection has been approved. The Plant Retirement Program has utilized the URS Lee Study and benchmarking to assess the Program strategy and risks and to develop baseline assumptions for retiring plants. The Program strategy has been aligned with corporate strategy to minimize risk to the Company from safety and environmental concerns and to promote the Company as a community steward. Economic Analysis was not performed to arrive at the Program strategy as the least cost option due to factoring in the safety and environmental risk of abandoning the unit in-place. Future alternatives will be evaluated as needed on a project by project basis.

The identified risks and expected responses/plans are outlined below:

Probability		Impact				
		Minimal	Moderate	Significant	Severe	Critical
Very High [90-100%]						
High [66-89%]						
Moderate [34-65%]					1.	
Low [11-33%]			10.	9.	4.	2, 3.
Very Low [0-10%]					7, 8.	5, 6.

	<2%	<5%	<10%	<15%	>15%

15

2. Demolition and Abatement Safety

Impact to:

Cost	n/a	Schedule	n/a	Performance	n/a	Environmental	n/a	Safety	<input checked="" type="checkbox"/>
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Risk: Due to the nature of this type of work, greater emphasis is placed on safety to prevent any event that would impact the health and safety of employees and contractors.

Trend: Current Ranking: Yellow Prior CPP Ranking: N/A

Response/Plan: Contractor and employees have site specific safety plans and when needed JHAs are being developed. JHAs are developed and reviewed by corporate safety for major activities such as asbestos abatement and demolition. Site specific safety plans will be developed. This includes site specific engineered drop plan with a third party review. Lessons learned from the Weatherspoon abatement efforts will be applied, specifically related to heat stress.

3. First Time Evolution Risk

Impact to:

Cost	n/a	Schedule	n/a	Performance	n/a	Environmental	n/a	Safety	<input checked="" type="checkbox"/>
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Risk: During dismantlement, many new activities will be performed. These first time evolutions could pose a significant safety risk if not mitigated.

Trend: Current Ranking: Yellow Prior CPP Ranking: N/A

Response/Plan: Site specific safety plans have been developed. This includes contractor safety evaluations, dismantlement specific PJB, and specific JHAs.

4. Unforeseen Environmental

Impact to:

Cost	<input checked="" type="checkbox"/>	Schedule	<input checked="" type="checkbox"/>	Performance	n/a	Environmental	<input checked="" type="checkbox"/>	Safety	n/a
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Risk: Site contamination associated with past operations may be discovered or exacerbated through decommissioning/demolition activities.

Response/Plan: Contamination of soil and/or groundwater from petroleum products, PCBs and/or coal storage areas is known or can be anticipated at each of the designated sites. Ground disturbance or excavation below grade could result in discovery of stained soil or other indicators of impacts. Such discovery would cause project delays and additional expense to investigate and manage the areas. To mitigate this potential impact, project plans reflect minimal below grade excavation, limited to removal of high risk elements such as underground fuel piping that will no longer be needed. An environmental plan will be developed for the demolition process and the plan will specify actions to be taken in the event of any unanticipated discovery, including suspect hazardous materials or products. Contractor personnel will be trained regarding project objectives and plans for minimization of site disturbance.

Risk: Legacy issues not fully addressed during site decommissioning/demolition may necessitate future expenditures for investigation and cleanup.

Response/Plan: There are active investigations and/or clean-up projects at several retired stations to address site contamination from past operations. These investigations primarily involve petroleum contamination from leaking tanks or underground piping. The existing soil and groundwater contamination issues for which the agency notice has already been made will be coordinated with the Plant Retirement Program and funded through Remediation. If undocumented issues are discovered by the Plant Retirement Program then conditions will be reported to Remediation upon discovery. The Plant Retirement Program will be responsible for emergency response activities for undocumented soil and groundwater issues. At a mutually agreeable juncture assessment and/or corrective action would be transferred to Remediation.

In addition, ash ponds on the sites will no longer be needed for management of coal combustion residuals. Closure of the ash ponds will likely be required to address groundwater contamination issues being evidenced by recently required groundwater monitoring programs at the sites. If these legacy issues remain on site following decommissioning/demolition it is possible that ongoing investigation/remediation work will lead to discovery of additional issues on or under the demolition site (for example, contamination of groundwater beneath the coal storage area). There is risk that additional expenditures will be incurred in the future to resolve subsurface issues not addressed during demolition.

Trend: Current Ranking: Yellow

Prior CPP Ranking: N/A

5. Regulatory

Impact to:

Cost	<input checked="" type="checkbox"/>	Schedule	<input checked="" type="checkbox"/>	n/a	Performance	n/a	Environmental	<input checked="" type="checkbox"/>	n/a	Safety	n/a
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Risk: NC environmental regulations do not specifically address DENR's role regarding decommissioning/demolition of facilities; there are some permit or notification actions that may trigger DENR to assert oversight to a greater degree than supported by the regulations.

Response/Plan: DENR may exercise its option to become involved in the decommissioning/demolition process through minor permit modifications, notifications or assertion of jurisdiction over impacted groundwater, site contamination or changes to the operation of a permitted facility. Public announcement of plant closures could also attract the attention of DENR, which may want to ensure that environmental issues are addressed before the Company permanently ceases operations. DENR oversight of decommissioning/demolition could significantly increase the time and cost required to complete environmental aspects of the work. A plan will be developed for communication with DENR regarding the decommissioning/demolition projects. A strategy of providing information without agreeing to oversight could satisfy DENR needs without triggering schedule/cost risks on this issue.

Risk: Federal and state regulations are pending for the disposition of ash ponds. Reclassification of ash as a hazardous material would significantly impact cost of closure. Any regulations that would require additional closure measures than the planned cap and monitor would have cost impacts.

Response/Plan: Monitor rulemaking and influence outcome to the extent possible. Collaborate with ESS on the proposal for the cap and monitor strategy. This is an issue for the entire company and industry, not just retiring plants.

Trend: Current Ranking: Yellow Prior CPP Ranking: N/A

6. Infrastructure Degradation

Impact to:

Cost	n/a	Schedule	n/a	Performance	n/a	Environmental	n/a	Safety	<input checked="" type="checkbox"/>
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Risk: If the existing infrastructure degrades, before demolition activities begin, to a point that facilities will fail, then a significant safety risk could be realized.

Trend: Current Ranking: Yellow Prior CPP Ranking: N/A

Response/Plan: Site specific safety walk-downs will be conducted and an engineering assessment of current site conditions will be performed. This risk will be included in the contractor safety evaluations, dismantlement specific PJB, and specific JHAs.

7. Impacting Operations of other units/systems on-site

Impact to:

Cost	<input checked="" type="checkbox"/>	Schedule	n/a	Performance	<input checked="" type="checkbox"/>	Environmental	n/a	Safety	n/a
------	-------------------------------------	----------	-----	-------------	-------------------------------------	---------------	-----	--------	-----

Risk: This risk is associated with the existing Combustion Turbine (CT's), Combined Cycle (CC) plants, and Transmission/Switchyard at the designated sites. Currently most of the infrastructure (i.e. fire water, telecommunication, service water, potable water, power supply, waste treatment, instrument air, relays and breaker control and monitoring) associated with these CT's are interfaced through the designated coal fired units. If decentralization of the CT's is not performed completely, then there is possible impact on CT operations and additional project cost would be incurred in dealing with these issues. Also, during dempolition, the operating units need to be secured.

Trend: Current Ranking: Green Prior CPP Ranking: N/A

Response/Plan: A support team is formed that encompasses IT, CT operations, Transmission, Plant operations, Supply Chain, and Engineering. This team is leading the effort in evaluating all the CT unit needs. Several engineering studies are underway to address all infrastructure separation concerns. All cost associated with identified work to support this effort are included in the CPP. Also, during demolition, the team will develop a detailed risk and drop plan with 3rd party review. Incorporate lessons learned from Bartow Demo.

8. Program Environmental Approach

Impact to:

Cost	<input checked="" type="checkbox"/>	Schedule	n/a	Performance	n/a	Environmental	<input checked="" type="checkbox"/>	Safety	n/a
------	-------------------------------------	----------	-----	-------------	-----	---------------	-------------------------------------	--------	-----

Risk: If the program environmental approach in dealing with regulatory agencies is inconsistent and does not take into account a programmatic approach, then significant cost could be incurred. Then early decisions could impact later decisions.

Trend: Current Ranking: Green Prior CPP Ranking: N/A

Response/Plan: The environmental approach for site retirement and ash pond closure will be developed by a team comprised of subject matter experts from strategic engineering, environmental, and plant retirement.

9. Asbestos Abatement

Impact to:

Cost	<input checked="" type="checkbox"/>	Schedule	n/a	Performance	n/a	Environmental	<input checked="" type="checkbox"/>	Safety	<input checked="" type="checkbox"/>
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Risk: Asbestos abatement is a major portion of the Environmental cleanup scope. The abatement includes the removal of ACM (such as thermal system insulation (TSI), transite and mastic/roofing material) and disposal. The quantity and type of ACM drives the scope and cost of abatement. If additional ACM scope is identified beyond estimated quantities the cost for abatement could be impacted significantly. State and federal regulations require proper disposal of ACM.

Trend: Current Ranking: Green Prior CPP Ranking: N/A

Response/Plan: Asbestos mapping and surveying will be performed at each designated site. The asbestos surveying includes reviewing prior abatement records, identifying the types of ACM on-site and performing sampling. The asbestos mapping involves marking and estimating the quantity of ACM. The estimated quantities will be provided to bidders; however, bidders will perform site walk downs and develop their own estimates. (ACM) will be abated prior to demolition to address and alleviate risk associated with ACM.

10. Site Security risk

Impact to:

Cost	n/a	Schedule	n/a	Performance	n/a	Environmental	n/a	Safety	<input checked="" type="checkbox"/>
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Risk: If site security is compromised during decommissioning and demolition activities, then an environmental, safety, or theft event could occur.

Trend: Current Ranking: Green Prior CPP Ranking: N/A

Response/Plan: Will provide site security during decommissioning and implement security measures as identified by corporate security

6. Annual Funding Requirements, Authorizations and Gate Reviews

The Plant Retirement Program, with concurrence of the strategic elements in this document, will develop required 2013 annual funding requirements, authorizations and gate reviews.

The total Program cost includes cost for fossil unit dismantlement and ash pond closure and is estimated to be \$300 to \$400 million. The Program has received authorization to spend \$1.8 million in 2011, and \$ 5.9 million in 2012 (Not including Legacy Duke). Legacy Duke will have spent approximately \$6.4 million on plant retirement by the end of 2012 which includes Edwardsport demolition.

Table 3 below outlines the Program cost estimates for dismantlement and ash pond closure.

Table 3: Cost Estimates for Dismantlement and Ash Pond Closure

Decommissioning, Interface Projects, and Demolition

	2013	2014	2015	2016	2017	2018	Total
Legacy Progress Carolinas							
Weatherspoon	\$ 4,233,138	\$ 25,000	\$ -	\$ -	\$ -	\$ -	\$ 8,864,751
Lee (NC)	\$ 4,652,070	\$ (1,493,067)	\$ 553,126	\$ -	\$ -	\$ -	\$ 4,483,558
Cape Fear	\$ 5,810,601	\$ 3,105,369	\$ (1,986,083)	\$ -	\$ -	\$ 25,000	\$ 8,223,536
Sutton	\$ 645,611	\$ 4,169,206	\$ (1,664,279)	\$ 595,917	\$ -	\$ -	\$ 3,833,074
Robinson	\$ 1,871,725	\$ 5,154,614	\$ 6,531,110	\$ 3,156,176	\$ (990,000)	\$ (4,178,351)	\$ 12,038,987
Morehead City (Included with Lee)							
Lee (NC) CTs (Included with Lee)							
Total (w/o contingency)	\$17,213,145	\$10,961,122	\$ 3,433,874	\$ 3,752,093	\$ (990,000)	\$ (4,153,351)	\$ 37,443,905
Legacy Duke Carolinas							
Cliffside 1-4	\$ 1,449,732	\$ 535,860					\$ 1,985,592
Lee 1-2 (SC) and coal yard	\$ 384,841	\$ 44,905	\$ 1,184,508	\$ 723,543	\$ 47,313	\$ 48,097	\$ 2,433,206
Dan River 1-3 (Demolition)	\$ 856,644	\$ 1,802,733	\$ 2,574,148	\$ 1,363,920			\$ 6,597,444
Dan River CC (Replacement Water Supply)	\$ 3,367,424	\$ 8,328,139					\$ 11,695,563
Buck Demolition	\$ 2,421,741	\$ 910,962	\$ 4,149,995	\$ 2,037,481			\$ 9,520,179
Buck CC (Replacement Water Supply)	\$ 471,420	\$ 2,305,462	\$ 9,301,387				\$ 12,078,269
Riverbend 4-7	\$ 2,275,405	\$ 1,000,031	\$ 4,456,184	\$ 6,041,456			\$ 13,773,076
Buzzard Roost CTs	\$ 831,905						\$ 831,905
Buck CTs	\$ 94,893	\$ 428,688	\$ 1,119,407	\$ 42,169			\$ 1,685,157
Dan River CTs	\$ 158,153	\$ 43,912	\$ 764,473	\$ 521,941			\$ 1,488,478
Lee 4,5, and 6 (SC) CTs	\$ 158,153	\$ 43,912	\$ 764,473	\$ 521,941			\$ 1,488,478
Riverbend CTs	\$ 158,153	\$ 43,912	\$ 764,473	\$ 521,941			\$ 1,488,478
Total (w/o contingency)	\$12,628,463	\$15,488,515	\$ 25,079,047	\$ 11,774,391	\$ 47,313	\$ 48,097	\$ 65,065,825

Ash Pond Closure

	2013	2014	2015	2016	2017	2018	2019	Total
Legacy Progress Carolinas								
Weatherspoon	\$ 1,911,836	\$ 3,140,394	\$ 1,850,000	\$ -	\$ -	\$ -	\$ -	\$ 7,402,229
Lee (NC)	\$ 1,811,257	\$ 5,167,265	\$ 9,749,313	\$ 10,064,190	\$ 5,259,627	\$ -	\$ -	\$ 32,051,651
Cape Fear	\$ 314,517	\$ 876,719	\$ 5,062,624	\$ 10,885,842	\$ 4,065,794	\$ -	\$ -	\$ 21,205,496
Sutton	\$ -	\$ 65,622	\$ 379,887	\$ 1,452,079	\$ 5,000,000	\$ 8,407,412	\$ 4,250,000	\$ 19,555,000
Robinson	\$ -	\$ 200,000	\$ 750,000	\$ 3,661,676	\$ 5,193,351	\$ 4,203,351	\$ -	\$ 14,008,378
Total (w/o contingency)	\$ 4,037,610	\$ 9,450,000	\$ 17,791,823	\$ 26,063,786	\$19,518,772	\$12,610,763	\$ 4,250,000	\$ 94,222,754
Legacy Duke Carolinas								
Lee 1-2 (SC)		\$ 910,836	\$ 817,440	\$ 18,637,882	\$ 1,899,343			\$ 22,265,501
Dan River 1-3	\$ 910,836	\$ 817,440	\$ 18,637,882	\$ 1,899,343				\$ 22,265,501
Buck	\$ 126,522	\$ 3,215,160	\$ 10,921,040	\$ 19,306,251	\$ 1,934,761			\$ 35,503,734
Riverbend 4-7		\$ 126,522	\$ 3,215,160	\$ 10,921,040	\$ 19,306,251	\$ 1,934,761		\$ 35,503,734
Total (w/o contingency)	\$ 1,037,358	\$ 5,069,958	\$ 33,591,522	\$ 50,764,516	\$23,140,355	\$ 1,934,761	\$ -	\$115,538,470

7. Summary

The Plant Retirement Program CPP summarizes the overall plan for retiring coal-fired units and ash ponds at designated sites. The Program outlines the proactive strategy for Duke Energy to safely retire the designated units to an environmentally neutral state and close the ash ponds. The Program will continue to proactively and collaboratively engage various stakeholders to ensure effective alignment with corporate strategy, public policy, legislative and regulatory initiatives, and to identify gaps.

The Plant Retirement Program assumes the following:

- Fossil units will be decommissioned and demolished to grade-level.
- Environmental cleanup will include asbestos abatement, known hazardous and non-hazardous waste removal and chemical removal.
- The projects will include the restoration of remaining operating unit functionality to decoupling existing site interfaces which are presently integrated into the coal-fired units.
- Ash pond closure will incorporate a cap and monitor strategy.
- The investment recovery strategy incorporates investment from the sale of inventory, assets and scrap metal.
- The rate recovery approach is to include the recovery of dismantlement costs for non-nuclear generation assets as part of the overall depreciation expense that is included in the cost of service rate request during the 2012 rate case.
- The roadmap and processes established are modeled to incorporate additional plant retirements and ash pond closures as dictated by corporate strategy. Program will utilize designated plant resources for decommissioning tasks and ash pond closure where applicable.

Appendix A: References – Charters, Project Plans and other
Critical Documents

Plant Retirement Program Charter

Charter

[Plant Retirement Program]

Opportunity / Threat Statement:

In 2010 Progress Energy filed the integrated resource plan (IRP) with North Carolina Utilities Commission with plans to retire 11 coal-fired units at four North Carolina sites by the end of 2014. The Plant Retirement Program was developed to provide a structured approach for initiating, planning and executing the safe and environmentally neutral decommissioning and demolition of the units. The impacted sites are Cape Fear, Lee, Sutton and Weatherspoon.

Objective(s):

The Plant Retirement Program efforts include initiating and planning the strategy, cost estimates, and risk assessments associated with retiring a unit. Performing decommissioning and demolition of the units (existing components, equipment and structures) to grade-level and closing the ash ponds at impacted sites.

Scope: (Includes but not limited to)

1. Perform fleet-wide dismantlement studies.
2. Perform sites retirement assessments and risk evaluations (major areas include asbestos, hazardous and universal waste, and other environmental concerns).
3. Perform an ash pond closure engineering study (not including lay of land).
4. Perform engineering assessments as needed to support plant interface of existing CT units, Transmission and Distribution.
5. Prepare Project Execution plans for each site.
6. Prepare CPP and Governance Policy for approval.

Key Deliverables & Milestones

Key Deliverables & Milestones	Due Date
Develop Plant Retirement Guidelines	6/30/2011
Submit Initial CPP and Governance Policy for Approval	8/30/2011
Prepare Model Project Execution Plan	9/1/2011
Issue Fleet-wide Dismantlement Studies	12/31/2011
Dismantlement Complete	12/31/2016
Ash Pond Closure Complete	12/31/2019

Comments

1. Ash Pond Closure – Based on cap (\$100K/acre) and on-going monitoring (\$250K annual cost)
2. Environmental Clean-up – Place facility in an environmentally neutral state. No impact on existing remediation efforts.
3. Investment Recovery – market risks associated with scrap metal market volatility.
4. Explore common contractors for demolition and asbestos.

Funding Limit: (\$K)

	Dismantlement	Ash Pond Closure
2011:	\$1,888	\$300
2012:	\$6,417	\$700
2013:	\$10,894	\$8,750
2014:	\$4,819	\$15,700
2015:	\$102	\$14,050
2016:	\$440	\$15,250
2017:		\$12,000
2018:		\$10,000
2019:		\$4,250
Total	\$24,560	\$81,000

Approved By:

Date Approved: 6/6/11

Accepted By:

Revision #: 1

2014

Plant Demolition and Retirement Comprehensive Program Plan

Revision Number: 2

Program Manager: Issa Zarzar

Revision Date: 10/14/13

Member of: Outage And Maintenance Services

Comprehensive Program Plan

Document ID

Revision Summary

Date	Revision Summary
10/31/2012	Update program to include new retired facilities at Duke Energy Carolinas and Duke Energy Progress and to incorporate best practices from both organizations.
10/14/2013	Update program to include planed facility retirements in the Midwest and Florida

Program Overview

Purpose: ☒ Annual Review

☐ Revision

Proposed funding is estimated at \$21 million for plant decommissioning and demolition, \$19 million for decoupling projects, and up to \$32 million in ash basin closure in 2014. Each project within the CPP will be approved separately within the appropriate Delegation of Authority. Current estimated total program cost is \$350 million to \$600 million (which includes cost for fossil unit dismantlement and ash basin closure). Note that Midwest and Florida plant funding will be added once planning is complete.

Next key semi-annual review is expected on May 2014

Expected program completion date: 2020

Strategy: Fossil units will be decommissioned and demolished to grade-level.
Ash basin closure will incorporate a cap and monitor strategy, unless, on a case-by-case basis, another closure strategy is selected for a specific plant.

Designated Sites: Buck, Buzzard Roost, Cape Fear, Cliffside, Dan River, Lee (NC), Lee (SC), Morehead City, Riverbend, Robinson, Sutton, and Weatherspoon. In addition, the program will include designated facilities in the Midwest and Florida.

Baseline Assumptions:

- Closure facilities are listed in Table 1. Facilities in Florida and Midwest are not reflected in the overall budget at this time and will be added later.
- No impacts to dismantlement and ash basin closure strategy due to new regulations
- Sites will be restored to an environmentally stable state for all known issues.
- Preliminary cost estimates: Dismantlement (\$6M per site on average) and Ash basin Closure (\$100K-300K/acre)
- A portion of the demolition cost may be offset by investment recovery from scrap metal

Approval Required

This CPP requires approval of the Plant Demolition and Retirement Executive Governance Committee (EGC)

Approvals

The parties signing below indicate by their signature that they, or the body they represent below, have reviewed the CPP and either recommend approval of or approve the above Request for Approval.

Action	Name	Reviewing Position	Signature	Date
Recommend Approval	Issa Zarzar	Director – Plant Demolition and Retirement		10/7/2013
Recommend Approval	Al Smith	GM - Plant Retirement and Plant Integration		10/9/2013
Program Executive Governance Committee Approval				
Approve	Garry Rice	Deputy General Counsel		10/11/2013
Approve	Mitchell Griggs	VP Environmental		10/14/13
Approve	Mark Myers	VP Reg Utility Financial Planning		10-14-13
Approve	Paul Draovitch	VP Outage & Maintenance Services		10/14/13
Approve	Charlie Gates	SVP Power Gen Operations		10/14/13
Approve	Keith Trent	Exec VP & COO, Regulated Utilities		10/22/13

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1. Executive Summary

The Plant Demolition and Retirement Comprehensive Program Plan (CPP) provides the overall plan for the decommissioning of coal-fired units, combustion turbine units, and ash basins at designated Duke Energy (henceforth referred to as Company sites). The program provides the benchmarking, planning and execution of the strategy for retiring fossil units and ensures alignment with corporate strategy.

The CPP assumes the following.

- Ash basin closure will incorporate a cap and monitor strategy, unless, on a case-by-case basis, another closure strategy is selected for a specific plant.
- Environmental cleanup will include asbestos abatement, known hazardous and non-hazardous waste removal and chemical removal.
- Fossil units will be decommissioned and demolished to grade-level.
- The investment recovery strategy incorporates investment from the sale of inventory, assets and scrap metal.
- Program will utilize designated plant resources for decommissioning tasks and ash basin closure where applicable.
- The rate recovery approach is to utilize the amounts already being collected from customers through depreciation expense to the extent that spending is below such amounts. To the extent that spending exceeds amounts already collected, separate regulatory approval could be required to defer and recover incremental costs.
- The projects will include the restoration of remaining operating unit functionality due to decoupling existing site interfaces that are presently integrated into the coal-fired units.
- The roadmap and processes established are modeled to incorporate additional plant retirements and ash basin closures as dictated by corporate strategy.

2. Program Overview

Designated units are being retired to ensure compliance with state and federal regulations and as part of the Company's fleet modernization strategy. The designated coal-fired units are non-scrubbed units and would require additional environmental controls to meet operational compliance beyond 2015. The Program is not expected to be limited to these sites. As the need arises, other plant retirements and ash basins may be added. The schedule of proposed dates for plant retirements is below in Table 1.

Table 1 – Proposed/Retirement Plant Dates

Plant	Summer Capacity (MW)	In-Service Date of First Unit	Proposed/Retirement Date
Lee (SC) Old CTs	90	1968	January 2007
Miami Wabash 4C	17		2011
Edwardsport 6-8	160	1944	March 2011
Buck Units 3 & 4 ¹	113	1941	May 2011
Weatherspoon Units 1-3	171	1949	October 2011
Cliffside Units 1-4	198	1940	October 2011
Dan River Units 1-3	276	1949	April 2012
Gallagher 1 & 3	280	1959	January 2012
Lee (NC) Units 1-3	397	1951	September 2012
Lee (NC) Old CTs	75		October 2012
Cape Fear 5-6 ²	316	1956	October 2012
Robinson Unit 1	177	1960	October 2012
Buzzard Roost CTs	196	1971	October 2012
Buck Old CTs	62	1970	October 2012
Dan River Old CTs	48	1968	October 2012
Riverbend Old CTs	64	1969	October 2012
Cape Fear 2B CT	11	1969	October 2012
Morehead City CT	12	1968	October 2012
Cape Fear 1A, 1B, 2A	35	1969	March 2013
Robinson CT	11	1968	March 2013
Sutton Units 1-3	575	1954	December 2013
Buck Units 5 & 6	256	1953	April 2013
Riverbed Units 4 -7 ³	454	1952	April 2013
Lee (SC) 1-2 Coal Units and Material Handling	180	1951	April 2015
Miami Ft 6 (reg)			April 2015
Wabash River 2-5		1953	April 2015
Beckjord 1-6 (unreg) ⁴	862	1952	April 2015
Suwannee River 1,2 ⁵ & 3	129	1953	June 2016
Various Florida CT's ⁶			June 2016
Crystal River 1 & 2			April 2018

¹ The Buck project will include the dismantlement of inactive units (Units 1 & 2) on the site.

² The Cape Fear project will include the dismantlement of inactive units (Units 1 & 2 CC, Unit 3 & 4 turbines and the boilers 1- 8) on the site. The in-service date for the first unit on-site is 1923.

³ The Riverbend project will include the dismantlement of inactive units (Units 1-3) on the site.

⁴ The program will only provide consultation to unregulated sites at this time

⁵ Potential for early retirement

⁶ Includes Rio Pinar, Avon Park, Higgins, and Turner P1 and P2 CT's (9 Units total)

The Plant Demolition and Retirement Program (PDRP) provides the planning, design and execution of the scope and tasks necessary to restore the retired plant sites to a safe and environmentally stable state. The PDRP engages business units across the enterprise to ensure effective alignment of Plant Demolition and Retirement initiatives with corporate strategy, public policy, legislative and regulatory initiatives and to identify gaps in a timely manner. These efforts provide Duke Energy with a proactive approach to managing the retirement of fossil units.

The PDRP seeks concurrence to proceed with executing a retirement strategy for the designated coal-fired units, CT units, and ash basins on the basis of the following elements:

1. Coal-fired and CT units will be decommissioned to a safe and environmentally stable state,
2. Coal-fired and CT units will be demolished to grade-level, and
3. Ash basins will be closed with a cap and monitor strategy, unless, on a case-by-case basis, another closure strategy is selected for a specific plant.

Proposed funding is estimated at \$21 million for plant decommissioning and demolition, \$19 million for decoupling projects, and up to \$32 million in ash basin closure in 2014. Each project within the CPP will be approved separately within the appropriate Delegation of Authority.

3. Program Drivers

Several program drivers were identified that include legislative and regulatory expectations, environmental expectations, Business strategy – fleet modernization, recovery mechanisms, and initiatives and study projects.

a. Legislative and Regulatory Expectations

Since 1990, federal and state environmental regulations have gradually been changing the landscape for coal-fired electric power generation. The Clean Air Act Amendments of 1990 brought the first “cap and trade” program intended to significantly reduce emissions of NO_x and SO₂ from power plants. Other air emission reduction programs followed, including the North Carolina Clean Smokestacks Act that required the investment of several billion dollars by the Company to retrofit additional air pollution controls on several facilities. Recently, the environmental regulations and new initiatives that will impact cooling water systems, wastewater discharge temperature and chemical content, coal combustion residuals management and air emissions are on the horizon. The collective effects of these regulatory changes represent significant additional costs to the affected facilities.

The company has been tracking these developments for years, and has made a number of strategic decisions to prepare for the future, taking into account the capacity, age, regulatory uncertainty, cost of upgrades, and potential for repowering and other site-specific factors at each facility. As a result, some plants were selected to receive upgraded air pollution control and/or wastewater treatment systems, some sites are being repowered with new natural gas-fired plants as part of the fleet modernization program and still others, smaller - older plants, have been slated for retirement. These actions are all part of building the Company’s balanced solution and ensuring a state-of-the-art power system for the future.

b. Environmental Expectations

In older plants, the removal of asbestos-containing material (ACM) in some areas will be a major effort, involving significant expense and requiring completion before workers can safely begin equipment salvage and demolition activities. If the ACM is not disposed of properly then ongoing costs associated with ACM management will increase significantly. During decommissioning other known chemicals and materials will be removed and disposed or recycled. Any laboratory chemicals or inventories of metal-cleaning chemicals, which cannot be completely used before shutdown, will be sent for reuse to other company facilities, sold, or disposed of properly. Freon, batteries and residual oils (i.e., used lubricants, fuel, etc.) will also be reused, recycled, or disposed of. Older plants have instrumentation and pressure-vapor lighting that may contain mercury, or light ballasts and electrical equipment that may contain polychlorinated biphenyls (PCBs) at regulated concentrations. Mercury and PCBs will be removed and disposed of, or the equipment containing these compounds will be disposed of properly. During decommissioning, light bulbs and florescent lighting will be removed and disposed per local and state regulatory requirements. Lead paint is an issue for many older plants. Identification and removal of lead contamination will be required before workers can safely begin equipment salvage and demolition activities in some areas. All these and other solid, hazardous and universal wastes will need to be addressed during decommissioning to minimize environmental risks.

In addition to the above-mentioned environmental drivers, cleaning up fuel oil lines and addressing ash basin closure will also alleviate potential long-term liability associated with dam safety, fugitive dust and ground water contamination.

c. Business Strategy – Fleet Modernization

The Fleet Modernization Program encompasses a range of strategic investment opportunities in fossil generation at Company sites and/or through partnerships with other companies. One driver for fleet modernization is the aging fleet assets, as most of the units included in the initial Program scope are more than 50 years old. In addition to the age of the facilities, the Company considered the investments that would be needed to address known and expected regulations on nitrogen oxides, sulfur dioxide, mercury, particulates and other emissions; increasing costs of storing coal ash; and other factors. These retirements and new generation are part of a long-term strategy to modernize the fleet with new nuclear, cleaner coal, and natural gas, while continuing to invest in renewable and energy efficiency programs.

d. Recovery Mechanisms

Dismantlement charges are retirement activities which occur under the “108” account transactions, (as opposed to additions which occur under “107” account). These “108” account transactions are captured during the dismantlement process and recovered via the depreciation and rate case processes. Recovery of dismantlement costs for non-nuclear generation assets will be part of the overall depreciation expenses the Company includes in its cost of service request to the applicable government agency. However, if at any time the amounts spent exceed the amounts received from customers for non-nuclear generating assets, regulatory approval could be required to collect, defer and recover the incremental costs. The Company estimates site retirement costs when the site demolition studies are completed and begins recording appropriate recovery as new depreciation studies are implemented. This retirement cost is captured from the ratepayers until the site is actually removed from service.

Terminal Net Salvage (TNS) for generation assets is the estimated cost for the dismantlement of the plant offset by the salvage value to be recovered. TNS represents a net expense for the Company that will need to be recovered from ratepayers. The January 2012 TNS estimates, which have since increased, were included in the most recent DEP depreciation study. The net expense represented by TNS will increase the depreciation expense included in the cost of service rate request. Updated TNS values will be included in future DEC and DEP rate requests. Through cost of removal (COR), each jurisdiction has been collecting funds for compliance with various regulations. The Company continues to collect COR funds so the majority of the compliance costs would be covered using the COR reserve. In the case that the COR funds are not sufficient, see below for each jurisdiction's recovery plan.

- DE Carolinas and DE Progress – Costs will be deferred to the next rate case for recovery.
- DE Indiana - Costs will be addressed through a Federal mandates rider that collects 80% of the costs if the expenditures are related to federal mandates and the remaining 20% will be deferred to the next rate case.
- DE Ohio – Since Ohio is deregulated, recovery is less certain but various legislative initiatives are being considered at this time.
- DE Kentucky – Costs will be addressed through the normal ratemaking process or via the Environmental Surcharge Mechanism (ESM).
- DE Florida – Costs will be addressed through the Environmental Cost Recovery Clause (ECRC). The Coal Combustions Residual Rule (CCR) compliance costs related to DE Florida are lower since they do not have ash basins but they do have an unlined dry storage facility that will have to be addressed under the CCR regulation.

e. Initiatives and Study Projects

The PDRP is structured to support initiatives and study projects on an on-going basis. Currently the Program is supporting studies for the Crystal River Units 1 & 2 retirement and for retirement of the gas line between Bartow and Anclote. In addition, the Program is supporting Midwest facility retirement planning. The Program is also supporting planning efforts for future ash basin closure at operating sites.

4. Program Strategy

The CPP strategy encompasses retiring the fossil units to a safe and environmentally stable state by performing decommissioning activities on equipment and systems and demolishing the units to grade-level. The Program approach for ash basins is to close the basins with a cap and monitor strategy, unless, on a case-by-case basis, another closure strategy is selected for a specific plant. The Program approach is to establish a framework to ensure sustainability that is adaptable to the entire Regulated Utilities Operations.

The CPP strategy to demolish the units to grade-level was derived after a study to retire H. F. Lee Plant was conducted by URS Corporation in 2010. The Company approach was to utilize the H. F. Lee study as a roadmap to determine a PDRP strategy to retire the designated units. The study researched three options for retiring the units and three options for closing the ash basins. The three options for retiring the units were: (1) retire the units and perform the minimal scope of work to bring the units to a safe and environmentally stable state, (2) retire the units by performing all tasks necessary to bring the units to a safe and environmentally stable state and demolition the site to grade level or two-feet below grade and (3) retire the units by performing all tasks necessary to bring the units to a safe and

environmentally stable state and demolish the site to a Greenfield state. The three options for ash basins were: (1) do nothing and continue to maintain basins, (2) cap the basins and provide on-going monitoring, (3) close ash basins to a Greenfield state by excavating the basins and disposing of waste in a lined landfill.

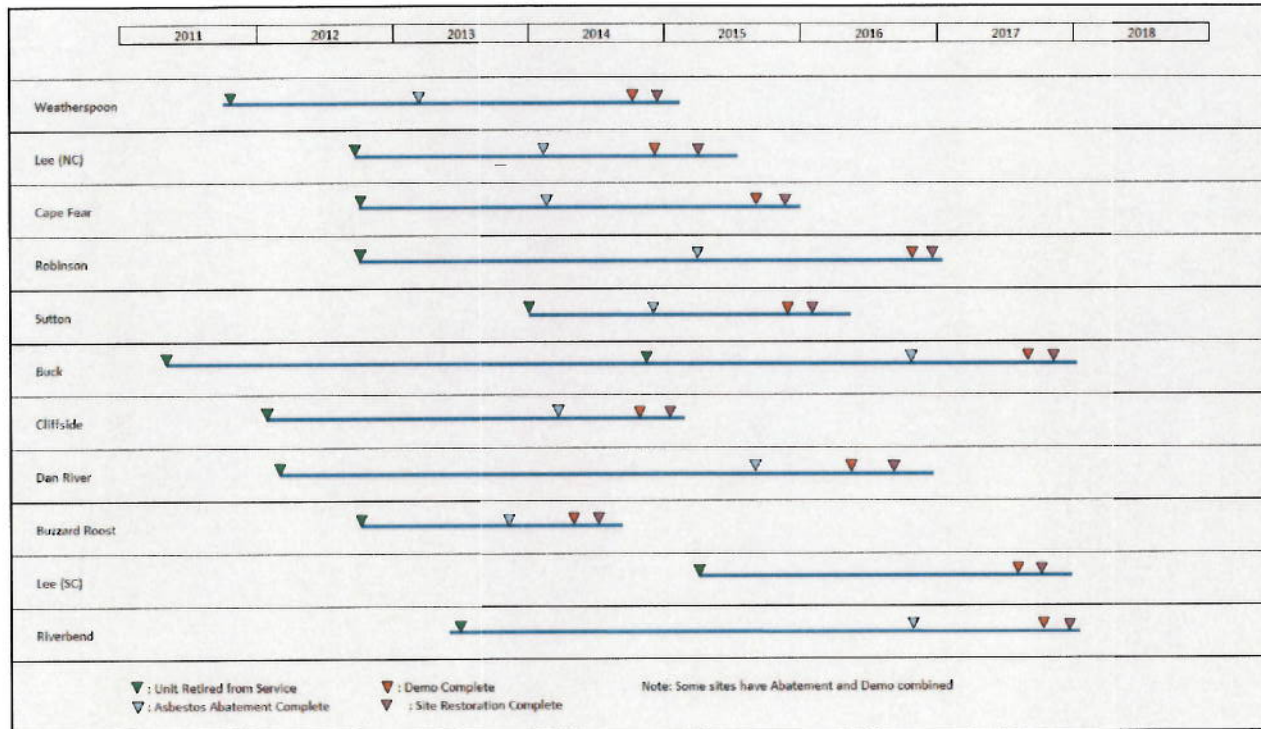
The options to demolish the designated sites to grade level and to cap and monitor the ash basins (unless, on a case-by-case basis, another closure strategy is selected for a specific plant) were recommended and approval was granted to develop a charter for a program based on this recommended scope. The expected results of this strategy are to minimize risks to Duke Energy from safety and environmental concerns, minimize on-going O&M costs, and promote the company as a community and environmental steward.

a. Fossil Unit Retirement Strategy

The strategy to decommission and demolish was derived and recommended after review of the URS H. F. Lee Plant Demolition Study and benchmarking with the Bartow Dismantlement project and the EPRI Plant Closure Interest Group. The Program strategy was recommended as the best approach to minimize safety and environmental concerns such as hazardous and universal waste, ACM, chemicals, PCB, and lead-based paint. As ACM and lead-based paint deteriorate, the cost for future abatement significantly grows. Federal and State regulations require proper disposal of chemicals. If structures are allowed to remain on-site after retiring the units, on-going maintenance cost would be required to maintain the site in a safe and secure manner. Once the site is at an environmentally stable state, the remaining structure has significant salvage value that would offset some of the costs associated with decommissioning.

There is a three-stage approach to implementing the strategy: (1) Decommissioning, (2) Demolition and (3) Site Restoration. The Decommissioning stage involves performing shutdown activities (such as washing boilers and precipitators, vacuuming and clinker blasting), environmental cleanup (such as removing hazardous waste, universal waste and chemicals and asbestos abatement), plant interface modifications (such as decoupling relays and rerouting piping and wiring) and transferring and selling inventory and assets. See the proposed Decommissioning schedule in Chart 1. The Demolition phase involves dismantling the site to an environmentally stable state (deconstruction of equipment and buildings to grade level. The Site Restoration involves restoring the site to grade-level, filling in basements (based on site designs) and backfilling and seeding.

Chart 1: Proposed Plant Decommissioning Schedule



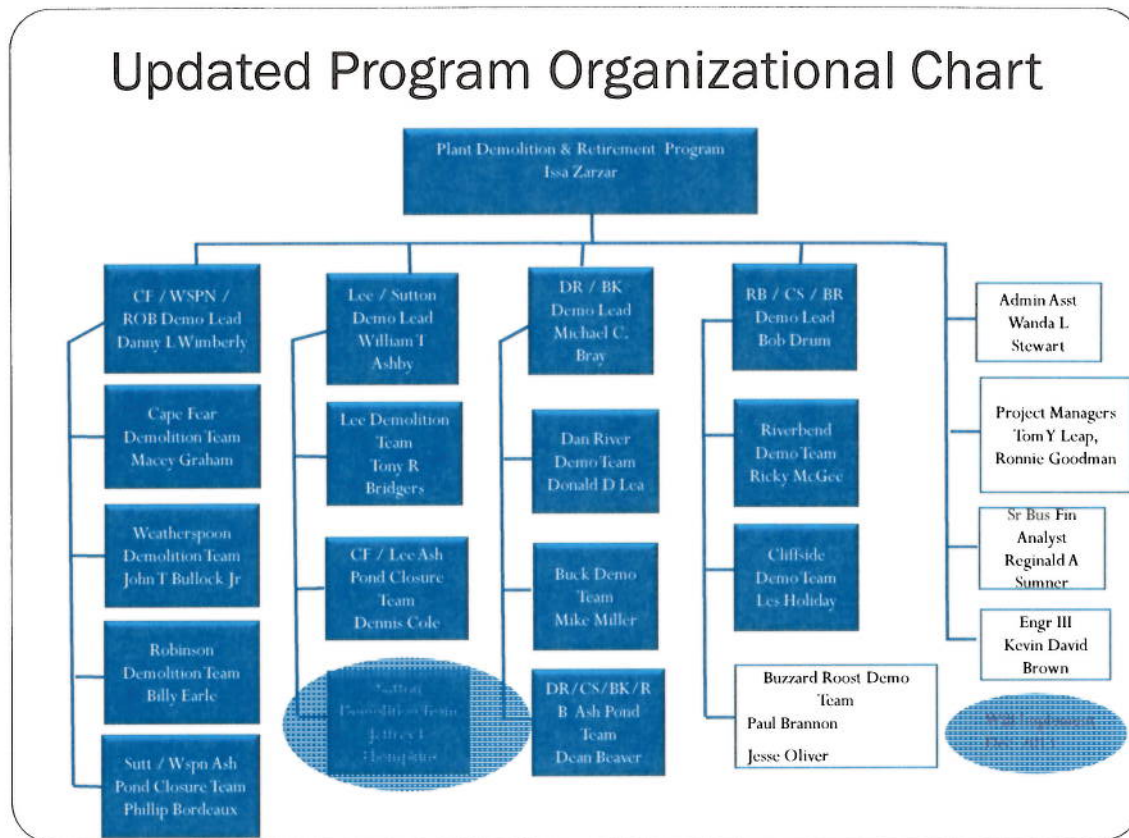
b. Ash basin Closure Strategy

Currently federal and state regulatory programs do not specifically address the decommissioning and closure of ash basins, but state regulations provide some options for closure framework. The recommended strategy is to cap the active and inactive ash basins and to monitor. Engineering design is completed for ash basin closure at Weatherspoon based on the recommended strategy. Plans are to submit this design to regulating agencies for approval in the Fall of 2013. Once regulatory approval is obtained, the team will proceed with closing the Weatherspoon ash basin. In addition, the team is currently performing site characterizations for H. F. Lee, Cape Fear, Dan River, and Buck ash basins. In 2014, the program will expand these studies into two Midwest facilities and into Robinson, Sutton, and Riverbend. The ash basin closure activities will be self-managed.

c. Organizational Design

The organizational design was developed based on benchmarking efforts and as a means to utilize the knowledge and technical skills of designated site personnel. Chart 2 below displays the current organization chart. The PDRP has established a support team that engages business units across the enterprise. This team ensures effective alignment of Plant Demolition and Retirement strategies with corporate strategy, public policy, and legislative and regulatory initiatives. The Program will allow flexibility to add additional designated sites subject to approval of associated CPP revisions.

Chart 2: Current PDRP Organization Chart



d. Benchmarking Strategy

The PDRP has participated in benchmarking efforts with the Bartow and Edwardsport dismantlement projects, the EPRI Plant Closure User Group, and the Fossil Decommissioning Network Group. Benchmarking involves sharing strategy, best practices and lessons learned. The PDRP will continue to support benchmarking efforts.

e. Permit Strategy

The permitting strategy is to retain site permits and plans, such as the Title V permit, the NPDES permit, and the SPCC plan and seek renewal for sites that currently are not slated for repowering. Compliance reports will be required regardless of the operating status of the units. A specific strategy and execution will be evaluated for each designated site based on on-going operational needs of the sites. The strategy also incorporates the requirements for permits and approvals that are needed for decommissioning and demolition activities.

f. Contract Strategy

The contracting and procurement strategy was designed to mitigate overall risks to the Program projects with particular focus on asbestos abatement and demolition contractors. The primary factors

considered when developing the strategy were safety, cost, current market conditions, environmental concerns, resource availability (both internal and external), and overall risk. The Program has pursued opportunities to bundle contract services across multiple sites. The Program has competitively bid the ash basin closure engineering, asbestos abatement, ash vacuuming/wash down and demolition contractors to qualified vendors.

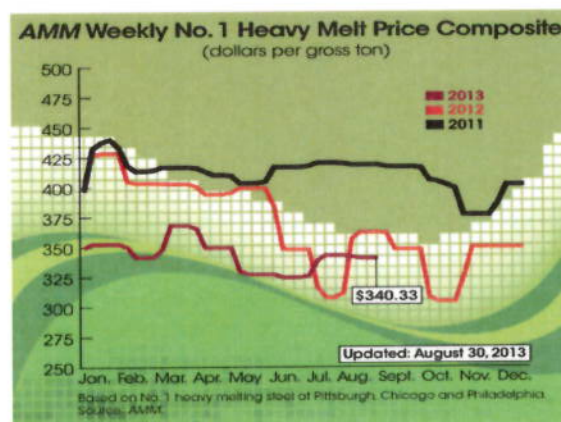
For all the inquiries and recommendations received for demolition and abatement contractors, the program narrowed the field from over 80 vendors to nine. The evaluation process took into account contractor safety, experience, and financial strength. These nine vendors participated in a bid event for Weatherspoon and Lee (NC) demolition and asbestos abatement. The field was narrowed down to five vendors that will participate in all future DEC and DEP bid events.

g. Investment Recovery Strategy

The investment recovery strategy focuses on optimizing the use of inventory and assets at the designated sites. The PDRP has collaborated with Supply Chain to develop and execute the investment recovery strategy. The initial focus for inventory is to ramp down the inventory levels prior to the retirement dates by evaluating min/max quantities and terminating automatic re-order and vendor managed processes. Inventory and assets will be marketed internally for redeployment options. Inventory and assets will be assessed for whether there is a business need to transfer them to other operating sites. Inventory and assets will be marketed externally if there is no need for internal redeployment.

The strategy for the sale of scrap metal is to incorporate the sale of scrap into the demolition contract. The demolition cost is primarily driven by the potential investment recovery from scrap metal. The amount of ferrous and non-ferrous metal will be assessed for each site. The Program will also evaluate options to market scrap metal (such as condenser tubes) directly. Due to variability in the market, the investment recovery amount from scrap metal may vary. Chart 3 below, shows how the steel scrap metal market has varied from January 2011 to August 2013.

Chart 3: American Metal Market Steel Scrap Price



h. Communications Strategy

A comprehensive communication plan has been developed for the program. The scope of this plan includes a high-level communications template to follow as units retire, as well as general communications that should be considered at each site as decommissioning follows. Corporate Communications will work closely with the appropriate decommissioning project managers, station managers, district managers and others to coordinate this effort. Because each site and community is unique, specific plans will be developed that follow this communication plan.

i. Records Management Disposition Strategy

Records related to station decommissioning or retirement are governed by the various regulatory agencies as well as by the operational needs of the Corporation. The objective of this strategy is to ensure the management of all records is based on regulatory requirements, industry standards and sound business practices. A Job Aid (FHG-ISC-JA-0007 Rev. 000) was developed to establish a standard process, provide direction, and guidance to ensure records are effectively managed to final disposition. Disposition encompasses retaining records on-site, retaining records in off-site storage, retaining records electronically and/or destroying records. A "Records Disposition Template Action Plan" has been developed to capture focus areas for the disposition process.

All documents produced during the decommissioning effort are maintained by the program for future record. Documents such as final site plans, underground utilities, and waste manifests are developed and stored for future use.

5. Program Analytics

The PDRP supports studies and initiatives that consider plants for retirement; however, the Program does not determine which sites are selected for retirement. The Program executes the necessary tasks to retire a plant once the retirement decision has been approved. The CPP has utilized the URS Lee Study and benchmarking to assess the program strategy and risks and to develop baseline assumptions for retiring plants. Economic Analysis was not performed to arrive at the Program strategy as the least cost option due to factoring in the safety and environmental risk of abandoning the units in-place. Future alternatives will be evaluated as needed on a project-by-project basis.

The identified risks and expected responses/plans are outlined below:

Program Risk	Probability					Impact
	Very High [90-100%]	High [66-89%]	Moderate [34-65%]	Low [11-33%]	Very Low [0-10%]	
1 Investment Recovery from Scrap Metal						
2 Demolition Safety						
3 Unforeseen Environmental Issues				1		
4 Regulatory		8	7	3	2	
5 Impact of Demolition on Existing Plant/Systems				5,6	4	
6 Program Environmental Approach						
7 Asbestos Abatement						
8 Site Security						
	Minimal	Moderate	Significant	Severe	Critical	
	<2%	<5%	<10%	<15%	>15%	

1. Investment Recovery from Scrap Metal

Impact to:

Cost	<input checked="" type="checkbox"/>	Schedule	n/a	Performance	n/a	Environmental	n/a	Safety	n/a
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Risk: Demolition contractor cost is primarily based on the investment recovery potential from scrap metal. Over the past few years the steel scrap metal price has been volatile, ranging from \$200/Ton to \$440/Ton (based on American Metal Market pricing 8/30/2013). The amount of recoverable ferrous and non-ferrous metals is also a variable. Investment recovery from scrap metal is based on the demolition contractor risk tolerance.

Trend: Current Ranking: Yellow Prior CPP Ranking: Yellow

Response/Plan: The Program estimate for demolition contractor costs is based on the Bartow demolition extrapolation and from other recent demolition projects. Allowing the contractor a period for the disposition of scrap metal will help alleviate some of their risk. The basis for the demo contractor estimates in the CPP is \$300/Ton of scrap ferrous metal. The program has established partnership with five demolition contractors for DEC and DEP. These five contractors are included in the bid process for each project. The Program will continue to monitor price fluctuations and adjust risk accordingly.

2. Demolition and Abatement Safety

Impact to:

Cost	n/a	Schedule	n/a	Performance	n/a	Environmental	n/a	Safety	<input checked="" type="checkbox"/>
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Risk: Due to the nature of this type of work, emphasis is placed on safety to prevent any event that would impact the health and safety of employees and contractors. Significant safety events can have severe impact on the public perception of Duke Energy. During dismantlement, many new activities will

be performed. These first time evolutions could pose a significant safety risk if not mitigated. If the existing infrastructure degrades, before demolition activities begin, to a point that facilities will fail, then a significant safety risk could be realized.

Trend: Current Ranking: Yellow Prior CPP Ranking: Yellow

Response/Plan: Contractors and employees have site-specific safety plans, and when needed Job Hazard Analysis (JHAs) are being developed. JHAs are developed and reviewed by corporate safety for major activities such as asbestos abatement and demolition. Site-specific safety plans will be developed. This includes site-specific drop plan with appropriate rigorous review. Lessons learned from completed projects will be incorporated into safety planning. The program has developed management review points for medium and high-risk evolutions. These risk evolutions require detailed site-specific plans and check lists for review. Site-specific safety walk-downs will be conducted and an engineering assessment of current site conditions will be performed.

3. Unforeseen Environmental

Impact to:

Cost	<input checked="" type="checkbox"/>	Schedule	<input checked="" type="checkbox"/>	Performance	n/a	Environmental	<input checked="" type="checkbox"/>	Safety	n/a
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Risk: Site contamination associated with past operations may be discovered or exacerbated through decommissioning/demolition activities.

Response/Plan: Contamination of soil and/or groundwater from petroleum products, PCBs and/or coal storage areas is known or can be anticipated at each of the designated sites. Ground disturbance or excavation below grade could result in discovery of stained soil or other indicators of contamination. Such discovery could cause project delays and additional expense to investigate and manage. To mitigate this potential impact, project plans reflect minimal below grade excavation, limited to removal of high risk elements (such as underground fuel piping) that will no longer be needed. An environmental plan will be developed for the demolition process and the plan will specify actions to be taken in the event of any unanticipated discovery, including suspect hazardous materials or products. Contractor personnel will be trained regarding project objectives and plans for minimization of site disturbance.

Risk: Legacy issues not fully addressed during site decommissioning/demolition may necessitate future expenditures for investigation and cleanup.

Response/Plan: There are active investigations and/or clean-up projects at several retired stations to address site contamination from past operations. These investigations primarily involve petroleum contamination from leaking tanks or underground piping. The existing soil and groundwater contamination issues for which an agency notice has already been made will be coordinated with the PDRP and funded through remediation. If undocumented issues are discovered by the PDRP then conditions will be reported to Environmental Services upon discovery. The PDRP will be responsible for emergency response activities for undocumented soil and groundwater issues. At a mutually agreeable juncture, assessment and/or corrective action would be transferred to Environmental Services.

In addition, ash basins on the sites will no longer be needed for management of coal combustion residuals. Closure of the ash basins will likely be required to address potential groundwater

contamination issues. If these legacy issues remain on site following decommissioning/demolition it is possible that ongoing investigation/remediation work will lead to discovery of additional issues on or under the demolition site (for example, contamination of groundwater beneath the coal storage area). There is risk that additional expenditures will be incurred in the future to resolve subsurface issues not addressed during demolition.

Trend: Current Ranking: Yellow Prior CPP Ranking: Yellow

4. Regulatory

Impact to:

Cost	<input checked="" type="checkbox"/>	Schedule	<input checked="" type="checkbox"/>	n/a	Performance	n/a	Environmental	<input checked="" type="checkbox"/>	n/a	Safety	n/a
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Risk: NC environmental regulations do not specifically address N.C. Department of Environment and Natural Resources' (DENR) role regarding decommissioning/demolition of facilities. There are some permit or notification actions that may trigger DENR to assert oversight to a greater degree than supported by the regulations.

Response/Plan: DENR or other agencies may exercise its option to become involved in the decommissioning/demolition process through minor permit modifications, notifications or assertion of jurisdiction over impacted groundwater, site contamination or changes to the operation of a permitted facility. Public announcement of plant closures could also attract the attention of DENR, which may want to ensure that environmental issues are addressed before the Company permanently ceases operations. DENR oversight of decommissioning/demolition could significantly increase the time and cost required to complete environmental aspects of the work. Communication with DENR regarding aspects of the decommissioning/demolition projects such as lead abatement has already taken place.

Risk: Federal and state regulations are pending for the disposition of ash basins. Reclassification of ash as a hazardous material would significantly impact cost of closure. Any regulations that would require additional closure measures other than the planned cap and monitor would have cost impacts.

Response/Plan: Monitor rulemaking and influence outcome to the extent possible. Collaborate with Environmental Services and Strategic Engineering on the proposal for the cap and monitor strategy. This is an issue for the entire company and industry, not just retiring plants.

Trend: Current Ranking: Yellow Prior CPP Ranking: Yellow

5. Impacting Operations of other units/systems on-site

Impact to:

Cost	<input checked="" type="checkbox"/>	Schedule	n/a	Performance	<input checked="" type="checkbox"/>	Environmental	n/a	Safety	n/a
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Risk: This risk is associated with the existing Combustion Turbine (CT's), Combined Cycle (CC) plants, and Transmission/Switchyard at the designated sites. Currently most of the infrastructure (i.e. fire water, telecommunication, service water, potable water, power supply, waste treatment, instrument

air, relays and breaker control and monitoring) associated with these CT's are interfaced through the designated coal-fired units. If decentralization of the CT's is not performed completely, then there is possible impact on CT operations and additional project cost would be incurred in dealing with these issues. Also, during demolition, the operating units need to be secured.

Trend: Current Ranking: Green Prior CPP Ranking: Green

Response/Plan: A support team has been formed that includes IT, CT operations, Transmission, Plant operations, Supply Chain, and Engineering. This team is leading the effort in evaluating all the CT unit needs. Several engineering studies are underway to address all infrastructure separation concerns. All cost associated with identified work to support this effort are included in the CPP. In addition, during demolition, the team will develop a detailed risk and drop plan with appropriate rigorous review. Lessons learned from completed projects will be incorporated into all planning.

6. Program Environmental Approach

Impact to:

Cost	<input checked="" type="checkbox"/>	Schedule	n/a	Performance	n/a	Environmental	<input checked="" type="checkbox"/>	Safety	n/a
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Risk: If the program environmental approach in dealing with regulatory agencies is inconsistent from site-to-site and does not take into account a programmatic approach, then significant cost could be incurred.

Trend: Current Ranking: Green Prior CPP Ranking: Green

Response/Plan: The environmental approach for site retirement and ash basin closure will be developed by a team comprised of subject matter experts from strategic engineering, environmental, and plant retirement, for each site.

7. Asbestos Abatement

Impact to:

Cost	<input checked="" type="checkbox"/>	Schedule	n/a	Performance	n/a	Environmental	<input checked="" type="checkbox"/>	Safety	<input checked="" type="checkbox"/>
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Risk: Asbestos abatement is a major portion of the environmental cleanup scope. Abatement includes the removal of ACM (such as thermal system insulation (TSI), transite and mastic/roofing material) and disposal. The quantity and type of ACM drives the scope and cost of abatement. If additional ACM scope is identified beyond estimated quantities the cost for abatement could increase significantly. State and Federal regulations require proper disposal of ACM.

Trend: Current Ranking: Green Prior CPP Ranking: Green

Response/Plan: Asbestos mapping and surveying will be performed at each designated site. The asbestos surveying includes reviewing prior abatement records, identifying the types of ACM on-site and

performing sampling. The asbestos mapping involves marking and estimating the quantity of ACM. The estimated quantities will be provided to bidders; however, bidders will perform site walk downs and develop their own estimates. ACM will be abated prior to demolition to address and alleviate risk associated with ACM.

8. Site Security risk

Impact to:

Cost	n/a	Schedule	n/a	Performance	n/a	Environmental	<input checked="" type="checkbox"/>	n/a	Safety	<input checked="" type="checkbox"/>
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Risk: If site security is compromised during decommissioning and demolition activities, then an environmental, safety, or theft event could occur.

Trend: Current Ranking: Green Prior CPP Ranking: Geen

Response/Plan: Will provide site security during decommissioning and implement security measures as identified by corporate security.

6. Annual Funding Requirements, Authorizations and Gate Reviews

The PDRP, with concurrence of the strategic elements in this document, will develop required 2014 annual funding requirements, authorizations and gate reviews.

The total Program cost includes cost for fossil unit dismantlement and ash basin closure and is estimated to be \$350 to \$600 million. The Program has received authorization to spend \$1.8 million in 2011, \$8.3 million in 2012, and \$35.3 million in 2013.

Table 2 below outlines the updated program cost estimates for dismantlement and ash basin closure.

Table 2: Cost Estimates for Dismantlement and Ash basin Closure (000)
(Funding for Midwest and Florida retired facilities are currently being developed)

<u>Description</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>Total</u>
Buck Steam Station Decommission	\$ -	\$ 1,495	\$ 2,465	\$ 1,701	\$ 1,858	\$ 3,352		\$ 10,871
Buck CT's Decommission	\$ (1)	\$ 127	\$ 211	\$ 653	\$ 42			\$ 1,032
Buzzard Roost CTs (6-15) Decommission (2014)	\$ 156	\$ 526	\$ 163	\$ -				
Cliffside Retire Units 1-4	\$ 548	\$ 2,302	\$ 757	\$ -				\$ 3,607
Dan River Decommissioning Retirement	\$ 1,345	\$ 3,003	\$ 1,727	\$ (533)	\$ 4,128			\$ 9,670
Dan River Retire Combustion Turbines	\$ 44	\$ 246	\$ 46	\$ 67	\$ 522			\$ 925
Decommissioning Lee Units 1 & 2	\$ -	\$ 105	\$ 454	\$ 1,276	\$ 793	\$ 53	\$ 54	\$ 2,735
Lee Units 4,5 and 6 (SC) CT's Decommissioning	\$ -	\$ 158	\$ 214	\$ 824	\$ 572			\$ 1,768
Riverbend CT's Retirement (2014)	\$ -	\$ 138	\$ 47	\$ 835	\$ 580			\$ 1,600
Riverbend Units 4-7 Retirement	\$ 123	\$ 2,158	\$ 3,858	\$ 2,447	\$ 7,032			\$ 15,618
	\$ 2,215	\$ 10,258	\$ 9,942	\$ 7,270	\$ 15,527	\$ 3,405	\$ 54	\$ 35,923
Buck Replacement Water Supply	\$ -	\$ 145	\$ 9,961	\$ 417	\$ 11			\$ 10,534
Decouple DRCC from DRSS	\$ -	\$ 2,455	\$ 9,299					\$ 11,754
	\$ -	\$ 2,600	\$ 19,260	\$ 417	\$ 11	\$ -	\$ -	\$ 22,288
Buck Ash Basin Closure (\$ 45 Million)	\$ -	\$ 525	\$ 3,754	\$ 13,790	\$ 25,671	\$ 2,761		\$ 46,501
Dan River Ash Basin Closure (\$ 24 Million)	\$ -	\$ 399	\$ 1,749	\$ 6,427	\$ 14,411	\$ 1,007		\$ 23,993
Riverbend Ash Basin Closure (\$ 41 Million)	\$ -	\$ -	\$ 3,099	\$ 11,386	\$ 24,598	\$ 1,784		\$ 40,867
	\$ -	\$ 924	\$ 8,602	\$ 31,603	\$ 64,680	\$ 5,552	\$ -	\$ 111,361
DEC Total	\$ 2,215	\$ 13,782	\$ 37,804	\$ 39,290	\$ 80,218	\$ 8,957	\$ 54	\$ 182,320

<u>Description</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>Total</u>
Cape Fear Steam Decommissioning	\$ 591	\$ 2,846	\$ 3,235	\$ 1,062				\$ 7,734
Lee Steam Decommissioning	\$ 658	\$ 4,605	\$ (1,042)	\$ 557				\$ 4,778
Robinson Decommission	\$ 935	\$ 3,536	\$ 5,371	\$ 6,935	\$ 3,407	\$ (1,087)	\$ (4,663)	\$ 12,512
Sutton Steam Decommissioning	\$ 63	\$ 515	\$ 3,082		\$ 540			\$ 540
Weatherspoon Steam Decommissioning	\$ 3,837	\$ 2,719	\$ 339					\$ 6,895
	\$ 6,084	\$ 14,221	\$ 10,985	\$ 8,554	\$ 3,947	\$ (1,087)	\$ (4,663)	\$ 32,459
Cape Fear Ash Pond Closure (\$ 86 Million)	\$ -	\$ 1,057	\$ 6,981	\$ 25,648	\$ 48,349	\$ 4,019		\$ 86,054
Lee (NC) Ash Pond Closure (\$ 70.5 Million)	\$ -	\$ 1,270	\$ 5,344	\$ 19,634	\$ 41,422	\$ 3,077		\$ 70,747
Robinson Ash Basin Closure (\$ 32 Million)	\$ -	\$ -	\$ 2,921	\$ 10,732	\$ 16,862	\$ 1,682		\$ 32,197
Sutton Ash Pond Closure (\$ 65 Million)	\$ -	\$ -	\$ 5,645	\$ 20,738	\$ 34,054	\$ 3,249		\$ 63,686
Weatherspoon Ash Pond Closure (\$34 Million)	\$ -	\$ -	\$ 2,794	\$ 10,266	\$ 18,732	\$ 1,609		\$ 33,401
	\$ -	\$ 2,327	\$ 23,685	\$ 87,018	\$ 159,419	\$ 13,636	\$ -	\$ 286,085
DEP Total	\$ 6,084	\$ 16,548	\$ 34,670	\$ 95,572	\$ 163,366	\$ 12,549	\$ (4,663)	\$ 324,126
Program Total	\$ 8,299	\$ 30,330	\$ 72,474	\$ 134,862	\$ 243,584	\$ 21,506	\$ (4,609)	\$ 506,446

7. Summary

The Plant Demolition and Retirement Program CPP summarizes the overall plan for decommissioning coal-fired units, CTs, and ash basins designated for retirement. The Program outlines the proactive strategy for Duke Energy to safely decommission the designated units to an environmentally stable state and close the ash basins. The Program will continue to proactively and collaboratively engage various stakeholders to ensure effective alignment with corporate strategy, public policy, legislative and regulatory initiatives, and to identify gaps.

The CPP assumes the following.

- Ash basin closure will incorporate a cap and monitor strategy, unless, on a case-by-case basis, another closure strategy is selected for a specific plant.
- Environmental cleanup will include asbestos abatement, known hazardous and non-hazardous waste removal and chemical removal.
- Fossil units will be decommissioned and demolished to grade-level.
- The investment recovery strategy incorporates investment from the sale of inventory, assets and scrap metal.
- Program will utilize designated plant resources for decommissioning tasks and ash basin closure where applicable.
- The rate recovery approach is to utilize the amounts already being collected from customers through depreciation expense to the extent that spending is below such amounts. To the extent that spending exceeds amounts already collected, separate regulatory approval could be required to defer and recover incremental costs.
- The projects will include the restoration of remaining operating unit functionality due to decoupling existing site interfaces that are presently integrated into the coal-fired units.
- The roadmap and processes established are modeled to incorporate additional plant retirements and ash basin closures as dictated by corporate strategy.

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing Late-Filed Exhibit No. 18 as filed in Docket Nos. E-7, Sub 1214 and E-2, Sub 1219, were served via electronic delivery or mailed, first-class, postage prepaid, upon all parties of record.

This, the 2nd day of November, 2020.

/s/Mary Lynne Grigg

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