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May 10, 2011

Renne C. Vance
Chief Clerk
NC Utilities Commission
4325 Mail Service Center
Raleigh, NC 27699-4325

Re: Docket No. E-7, Sub 819

Dear Ms. Vance:

Please find for filing the original and 30 copies of the Brief of the Public Advocacy Groups, along with a CD with the brief in two formats. Thank you for your attention to this matter.

Sincerely,



John D. Runkle
Counsel for the Public Advocacy Groups

cc. Service List – via email

Full Dist.
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VPISL - Patricia Barnes

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
DOCKET NO. E-7, SUB 819

FILED

MAY 10 2011

Clerk's Office
N.C. Utilities Commission

In the Matter of	)	
Application of Duke Power Company LLC d/b/a	)	
Duke Energy Carolinas, LLC, for Authority to	)	BRIEF OF
Recover Necessary Nuclear Generation	)	THE PUBLIC ADVOCACY
Development Expenses and Request for	)	GROUPS
Expedited Treatment	)	

NOW COMES the N.C. Waste Awareness and Reduction Network, Public Citizen, the N.C. Public Interest Research Group, the Nuclear Information and Resource Service, Common Sense at the Nuclear Crossroads and the Blue Ridge Environmental Defense League (the "Public Advocacy Groups"), through the undersigned attorney, with a brief in this proceeding. By filing this as a brief rather than as a proposed order, the Public Advocacy Groups are relying on the other parties to file proposed orders containing the customary procedural matters.

ARGUMENT

Duke Energy has failed to meet its burden of showing its request to incur development costs for the Lee Nuclear Station is both reasonable and prudent and therefore, the Commission should deny the application.

1. Standard of review.

The standard of review in under G.S. 62 110.7 (Section 7 of Senate Bill 3, Session Law 2007 397) is that "all reasonable and prudent project development costs, as approved by the Commission" will be included in rate base and fully recoverable in

rates in a general rate case pursuant to G.S. 62-133.¹ The statute limits the Commission review in that it is not able to "rule on the reasonableness or prudence of specific project development activities or recoverability of specific items of cost." G.S. 62 110.7(b). This latter restriction does not diminish the Commission's mandate to determine whether the costs to be expended are reasonable and prudent - and as argued by the Public Advocacy Groups, this includes the projected development costs as they relate to the overall cost of the nuclear project as well as a determination the project will even be completed.

Duke Energy has the burden of proof in this matter and is required to show the project development costs it is seeking are both reasonable and prudent and do so by a "preponderance of evidence." The statute at G.S. 62 110.7(b) states "the public utility shall include with its request such information and documentation as is necessary to support approval of the decision to incur proposed project development costs." "Prudent" as defined in Black's Law Dictionary, 5th Edition, is "sagacious in adapting means to end; circumspect in action, or in determining any line of conduct" and "practically synonymous with cautious." One cannot separate the means from the end, or the partial activity from its total cost; it certainly would not be prudent to do so in this instance. However, in its various applications and at the evidentiary hearing, Duke Energy presented no competent evidence in support of its claim that the development costs it expected to incur at the Lee Nuclear Station were either reasonable or prudent.

¹ Contrary to the statute, Duke Energy witness Rogers erroneously stated the nuclear development costs could only be recovered after the project received a certificate of public convenience and necessity pursuant to G.S. 110.1. (Tr. Vol. 1, pages 135-137).

The total cost of the Lee Nuclear Station is obviously relevant to this proceeding. Ratepayers will pay for the costs of developing the project and would ultimately bear the costs of the entire construction through the current construction work in progress ("CWIP") and the other baseload financing provisions of S.L. 2007 397. The Commission cannot determine that the costs associated with the open ended "project development" activities proposed by Duke Energy are reasonable and prudent without investigating how the proposed costs relate to the costs associated with the total project. It remains highly troublesome to the Public Advocacy Groups that Duke Energy has continued to request development costs and has begun construction at the Lee Nuclear Station without a firm estimate of the costs of those nuclear units, i.e., how much the ratepayers would ultimately pay for it or how it would affect the rates and bills of Duke Energy's customers. As a recommendation to the Commission, Public Advocacy Groups witness Bradford stated

In addition, the Commission should indicate a maximum acceptable cost for the Lee project itself. Such a determination need not be binding at this time, but it would provide useful guidance to Duke Energy and to its customers alike that the sky is not the limit where the Lee project is concerned. Given the instability in nuclear construction cost projections, a firm cap on costs is likely to be needed to protect customers from cost overruns and cancellations over the next decade as well. This is a prudent approach to limit costs now before allowing unchecked, and potentially staggering, costs of the proposed Lee Nuclear Station to be passed on to Duke Energy ratepayers. The question the Commission faces is whether it is reasonable and prudent to allow Duke Energy to incur costs without a firm estimate of the total costs of the project.

Duke Energy is proposing to spend significant amounts on a generating plant without a certificate of public convenience and necessity ("CPCN") from either the North Carolina Utilities Commission or its equivalent with the Public Service Commission of

South Carolina. (Tr. Vol. 1 page 161).² The Public Advocacy Groups believe it is questionable whether Duke Energy will be able to receive a CPCN for a nuclear facility as it faces a high hurdle in showing the nuclear plants compare favorably to energy efficiency, renewable energy and combined heat and power. G.S. 62 110.1(e) states

a certificate for the construction of a coal or nuclear facility shall be granted only if the applicant demonstrates and the Commission finds that energy efficiency measures; demand side management; renewable energy resource generation; combined heat and power generation; or any combination thereof, would not establish or maintain a more cost effective and reliable generation system and that the construction and operation of the facility is in the public interest.

As noted below, the costs of energy efficiency remain low and the costs of renewable energy resources continue to decrease.

Relevant to this matter, case law points out that the purpose of receiving a CPCN pursuant to G.S. 62 110.1, is to prevent costly overbuilding. *State ex. rel Utils. Comm'n v. High Rock Lake Ass'n*, 37 NC App. 138, 245 S.E.2d 787, cert. denied, 295 N.C. 646, 248 S.E.2d 257 (1978). Otherwise, Duke Energy ratepayers will bear the burden of paying for the proposed nuclear plants, as well as the risks of the new plants in terms of escalating costs, delay and abandonment.

2. Costs incurred.

The actual costs incurred by Duke Energy for the proposed Lee Nuclear Station

² Duke Energy does not have a combine operating license from the Nuclear Regulatory Commission to construct or operate the Lee Nuclear Station, nor, as admitted by Duke Energy witness Jamal, has the design for the proposed Westinghouse-Toshiba AP1000 reactors been finalized or tested. (Tr. Vol. 2, pages 35-36)

are not accurately reflected in its applications to expend funds for predevelopment and development activities. Duke Energy has requested the ability to incur a considerably greater amount than it has actually spent to date. At this point, based on the expenditures to date and the consistent slippage in a proposed operation date, Duke Energy's appears to be simply keeping the project as an option. Is it reasonable or prudent for ratepayers to bear this burden, or should shareholders make this investment?

Arguably, the amounts requested are not even "best estimates" of what Duke Energy expects to spend on the project as the estimates have been consistently and substantially higher than actual expenditures. Duke Energy initially requested the \$70 million it had spent on the project in 2007 prior to the passage of Session Law 2007-397 on what was also characterized as preconstruction activities. This was approved as reasonable in the Commission's Order dated March 20, 2007. In the second application in this docket, Duke Energy requested \$160 million until the end of 2009 to develop and construct the Lee Nuclear Station, including funding for the license review by the Nuclear Regulatory Commission, land and right of way funding, site preparation, and project planning and engineering. In its Order, dated June 11, 2008, the Commission found expected expenditures until the end of 2009 to be reasonable and prudent. On November 10, 2010, Duke Energy submitted an amended application requesting up to \$229 million in expenditures through December 31, 2013, and on December 6, 2010, Duke Energy filed a revised amended application requesting an additional \$287 million in nuclear generation project development costs between the date of the application and the end of 2013. Duke Energy's estimate for the total

expenditure through the end of 2013 was \$459 million. Subsequent to the evidentiary hearing, in its May 3, 2011 Notice of Acceptance of Public Staff's Position, Duke Energy stated it would accept the Public Staff's recommendation of limiting additional project development costs up to \$120 million from January 1, 2011 through June 30, 2012, and urged the Commission to adopt this position and determine those costs to be reasonable and prudent. At the same time, Duke Energy maintained its decision to continue to incur costs in 2010 was reasonable and prudent but did not state in the Notice of Acceptance the amount of those costs.

Given the variances in what was requested by Duke Energy in its various amended and revised applications, what the Commission determined to be reasonable and prudent in its earlier orders in this docket and what was actually incurred by Duke Energy for each year, the Public Advocacy Groups urge the Commission to carefully determine what actually has been spent and what Duke Energy actually expects to spend on the Lee Nuclear Station. As shown in its report filed on February 1, 2011, Duke Energy reported it had spent \$208,441,255 on the Lee project through December 31, 2010. The amounts spent each year on the Lee Station have been steadily declining; the semiannual Reports of Lee Nuclear Station Activities and Expenditures filed earlier in this docket show Duke Energy spent \$69,644,571 through the end of 2007, an additional \$54,844,949 in 2008, \$47,515,460 in 2009 and \$36,045,110 in 2010. The total costs incurred by Duke Energy for the Lee Nuclear Station for 2010 (and each of the proceeding years) were far less than even the \$120 million it is willing to accept for the 18-month period designated in its Notice of Acceptance, which averages out to be \$90 million annually. Duke Energy simply has not justified the

amount it has requested in its amended or revised amended applications, nor has it justified the \$120 million it states it is willing to "accept."

In return for the actual expenditures, the ratepayers have received no direct benefits; the project is no closer to being in operation now that it was when first announced. In Duke Energy's 2007 Integrated Resource Plan ("IRP"), the projected in-service date for the first Lee unit was 2018; three years later in the 2010 IRP, the in-service date for the first Lee unit has slipped three years, from 2018 to 2021, the second unit slipping to 2023. Customers are no closer to seeing electricity generated at the Lee Nuclear Station than they were in 2008. As Public Advocacy Group witness Bradford testified, "now, with far less justification than existed in 2008, Duke Energy is asking the Commission to more than double customer exposure to cost and risk." (Tr. Vol.1, page 83).

In his cross-examination, Mr. Rogers, Duke Energy CEO, testified "the overnight cost of a [nuclear] plant, based on best available information today, is roughly \$11 billion." (Tr. Vol. 1, page 151).³ It should be noted that "overnight costs" do not include financing costs, inflation, increases in labor costs and increase in component costs, and these are the costs which can substantially escalate the final cost of the plant. (Tr. Vol. 1, page 164). Mr. Bradford agrees with the cost estimates in the \$11 billion range but concludes

The so called U.S. "nuclear renaissance" is in shambles, with almost all of the projects having encountered some combination of cost overruns,

³ Elsewhere in his cross-examination, Mr. Rogers testified that the overnight costs of the two units at the Lee Station were only \$11 billion, a remarkable 50% less than the estimated costs of other nuclear projects across the country. (Tr. Vol. 1, page 164).

major delays or outright cancellation. The statement in the Duke Energy application (p. 4) that "interest in new nuclear generation has increased in the United States over the past several years" is incorrect. Most of the projects that were said to constitute the "renaissance" in 2008 have been canceled, suspended or greatly delayed. One of the primary reasons is the cost increases; the U.S. Energy Information Administration recently increased its estimate of the cost of new reactors by 37%.⁴

Because of the financial risk and uncertainties, the result is only a handful of nuclear plant projects are still viable in this country.

Cost overruns and delays are common in baseload power plant construction and Duke Energy is no exception. Mr. Rogers testified on cross-examination regarding new coal units under construction and stated "virtually every one of them has come in somewhere between 23 and 50 percent above the Commission-approved cost estimate in the CPCN." Duke Energy's experience at the Edwardsport, Indiana coal plant shows the cost increases from an original \$1.9 billion to \$2.88 billion as construction costs rose and financing costs increased because of delays. (Tr. Vol. 1, page 144-148; Public Advocacy Groups' Rogers Cross Exhibit 1). In a proceeding before the Indiana Utility Regulatory Commission on recovering the costs for the project, Duke Energy has proposed a hard cost cap of \$2.72 billion plus financing to rein in the expected cost overruns of the Edwardsport project. Similarly, at Duke Energy's Cliffside coal plant, now under construction, the initial cost estimate was \$2 billion for two 840 MW units, and when only one unit was given a CPCN, the cost estimate for the single unit was changed to \$1.8 billion. (Tr. Vol. 1, page 149).

In his cross-examination, Mr. Rogers testified about numerous factors which

⁴ The EIA report is at www.eia.doe.gov/oiaf/beck_plantcosts/pdf/updatedplantcosts.pdf

could cause the costs of the Lee Nuclear Station to increase. In addition to the factors causing costs at any power plant to increase during construction, the cost of key components necessary for nuclear plants may increase. Slippage in schedule from construction delays or the drop in demand could also cause delays in the nuclear plant operation date. (Tr. Vol. 1, pages 138-141). Cost increases could occur from upheavals in the national and global economies affecting the cost of capital. Costs would also increase from additional regulatory burdens similar to those put in place after the Three-Mile Island disaster or if the accident at Fukushima, Japan, makes nuclear power plant even more financially risky, or if major changes were needed in new plant design. (Tr. Vol. 1, page 141-144). Any or all of these could substantially increase the overall cost of the Lee Station, and cause substantial rate increase to the Duke Energy customers.

Duke Energy appears to expect the final price for the Lee Nuclear Station to come in much higher than the figures it is currently providing the Commission in this docket or in the 2010 IRP in Docket E-100 Sub 128. (Tr. Vol. 1, pages 154-155; Public Advocacy Groups' Rogers Cross Exhibit 2). The unredacted part of the internal email from Mr. Turner, then group vice president, to Mr. Rogers reads

obviously, the 'design it once, build it many times' philosophy that underpins the AP1000 design substantially reduces the likelihood of overruns in the 340 percent to 450 percent range, but it is not unreasonable to assume and plan for costs to be as high as 40 percent to 50 percent above current estimates (see for example, Cliffside and Edwardsport).

The cost estimates for the Lee Nuclear Station are at best vague, and at worst, so low as to be intentionally misleading. It is not reasonable and prudent to allow Duke Energy

to incur additional costs for the Lee Nuclear Station without solid estimates of what the actual cost is most likely to be.

Regardless of what the estimated costs are or what the final cost would be, the bottom line is that the Lee Nuclear Station would be an extremely expensive source of electricity. As a result, the Commission is required to make a determination that it is not a reasonable and prudent investment by the ratepayers to start in on the process.

3. Conditions precedent.

In addition to the arguments above providing a basis for denying Duke Energy's request, Mr. Rogers listed three condition precedents - new legislation in North Carolina, partners to bear the financial risk, and demand for new baseload units - necessary for Duke Energy going ahead with the Lee Nuclear Station. The Commission should determine whether incurring additional costs for the project is reasonable and prudent if one of these conditions has not been met. The Public Advocacy Groups maintain that the absence of any, or all, of these conditions proves conclusively no additional costs are reasonable and prudent.

A. Tracking CWIP. One of the conditions precedent for going ahead with the Lee Nuclear Station is automatic recovery of construction work in progress ("CWIP"). Mr. Rogers, was explicit in his statements that Duke Energy would not go forward with the Lee Nuclear Station without legislation from the North Carolina modifying G.S. 62 110.7 to allow Duke Energy to collect what Mr. Rogers termed "tracking CWIP," which others refer to as "SuperCWIP."

ROGERS: What's key to us is a series of things. One, is we have to get

legislation in North Carolina that allows us to track CWIP similar to the legislation that we have in South Carolina. That's a key before we'll move forward.

(Tr. Vol. 1, page 162). He emphatically reiterated his position in response to questions from both Commissioner Culpepper and Chairman Finley; Duke Energy would not go forward with the project without the tracking CWIP legislation. (Tr. Vol. 1, pages 171-173 and 185-189).

To date, legislation to allow tracking CWIP for nuclear projects has NOT been introduced in the General Assembly and it is extremely unlikely tracking CWIP will be introduced this session. In an interview in the Raleigh NEWS & OBSERVER on May 4, 2011, Mr. Rogers announced the "earliest the N.C. General Assembly could vote on the legal change sought by electric utilities would be during the next year's legislative session," blaming in part the financial uncertainties associated with the Fukushima nuclear crisis. Public Advocacy Groups' Supplemental Exhibit 1.⁵ The comments of Representative Mike Hager (R-Cleveland, Rutherford), Co-chair of the House Public Utilities Committee, described several issues he had with Duke Energy's proposed legislation and clearly stated the legislation would not be considered this year. Similarly, in an interview with the Charlotte BUSINESS JOURNAL on April 12, 2011, the Executive Director of the Public Staff, Robert Gruber, expressed his opposition to the legislation because "the nuclear crisis in Japan may drive construction costs for new

⁵ Murawski, "Nuclear plant change put off for now," March 4, 2011. www.newsobserver.com/2011/05/04/vprint/1173209/n_plant_change_put_off_for_now.html Given the late-breaking changes at the General Assembly, the Public Advocacy Groups offer this exhibit on the issue of whether Duke Energy has met its condition precedent, the tracking CWIP legislation from the NC General Assembly.

nuclear plants in the United States prohibitively high." Mr. Gruber further opined he believes the legislation will not arise in the 2011 legislative session. Public Advocacy Groups' Supplemental Exhibit 2.⁶

If the one key piece of legislation required by Duke Energy to finance the Lee Nuclear Station will not be considered until next year's short session of the General Assembly beginning in May 2012, or perhaps not until subsequent sessions, then it is not reasonable or prudent to incur expenditures on the project at this time.

B. Partners. A consolidation of nuclear projects in the Southeast, together with a reshuffling of the ownership interests, seems very likely. Although Mr. Rogers would not testify on cross-examination to the amount of the Lee Nuclear Station Duke Energy was willing to sell to other parties, he concluded "in the ideal world I'd like to have partners." (Tr. Vol. 1, page 159). Prior to the evidentiary hearing, Mr. Rogers supplemented his prefiled testimony and described an option the City of Jacksonville, Florida, had purchased for \$7.5 million on a 5 - 20% share of the Lee Nuclear Station. The cost to Jacksonville of the share had not been determined, although the option had to be acted on within 90 days after Duke Energy received a license from the U.S. Nuclear Regulatory Commission. (Tr. Vol. 1, pages 157). In cross-examination, Mr. Rogers described ongoing discussions with the South Carolina utility, Santee Cooper, as well as other entities, to purchase shares of the project. Mr. Rogers characterized

⁶ Downey, "N.C.'s customer advocate now opposes nuclear legislation," April 12, 2011. www.bizjournals.com/charlotte/blog/power_city/2011/04/ncs_customer_advocate_opposes.html Given Mr. Gruber's understanding of the proposed legislation and legislative process, the Public Advocacy Groups offer this exhibit on the issue of whether Duke Energy has met its condition precedent, the tracking CWIP legislation from the NC General Assembly.

this as "casting a wide net" to share the costs and risks. (Tr. Vol.1, pages 158-160).

He reported that one of the reasons for the merger with Progress Energy was because Duke Energy would "have a much larger customer base to spread the cost over and a larger, stronger balance sheet to handle it. (Tr. Vol. 1, pages 160).

Although spreading the financial risks of the Lee Nuclear Station may make financial sense to Duke Energy, the necessity for partners goes to whether Duke Energy actually needs the entire project to meet future demand. It further emphasizes the exceptional financial risk nuclear projects have; if a utility as large as Duke Energy cannot finance one on its own, the Commission should question the financial viability of going forward. Other utilities and power companies are backing away from nuclear projects across the country. (Tr. Vol. 1, pages 87-88). Mr. Bradford reported Exelon CEO as stating that "no way that nuclear power can charge a price in competitive markets that would produce acceptable returns, and his company has no interest in going forward with nuclear projects for the foreseeable future." (Tr. Vol. 1, pages 90).

Another outstanding question is whether it is fair to the North Carolina ratepayers to pay for development costs (and the subsequent construction and financing costs) if Duke Energy intends to sell significant shares in the project. In his testimony, Mr. Bradford questioned the fairness "if some companies are permitted to charge large costs to captive customers only later to sell shares of the plant to buyers who will want to pay market-based prices rather than make the captive customers whole." (Tr. Vol.1, pages 84-84).

C. Demand for baseload. Mr. Rogers's third condition precedent was the demand for additional baseload units would increase as expected by Duke Energy.

He stated "another key is that we'll continue to look at demand" to determine whether the Lee Nuclear Station was needed. (Tr. Vol.1, page 163). Duke Energy has not proved demand exists for large baseload units in the 2021 - 2023 time period. In the present docket, Duke Energy relied wholly on its 2010 IRP as the only evidence the Lee Nuclear Station could ever be considered a viable option.⁷ The hearing record contains little actual evidence and testimony on whether Duke Energy requires the baseload power from the Lee Nuclear Station. As noted above, what is known is Duke Energy's IRPs show the operation date for the Lee Nuclear Station has slipped three years over the last three years. Demand is not keeping up with Duke Energy's ambitious forecasts and the operation date for the Lee Nuclear Station has been consistently put off further into the future. The question whether the project is needed remains open.

While there is no North Carolina definition of a baseload power plant, the Commission requires the electric utilities to file monthly Base Load Power Plant Performance Reports pursuant to Rule R8-53.⁸ That rule requires reports on plant outages and generation capacity on each plant in the utility's nuclear fleet and listed coal plants, as well as all generating plants with greater than 500 MW maximum

⁷ Duke Energy's 2010 IRP was filed in Docket E 100 Sub 128 and to date has not been approved. Comments on it were submitted by the Public Staff and several intervenors and the Commission recently allowed the parties to submit proposed orders and briefs. The Public Advocacy Groups urge the Commission to review the comments of the Southern Alliance for Clean Energy, filed on February 10, 2011, and the comments of NC WARN file on February 11, 2011, in the IRP docket. Both comments address demand for baseload and the viable alternatives to meeting or lowering demand through energy efficiency and renewable energy sources.

⁸ Duke Energy currently is filing those reports in Docket E-7, Sub 935. The Commission may take judicial notice of these filings.

dependable capacity ("MDC") utilizing coal or nuclear fuel.⁹ The Lee Nuclear Station clearly falls within this definition of baseload. The 500 MW capacity limit clearly distinguishes between the baseload units that can be operated most of the time and the peaking units that are operated only when required. A useful distinction between the two resource types is the baseload units take time, up to days, to ramp up to full operation while peaking units, such as the natural gas combustion turbines, can generate electricity in a far shorter period of time after being dispatched.

In its February 2, 2011 filing in Docket E-7, Sub 935, Duke Energy reports in its Base Load Power Plant Performance Report that it currently has 11,854 MW in baseload units. This total baseload capacity figure is useful in looking at the load duration curves submitted in each of the IRPs, including the 2010 IRP relied upon by Duke Energy herein. A load duration curve places the MW load on the system for each of the 8760 hours in the year and the resulting curve shows the annual range of load from the lowest load needed for an autumn night as an example to the highest peak on a summer afternoon. In its 2010 IRP, Duke Energy provides two load duration curves in its IRP, Figure 3.1 (without energy efficiency) on page 54, and Figure 3.2 (with energy efficiency) on page 57. The load range for 2010 is 4500 MW at the lowest end and almost 17,000 MW at the upper end, with the average 2010 hourly sales approximately 10,900 MW.

⁹ Another way to view baseload is to include generating units that operate a certain percentage of the year, with rule of thumb estimates ranging from 35% up to 65% or more. The U.S. Department of Energy, in its regulation, 10 C.F.R. 500.2, defines a "base load power plant" as "a powerplant, the electrical generation of which in kilowatt hours exceeds, for any 12 calendar month period, such powerplant's design capacity multiplied by 3,500 hours." This includes plants that operate for more than 40% of the year (3,500 hours divided by 8,760 hours in a year).

An important factor emerges from reviewing Duke Energy's load duration curves. When all of its baseload plants are in operation (12,679 MW) they provide more electricity than is needed for 87% of the hours in a year; in other words, not all of the existing baseload units can operate for most of the year. For most of the year, the existing plants are either shut down and idle or spinning (still operating but not connected to the grid). Further, in its load duration curves, Duke Energy then forecasts increases in load for each of the hours for 2015, 2020 and 2025.¹⁰ Even using the load duration curve without energy efficiency, Duke Energy still has excessive baseload through 2025; with Duke Energy's projected energy efficiency programs, the current baseload plants provide excessive load for more than 50% of the year. With additional energy efficiency measures or combined renewable energy sources, less and less baseload will be needed.

It would not be reasonable and prudent to approve project development and construction costs for a project that would not be needed AND is extremely costly in comparison to other types of generating plants, and even less to renewable energy facilities and energy efficiency projects. Mr. Bradford testified that one of the reasons why the "nuclear renaissance" has collapsed is because projected natural gas prices (and therefore the cost of combinations of natural gas and renewable energy resources) are significantly lower than was the case in 2008. (Tr. Vol.1, page 82). Added benefits to the new natural gas facilities are that they can be readily built without requiring untested technology. Mr. Rogers noted Duke Energy's natural gas plants had

¹⁰ Without explanation, the load duration curves show a substantially greater increase in growth for the hours requiring the lowest load than for peak hours.

not been delayed, meeting their operation dates. (Tr. Vol.1, page 140). In his testimony, Mr. Bradford concludes

Falling costs of alternatives make it more urgent now than in 2008 that the Commission requires Duke Energy to use a competitive power procurement process to screen possible power supply resources. In addition, because of the strong likelihood that energy efficiency is available at lower cost than the proposed nuclear station, the Commission should reiterate the statement in its 2008 order to the effect it will require a showing that programs are in place to capture all cost effective energy efficiency before it accepts as prudent any decision to build a nuclear unit.

(Tr. Vol.1, page 85). This position is supported by Bradford Exhibit 2, from the Exelon 2020 vision, showing the cost-effectiveness of various options and rating them on their economic ability to reduce carbon outputs. (Bradford Appendix B - Exelon 2020, "Exelon's view of the cost and supply curve for low carbon options in the context of its plan to reduce its carbon footprint"). Most efficiency measures and several renewable energy resources have become much more cost-effective than nuclear sources, even when carbon output is factored in the equation.

As a basic premise, Duke Energy has significantly overestimated the need for baseload power plants over the IRP planning horizon, and as a result, continues to include expensive new nuclear plants, the Lee Nuclear Station. The unfortunate result of overly optimistic growth projections and ignoring alternatives to conventional generation is that Duke Energy's plan relies on new and costly baseload plants, all nuclear, that would cause electricity bills to increase dramatically over the next decade and beyond. The Public Advocacy Groups believe demand for baseload nuclear plants will decrease significantly through energy efficiency and renewable energy sources.

CONCLUSION

As demonstrated above, Duke Energy has not met its burden in G.S. 62 110.7 to show the development and construction costs for the Lee Nuclear Station are reasonable and prudent. The costs of the project are increasing, and at the same time the starting date has consistently slipped. None of the conditions precedent stated by Duke Energy witness, Mr. Rogers, have been met -- Duke Energy was not able to pass tracking CWIP legislation; the costs and risks of this undertaking require Duke Energy to find new partners in the project; and the need for power from new baseload plants is declining. The Lee Station is simply not a viable project. As a result, the Commission is required to find that it is not prudent or reasonable to expend any additional funds on development activities for the Lee Nuclear Station.

This is the 10th day of May 2011.


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CERTIFICATE OF SERVICE

I hereby certify that the following persons on the docket mailing list have been served this BRIEF OF THE PUBLIC ADVOCACY GROUPS by deposit in the U.S. Mail, postage prepaid or by email transmission:

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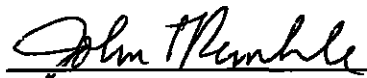
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This is the 10th day of May 2011.



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