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March 24, 2010

OFFICIAL COPY

VIA HAND DELIVERY

Ms. Renne Vance
Chief Clerk
North Carolina Utilities Commission
430 North Salisbury Street
Dobbs Building
Raleigh, NC 27603-5918

FILED

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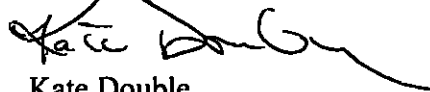
Clerk's Office
N.C. Utilities Commission

RE: Investigation of Integrated Resource Planning in North Carolina - 2009
Docket No. E-100, Sub 124

Dear Ms. Vance:

Enclosed please find for filing in the above-captioned matter on behalf of Environmental Defense Fund, Southern Alliance for Clean Energy, the Southern Environmental Law Center, and the Sierra Club an original and thirty-one (31) copies each of revised pages 30, 31, 36 and 37 of the Direct Testimony of John D. Wilson – Public Version. Kindly date-stamp the extra copy and return it to me. By copy of this letter, I am serving all parties of record.

Sincerely,



Kate Double
Legal Assistant

Enclosures

cc: Parties of Record

Full Dist. MAF

PUBLIC VERSION

1 Progress's potential study indicates that the findings were benchmarked against
2 other utilities. However, the results of that benchmarking are not discussed in the report
3 or any other material I had the opportunity to review.

4 Duke's potential study included only a brief comparison of its findings and
5 recommendations to programs operated by utilities serving 500,000 to 2,000,000
6 customers. However, the comparison in Duke's study focuses on spending, not energy
7 savings impacts. (The study indicates that the recommended spending levels are
8 somewhat above average, but within the range of typical programs.) The Forefront study
9 does compare its five-year potential of 1.9% energy savings to other utility DSM program
10 savings, but the comparison is so cursory that the reported impact of 2.9% for other
11 utility DSM programs is not clearly represented as to whether it refers to cumulative or
12 annual program impacts.³² Even though this average 2.9% impact is more than 50%
13 higher than the recommended five-year program, the report does not provide any
14 explanation for this substantial deviation, let alone justify a 1.9% five-year savings
15 potential in comparison to the 7.2 to 13.6% ten year savings potential discussed above.

16 The lack of a comparison to findings by comparable utilities is of concern because
17 the assumptions and methods selected may result in an inaccurate estimate of energy
18 efficiency potential. For these studies to be considered credible and comprehensive, a
19 thorough and convincing explanation for the unusually low potential estimates in these
20 studies should be provided.

21 The second problem with both the Duke and Progress potential studies is that the
22 measures studied exclude substantial energy savings opportunities. As discussed above,

³² Forefront Study at 94.

PUBLIC VERSION

1 the Duke study included too few measures to be considered comprehensive. For example,
2 its residential sector analysis only identified two cost-effective measures, programmable
3 thermostats and "set back HVAC," omitting commonly considered measures such as heat
4 pump upgrades.

5 The Progress study does include a large number of measures. However, the
6 measure count is somewhat inflated by a high degree of detail. For example, over
7 quarter of the measures are various non-residential chillers.

8 The measure list used by Progress Energy appears to exclude some quite obvious
9 and widely available technologies. I made a cursory comparison to the measure list for
10 the Florida potential study conducted for Progress Energy Florida and other utilities.

11 *Among the residential measures not found in the North Carolina study are high efficiency*
12 *room air conditioners, water heater blankets, faucet aerators and low flow shower heads.*

13 The study also omits non-residential measures such as roof insulation and duct sealing.

14 **Q. DID THE STUDIES ADDRESS ALL SECTORS AND MEASURES THAT**
15 **WOULD YIELD SIGNIFICANT ENERGY SAVINGS?**

16 **A.** No. I identified three substantial measures or practices that are missing from the Duke
17 and Progress studies: a Home Energy Comparison Report, a building
18 re/retro/commissioning program, and various energy recycling technologies, including
19 combined heat and power. As described in Wilson Exhibits 10-12, these three energy
20 efficiency measures or practices alone could double the energy savings impact forecast
21 by North Carolina Utilities.

22 Furthermore, several end use sectors, including the transportation,
23 communications and utilities sector, appear to be omitted from the Duke and Progress
24 studies. This is a significant omission, as this sector has highly energy-intensive customer

PUBLIC VERSION

1 Rather than being driven by a “bottom-up” analysis of options, the scale of the
2 Progress demand response and energy efficiency programs appear to be driven by a May
3 2007 goal to double “the amount of peak load reduction capability available through
4 DSM and EE programs, about 1,000 megawatts (MW).” Progress IRP at 17. No basis for
5 this goal is explained in the IRP. It is perhaps no coincidence that its year 15 portfolio
6 would save almost exactly 1,000 MW, the amount of the goal announced by Progress in
7 2007. While the expansion of its program is laudable, Progress has not associated this
8 target with a completion date nor an energy savings target.³⁵ It would be just as
9 incomplete if Progress announced a supply-side resource development program without a
10 timeline or anticipated level of resource use.

11 Progress does appear to be actively moving forward with its energy efficiency
12 programs. According to Progress Witness Edge, Progress “is investigating the potential
13 for new DSM/EE program opportunities on an on-going basis . . .” The company is
14 seeking approval of new residential programs, and is considering “a residential
15 behavioral change initiative and other DSM/EE research and development pilots.” Direct
16 Testimony of David Christian Edge at 8-9. These programs are also briefly described as
17 “prospective program opportunities” in the resource plan. (p. E-5) While it is
18 encouraging to learn that Progress is considering new unspecified programs, it is unclear
19 whether their program development is informed by the type of comprehensive analysis
20 required by Rule R8-60(g).

³⁵ In the testimony of Progress Energy Witness B. Mitchell Williams, he testified that PEC is “relying upon achieving a approximately 1,000 megawatt reduction in peak load by 2014” (transcript volume 4, p. 143, line 19); the 2009 IRP indicates 1,000 MW of peak load reduction would be achieved in 2019; and the potential study prepared by ICF indicates that this level of peak load reduction would be achieved in 2024.

PUBLIC VERSION

1 An examination of the potential study demonstrates that Progress has not fully
2 disclosed in its IRP its consideration of energy efficiency resources. Two examples of
3 programs that Progress has considered but did not discuss in its resource plan are an
4 ENERGY STAR Appliance program and six non-residential incentive programs.

5 An ENERGY STAR Appliance program is recommended in Progress's potential
6 study, but it is not included in any of the energy efficiency programs discussed in the
7 Progress IRP. For example, Progress's Residential Home Energy Improvement Program
8 does not include appliances. Neither does the Progress resource plan explain why
9 Progress may have rejected an ENERGY STAR appliance incentive program.

10 Progress's potential study also recommends six non-residential incentive
11 programs with cost-effectiveness scores that suggest they would be highly cost-effective.
12 The Progress resource plan does include the Commercial, Industrial, and Governmental
13 (CIG) Energy Efficiency Program, which is "available to all CIG customers interested in
14 improving the energy efficiency of their new construction projects or within their existing
15 facilities." The program offers both prescriptive incentives that appear to cover a broad
16 range of end-use categories as well as custom incentives available for "opportunities not
17 covered by the prescriptive measures." However, during the first two months of the
18 program, Progress reported only one transaction. If Progress is making effective use of
19 the insights offered by ICF International regarding opportunities in the CIG sectors, it is
20 not evident in either the resource plan or its supporting testimony.

21 Even if Progress had incorporated its potential study into its resource plan, the
22 resource plan would still lack a comprehensive analysis of demand-side resource options.
23 Furthermore, Progress appears to have considered only one alternative demand-side

CERTIFICATE OF SERVICE

I hereby certify that the following persons have been served with the revised pages 30, 31, 36 and 37 of the Direct Testimony of John D. Wilson – Public Version on behalf of Environmental Defense Fund, Southern Alliance for Clean Energy, the Southern Environmental Law Center and the Sierra Club either by electronic mail or by deposit in the U.S. Mail, postage prepaid:

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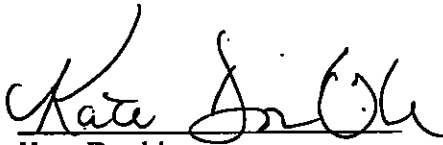
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This 24th day of March, 2010.


Kate Double