BEFORE THE GEORGIA PUBLIC SERVICE COMMISSION

In the Matters of Georgia Power Company's Application for Certification of Its Demand Side Management Program	)))	**DOCKET NO. 31082**

DIRECT TESTIMONY OF JOHN D. WILSON ON BEHALF OF SOUTHERN ALLIANCE FOR CLEAN ENERGY

MAY 7, 2010

List of Exhibits

JDW-DSM-1	Official Resume of John D. Wilson
JDW-DSM-2	Southern Alliance for Clean Energy Letter of Concern Regarding Demand-Side Management Working Group
JDW-DSM-3	Post-tax Earnings-to-Program-Cost Ratios for Duke Energy Carolinas Conservation Programs, Varying Amortization Period from One to Eleven Years
JDW-DSM-4	Recommended ‘Additional Sum’ Structure: Lost Revenues Plus Performance-Based Financial Incentive (with comparison to Georgia Power’s Proposal)

I. Background

Q. PLEASE STATE YOUR NAME, POSITION, AND BUSINESS ADDRESS.

A. My name is John D. Wilson. I am Director of Research for Southern Alliance for Clean Energy ("SACE"), and my business address is 1810 16th Street, NW, 3rd Floor, Washington, DC 20009.

Q. PLEASE STATE BRIEFLY YOUR EDUCATION, BACKGROUND AND EXPERIENCE.

A. I graduated from Rice University in 1990 with a Bachelor of Arts degree in physics and history. I received a Masters in Public Policy Degree from the John F. Kennedy School of Government at Harvard University in 1992 with an emphasis in energy and environmental policy and economic and analytic methods. Since 1992, I have worked in the private, non-profit and public sectors on a wide range of public policy issues, usually related to energy, environmental and planning topics.

I became the Director of Research for SACE in 2007. I am the senior staff member responsible for our energy efficiency program advocacy, as well as being responsible for work in other program areas.

I have testified before the North Carolina Utilities Commission (Dockets E-7 Sub 831 and E-100 Sub 124) and before the South Carolina Public Service Commission (Dockets 2007-358-E and 2009-226-E). I have testified and presented before the Florida Public Service Commission (including Dockets 080407 – 080413) and presented to the Board of the Tennessee Valley Authority regarding energy efficiency and renewable energy.

I have also testified or presented before the legislatures of Florida, North Carolina and Texas, the Texas Natural Resource Conservation Commission, and the U.S. Environmental Protection Agency on numerous occasions. I have participated in North Carolina Climate Action Plan Advisory Group and the South Carolina Climate, Energy & Commerce Advisory Committee as an alternate for Dr. Stephen A. Smith, Executive Director of SACE. I have also served as a member of various technical work groups dealing with energy supply and efficiency issues. I have served on numerous state and local government advisory committees dealing with environmental regulation and local planning issues in Texas. I have been an invited speaker to a wide variety of academic, industry and government conferences on a number of energy, environmental and planning related topics.

A copy of my resume is attached as Exhibit JDW-DSM-1.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS CASE?

A. I am testifying on behalf of SACE.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to present my evaluation of the Application for the Certification of Demand Side Management Programs ("DSM programs application") filed by Georgia Power Company. I will evaluate whether the Commission should issue the Certification or some other Certification based on the conclusions I reached in my IRP testimony in Docket No. 31082. I will also review the "additional sum" financial incentive proposal to determine whether it is appropriate and justified.

Q. WHAT IS THE BASIS FOR YOUR TESTIMONY?

A. In preparing my testimony, I evaluated the resource plan, DSM program application and testimony of Georgia Power, as well as responses to data requests. I also reviewed some documents from prior dockets and material from the DSM working group. I also relied upon documents and analysis related to the financial incentives for energy efficiency programs approved by other state utility regulators, and on nationally-recognized reports and studies that reflect best practices or common understanding of industry leaders.

Q. WHAT ARE YOUR OVERALL CONCLUSIONS?

A. The conclusions relevant to this docket are largely developed in my testimony regarding the 2010 Integrated Resource Plan (IRP) submitted by Georgia Power.

An aggressive level of energy efficiency programs is essential to providing Georgia Power customers with the most economic and reliable electric service for the next decade and beyond for many reasons. Georgia Power's recommendation to certify the base case energy efficiency programs should be rejected for the following reasons, which are repeated from my IRP testimony in Docket No. 31081.

- The selection of the base case energy efficiency alternative is carelessly flawed. Georgia Power's own data, as presented in its filed DSM programs application, shows that the "legislative case" outperforms the recommended "base case" on every cost-effectiveness test. And if considered under the same assumptions about fuel cost and federal legislative requirements, the "legislative case" performs even better. Even if the following concerns are ignored, Georgia Power is recommending less than half of the energy efficiency resources that its own analysis suggests would be cost effective, ***putting downward pressure on rates.***

- In its DSM programs application, Georgia Power has miscalculated the costs and benefits of energy efficiency programs. Avoided costs are improperly applied to energy efficiency measures, cost-effectiveness formulas appear flawed, there are careless errors, and assumptions about cost trends are unjustified and contrary to research regarding economy of scale effects.
- In its IRP financial review, its findings appear to improperly mix Georgia Power territory data with Southern electric system regional data in the revenue impact calculations. We requested corrected data from Georgia Power but have not received it at the time of filing this testimony.
- Georgia Power uses resource planning methods that undervalue energy efficiency by using assumptions related to capacity planning and cost allocation that do not realistically reflect how Georgia Power manages, or should manage, its resources.
- The cost-effectiveness evaluation model used by Georgia Power incorrectly presumes that lost base rate revenues will occur for the entire life of an energy efficiency measure; more realistically, Georgia Power will adjust its capital expansion plan after several years to align it with past and ongoing energy efficiency programs. For example, the installation of an energy efficient heat pump in 2011 is estimated to have a measure life of 25 years. It is simply unreasonable to suggest that in the year 2035, Georgia Power will collect an inadequate amount of revenue to meet the revenue requirement associated with rates. It is this practice that appears to cause rate impact measure test evaluations to suggest that otherwise cost-effective energy efficiency measures would place an upward pressure on rates.

Based on these findings, I recommend that the analysis be revised, conclusions be revisited, and further opportunity for review be provided.

Nevertheless, Georgia Power's DSM programs application does include adequate descriptions of each program, with appropriate information regarding program impacts in terms of capacity, energy, number of customers and other information for each program. For these reasons, the DSM programs application does provide an adequate basis on which to expand Georgia Power's DSM programs in the short term.

Based on these conclusions, as explained in my IRP testimony, I recommend that the Commission issue an interim certificate of need and public necessity for the legislative case described in Georgia Power's proposed IRP and DSM programs application. The interim certificate will allow Georgia Power to begin immediate investment in energy efficiency, ensuring that the economic, employment and customer benefits of energy efficiency may be realized without further delay.

I also recommend that the Commission should also direct Georgia Power to correct the defects described in my testimony and require Georgia Power to file a revised DSM programs application, including Georgia Power's revised recommendation regarding the "most economical and reliable" level of demand-side resources that would benefit its customers and the economy of the State of Georgia.

In this testimony, I also discuss the top-down DSM program planning process and make a number of recommendations to the Commission and Georgia Power.

Finally, I recommend that the Commission provide an alternative "additional sum" revenue requirement to the one requested by Georgia Power. Georgia Power has provided no substantive justification for what amounts to the single largest cost component of the revenue requirement it proposes for its demand-side resources. Approving this request would violate the basic principles of cost-of-service ratemaking.

The 'additional sum' requested by Georgia Power represents 32-50% of its total DSM tariff. This would be the single largest component of the total DSM tariff and should be subjected to a high degree of scrutiny.

Furthermore, while I agree that it is appropriate to establish an "additional sum" financial incentive for Georgia Power, the structure of the additional sum request is not optimal for an energy efficiency program.

I recommend that the Commission approve a lost revenue adjustment mechanism and a performance-based financial incentive structure as an 'additional sum' in this and any future certification of demand-side management resources. As illustrated in Exhibit JDW-DSM-4, the 'additional sum' I recommend would result in about $93 million over 10 years rather than the $257 million recommended by Georgia Power.

A lost revenue adjustment mechanism is an appropriate component of the "additional sum" under Georgia law. The rate structure used by Georgia Power, and most other investor-owned utilities, creates a financial disincentive to implementing energy efficiency programs. A lost revenue adjustment mechanism is a reasonable tool for reducing that disincentive so that Georgia Power's investors are not adversely affected by a decision to pursue cost-effective energy efficiency. I recommend several details to ensure that the mechanism is fair, relatively simple to administer and considers the ratemaking practices of the Commission.

The other component of the "additional sum" alternative I recommend is a performance-based "shared savings" financial incentive. In contrast to the arbitrary level suggested by Georgia Power, I have suggested a level that is consistent with the earnings opportunity associated with supply-side investments, and structured to encourage aggressive efforts to implement all cost-effective energy efficiency. However, I recommend that the specific percentages be established on an interim basis, and that the Commission direct Georgia Power to provide the necessary data to support a final determination.

Q. PLEASE DESCRIBE THE REQUIREMENTS IN GEORGIA CODE RELATED TO THE APPROVAL OF ENERGY EFFICIENCY PROGRAMS AND COST RECOVERY.

A. Under O.C.G.A. § 46-3A-3, a certificate that public convenience and necessity is required prior to making "expenditures for a demand-side capacity option," which includes energy efficiency programs. Furthermore, Commission approval is required for the utility to increase or decrease the capacity in megawatts of demand-side capacity options.

Recovery of actual costs of such a "certificated demand-side capacity option" is capped at the approved cost under O.C.G.A. § 46-3A-3. The Commission is authorized to determine an "additional sum … to encourage the development of such resources," considering lost revenues, changed risks and an equitable sharing of benefits between the utility and its retail customers.

II. Georgia Power's Demand-Side Management Planning Process

Q. DO YOU AGREE THAT THE TOP-DOWN APPROACH USED BY GEORGIA POWER IS APPROPRIATE FOR RESOURCE PLANNING?

A. In principle, the top-down approach approved by the Commission can be a reasonable and appropriate method for including demand-side resources in an integrated resource planning process. Due to the poor outcome of the most recent planning process, however, I cannot endorse its continued use. Perhaps with further commitments and greater oversight by the Commission it can be a useful approach, as I do agree that it is reasonable in principle.

A key element of the top-down approach, and one reason that it has the potential of being improved, is the agreement by Georgia Power to consider an aggressive case with an annual energy savings goal of 1% is supported by the experience of national leaders in energy efficiency, as recommended by the Demand-Side Management Working Group.

Based on the perspective of highly regarded experts and the review of a number of programs, I continue to recommend that utilities should be encouraged to strive to meet an annual energy savings goal of 1%. This goal is consistent with the actual achievements in leading states,[1] as eight states now exceed 0.8% in average savings as a percent of energy sales.[2] A large number of individual utilities have exceeded this threshold, including two in the Southeast.[3] Of Georgia Power's southeastern peers, Duke Energy Carolinas adopted this goal in a non-binding agreement with a number of national energy efficiency advocacy organizations, and later formalized it as part of its modified save-a-watt proposal that has been approved in North and South Carolina. Industry

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[1] Kushler, M., et al., "Meeting Aggressive New State Goals for Utility-Sector Energy Efficiency: Examining Key Factors Associated with High Savings," American Council for an Energy-Efficient Economy, Report U091, March 2009.

[2] American Council for an Energy-Efficient Economy (ACEEE), "The 2009 State Energy Efficiency Scorecard," Report Number E097, October 2009.

[3] Wilson, J., "Energy Efficiency Program Impacts and Policies in the Southeast," Southern Alliance for Clean Energy, May 2009.

experience strongly suggests that an annual energy savings goal of 1% is a reasonable estimate of what an aggressive, cost-effective energy efficiency program can deliver.

A 1% annual energy savings goal is also consistent with the findings of a recent Georgia Tech meta-analysis of several potential studies, which found that ***"the achievable electric efficiency potential for the South ranges from 7.2 to 13.6% after 10 years."***[4]

Utilities that claim to have conducted a comprehensive analysis of energy efficiency program options and suggest a substantially lower (or higher) program scale should be expected to make a convincing case for unusual circumstances that resulted in distinctive findings. Comparing a utility's assumptions and methods to that of other utilities is a recognized technique used by resource planning experts.[5]

If Georgia Power uses the top-down approach in the future, it is important that the stakeholder process be effective and respected by all participants. SACE has concurred with the concerns expressed by participants and the review by GDS Associates, as described in Exhibit JDW-DSM-2. In particular, participants need an opportunity to understand how Georgia Power has designed the aggressive case (or other cases that may be developed) and suggest modifications to improve its forecast performance. The unexplained,[6] vast discrepancy between Georgia Power's findings and well-respected industry studies and experience should be resolved to participants' satisfaction.

If Georgia Power uses the bottom-up approach in the future, it is important that it conduct a comprehensive analysis of energy efficiency potential. A non-comprehensive energy efficiency potential study can result in a substantial underestimate of energy efficiency potential. To demonstrate this point, I conducted a comparative analysis of the residential energy efficiency potential from three studies conducted for North Carolina:

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[4] Chandler, S. and M.A. Brown, "Meta-Review of Efficiency Potential Studies and Their Implications for the South," Working Paper # 51 (August 2009).

[5] See, for example, Direct Testimony of James A. Riddle for Duke Energy Carolinas before the North Carolina Utilities Commission, Dockets E-100, Sub 118 and 124, filed January 11, 2010, p. 15. In contrast, Georgia Power did recommend benchmarking its forecast program impacts to those of other utilities or organizations in its request to utilize the top-down planning method approved by the Commission, and did not perform such analysis on its own initiative. See Georgia Power response to data requests STF-GDS-2-16 and 2-17, March 12, 2010.

[6] Issues discussed in my IRP testimony (Docket No. 31081) may explain the discrepancy.

the 2007 Forefront study for Duke, a study by Appalachian State University ("ASU"), and a study by GDS Associates for the North Carolina Utilities Commission.[7] Although the three studies' findings appear similar at first glance, my detailed analysis indicates that each of these studies may have missed approximately half of the cost-effective energy efficiency potential for residential customers in North Carolina.[8]

While the main problem with the three North Carolina studies was that they did not include a comprehensive scope of study, it is also possible to skew the results of a potential study by using unrealistic assumptions about the cost of individual measures, customer adoption rates, or cost-effectiveness thresholds. A reasonable method for evaluating an energy efficiency study is to benchmark the study against other utilities' performance and respected studies. For these reasons, it is important that a bottom-up approach rely on appropriate expertise and have sufficient oversight to ensure that the energy efficiency potential study provides appropriate information to the process.

Q. DO YOU HAVE ANY OVERALL RECOMMENDATIONS FOR IMPROVING THE ANALYSIS OF DEMAND-SIDE RESOURCE OPTIONS IN THE GEORGIA POWER RESOURCE PLAN?

A. Yes. First, I recommend that the Commission reject the simplistic approach of offering only two or three options regarding demand-side resources and direct Georgia Power to develop a true range of alternatives with analysis that is as well-sourced and thoughtful as its supply-side resource analysis. The current treatment of demand-side resources is fundamentally inferior to the degree of variation and specificity allowed for supply-side resources. Among the best practices recommended in a Lawrence Berkeley National Laboratory review of resource planning practices in the West are that utilities should

[7] Forefront Economics, Inc., H. Gil Peach & Associates LLC, and PA Consulting Group, "Duke Energy Carolinas DSM Action Plan: North Carolina Report," prepared for Duke Energy Carolinas, August 2007; GDS Associates, "A Study of the Feasibility of Energy Efficiency as an Eligible Resource as Part of a Renewable Portfolio Standard for the State of North Carolina," prepared for the North Carolina Utilities Commission, December 2006; and Tiller, J, "Energy Efficiency Opportunities for North Carolina Buildings and Industrial Facilities," Appalachian State University, February 12, 2007.

[8] Direct Testimony of John D. Wilson on behalf of Environmental Defense Fund, the Sierra Club, Southern Alliance for Clean Energy and the Southern Environmental Law Center before the North Carolina Utilities Commission, Dockets E-100, Sub 118 and 124, filed February 19, 2010.

"construct candidate portfolios with the maximum achievable EE potential" and use a transparent process for "selecting the preferred portfolio."[9]

Second, the Commission should direct Georgia Power to adopt resource planning practices that include consideration of risks that can cause short-term rate spikes. As discussed in my IRP testimony (Docket No. 31081), this practice has been used by the Northwest Power and Conservation Council and helped utilities in that region reduce the risk of short-term rate increases. The current practice of using scenarios and sensitivities provides only minimal directional guidance and is not particularly useful in helping select lower-risk plans.

Third, the Commission should direct Georgia Power to engage in more transparent and constructive dialogue in the support of its demand-side management programs. Specifically, I recommend the creation of a regional energy efficiency database and collaboration process and either renewing and strengthening the Demand-Side Working Group or establishing a new stakeholder advisory group.

Q. WHAT BENEFITS WOULD A REGIONAL ENERGY EFFICIENCY DATABASE AND COLLABORATION PROCESS PROVIDE TO GEORGIA POWER AND ITS CUSTOMERS?

A. The creation of a regional energy efficiency database and collaboration process would show support for strong energy efficiency resource analysis and program development. The Commission could consider the success of three widely used models in considering this recommendation.

- The Northwest Power and Conservation Council's Regional Technical Forum is a regional advisory committee established to develop standards to verify and evaluate conservation savings; it is currently updating its measure database, which is available to the public.
- The California Energy Commission maintains the widely used Database for Energy Efficiency Resources (DEER).
- The New York State Energy Research and Development Authority (NYSERDA) maintains the widely-used Deemed Savings Database.

[9] Barbose, G., "Valuing Energy Efficiency as a Hedge Against Carbon Regulatory Risk: Current Resource Planning Practices in the West," Lawrence Berkeley National Laboratory, EMP Group Meeting Presentation, September 21, 2007.

These three existing energy efficiency databases and forums are widely utilized by consultants and utilities in other parts of the country for design and initial verification.

A useful starting point for a Southeast regional database would be the North Carolina Measures Database, prepared by Morgan Marketing Partners for several North Carolina utilities.[10] Other recent work by the Southeast Energy Efficiency Alliance also offers a good foundation for such a project.

Establishing a regional energy efficiency database and collaboration process would be a useful step for three reasons. First, it would provide a process and repository for the development of authoritative regional energy efficiency performance benchmarking. Second, a regional energy efficiency database would also help to minimize overall program evaluation costs of utilities, thereby maximizing more of the program budget that could be directed towards incentives, generating greater energy savings and benefits to customers. Third, it would provide an opportunity for business and program partners to engage with utility and government staffs to improve and expand energy efficiency programs.

The need for collaboration between utilities and their business and program partners is substantively different for demand-side resources than for supply-side resources. Many of the services provided by business and program partners are not designed to exclusively meet the utility's needs, but also designed to respond to diverse customer interests. Building a regional database and collaboration process creates the opportunity for effective dialogue through the process of ensuring performance accountability.

The regional energy efficiency database and collaboration process could be established separately from, or as a part of a strong stakeholder advisory group.

Q. WHY SHOULD THE COMMISSION STRENGTHEN THE DEMAND-SIDE WORKING GROUP OR ESTABLISH A NEW STAKEHOLDER ADVISORY GROUP?

A. As discussed above and in Exhibit JDW-DSM-2, the historical performance of the Demand-Side Management Working Group has not been strong.

[10] Direct Testimony of John D. Wilson on behalf of Environmental Defense Fund, the Sierra Club, Southern Alliance for Clean Energy and the Southern Environmental Law Center before the North Carolina Utilities Commission, Dockets E-100, Sub 118 and 124, filed February 19, 2010.

Even so, I recommend renewing and strengthening the working group or establishing a new advisory group. In several states, an effective advisory group has played roles such as improving programs by collaborating on new program ideas, reviewing modifications to existing programs, ensuring an accurate public understanding of the programs and funding, and reviewing the measurement and verification ("M&V") process. The specific responsibilities of the group could include:

- Review periodic status reports on program progress, collaborate on new program ideas, review modifications to existing programs, and review any proposed adjustments in overall program targets that may be suggested as a result of factors outside the Company's control;
- Help set M&V priorities, provide recommendations for the submission of applications to revise or extend programs and rate structures, and participate in the selection of the independent third party or parties that will conduct M&V of the programs;[11]
- Review Georgia Power's annual program report prior to its submission; and
- Evaluate and support appropriate strengthening of state building efficiency codes and state appliance efficiency standards, as well as any other state efficiency-related policies that may be encouraged or required by federal law.

In order for a stakeholder advisory group to be effective, the Commission would need to establish stronger accountability for its effectiveness than has been previously demonstrated in the Demand Side Management Working Group and also provide for greater transparency, including appropriate public disclosure of program costs.

Q. DO YOU HAVE ANY OTHER RECOMMENDATIONS THAT WOULD HELP BUILD THE BEST POSSIBLE ENERGY EFFICIENCY PROGRAMS?

A. Yes, I recommend that the Commission provide Georgia Power with flexibility to expeditiously expand successful programs. To achieve maximum results, Georgia Power should continuously monitor its portfolio of energy efficiency programs, and periodically modify the portfolio and/or programs in order to make the programs more successful,

[11] Georgia Power's program evaluation process does not appear to include any provision for stakeholder or outside peer review. See Georgia Power response to data request STF-GDS-5-39, April 5, 2010.

more cost-effective, and/or more responsive to market conditions. A three-year program review schedule is too infrequent.

III. Georgia Power's 'Additional Sum' Proposal

Q. DO YOU ENDORSE THE 'ADDITIONAL SUM' PROPOSAL BY GEORGIA POWER?

A. No, Georgia Power has provided no substantive justification for what amounts to the single largest cost component of the revenue requirement it proposes for its demand-side resources. Approving this request would violate the basic principles of cost-of-service ratemaking.

Instead, I recommend that an alternative 'additional sum' be adopted that incorporates a lost revenue adjustment mechanism and a performance-based financial incentive structure. The alternative I propose can be justified based on Georgia Power's cost-of-service, including both its need for recovery of fixed costs in its rate base and its need to sustain an appropriate rate of return for equity capital.

Q. PLEASE DESCRIBE THE 'ADDITIONAL SUM' PROPOSAL BY GEORGIA POWER AND EXPLAIN ITS FLAWS.

A. The 'additional sum' requested by Georgia Power represents 32-50% of its total DSM tariff. This would be the single largest component of the total DSM tariff and should be subjected to a high degree of scrutiny.

Georgia Power suggests 15% of what is typically termed "shared savings," representing the difference between avoided costs and total program costs.[12] Shared savings mechanisms have been adopted in several states and this proposal is further consistent with the spirit of O.C.G.A. § 46-3A-3.

Georgia Power provides no substantive justification for its proposal. I reviewed prior orders and testimony related to "additional sum" amounts. In every document I reviewed, the "additional sum" is a percentage of shared savings, and is either justified by

[12] Some states use the total resource cost-effectiveness test to determine "shared savings." I consider Georgia Power's selection of the utility cost test to be a reasonable choice. Georgia Power response to data request STF-GDS-5-29, April 5, 2010.

reference to a prior order or as a term of settlement.[13] This arbitrary justification for the single largest cost component of Georgia Power's revenue requirement for demand-side resources violates the basic principles of cost-of-service ratemaking.

The nominal revenue requirement for the additional sum is $257 million over 10 years under the base case level of energy efficiency programs. Although a reasonable argument can be made to justify such a large revenue requirement, I do not believe that it is necessary or advisable to agree to this level of funding for the level of programs recommended by Georgia Power, and instead recommend an alternative formula that would result in about $93 million over 10 years based on the same underlying data.[14]

Q. WHY DO YOU RECOMMEND AN INTERIM LOST REVENUE ADJUSTMENT MECHANISM FOR GEORGIA POWER?

A. The rate structure used by Georgia Power, and most other investor-owned utilities, creates a financial disincentive to implementing energy efficiency programs. A lost revenue adjustment mechanism is a reasonable tool for reducing that disincentive so that Georgia Power's investors are not adversely affected by a decision to pursue cost-effective energy efficiency.

Georgia Power's rates, simply put, are divided into a base rate and a fuel rate. The fuel rate is adjusted periodically in order to ensure that customers pay the actual cost of fuel. The base rate is adjusted during rate cases; recently, the practice has been to use an accounting order to adjust base rates every three years.

It is widely recognized that utility profitability is highly sensitive to marginal changes in energy sales. Once base rates are fixed, they are anticipated to cover the cost of capital debt service and other fixed costs based on existing sales and a rate of growth in sales. While utility profitability is also sensitive to cost control, most of the costs to be recovered in base rates are fixed and cannot be reduced when sales decline. In this way, a capital-intensive public utility has fundamental differences from a business that operates in a competitive market.

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[13] See Georgia Power response to data request STF-GDS-5-28, April 5, 2010. It has been more than ten years since Georgia Power or the Commission authorized an additional sum payment on any basis other than precedent. See Dockets 22528-U, 11086-U and 11293-U for examples.

[14] As described in my IRP testimony, I have significant concerns regarding the accuracy and reliability of the cost and benefit calculations in the program planning workbooks. For that reason, my recommendations are conditional on review of more accurate and reliable data.

Since energy efficiency is intended to result in a decrease in energy sales, utilities are understandably concerned about an unexpected increase in energy efficiency efforts. As demonstrated by the Regulatory Assistance Project and others, even a 1-2% decrease in sales can have a substantial impact on utility earnings. Considering that many utilities are achieving over 1% in annual energy savings as a part of their energy efficiency programs, this is a matter of significant interest in the investment community.

Q. IN ADDITION TO ADDRESSING THE FINANCIAL DISINCENTIVE TO ENERGY EFFICIENCY, DOES THE LOST REVENUE PROBLEM AFFECT ENERGY EFFICIENCY PROGRAMS IN ANY OTHER WAY?

A. Yes, if a utility is compensated for energy efficiency based on program cost recovery plus a shared savings incentive, it experiences the full impact of lost revenues on shareholder earnings. This is because it is possible to earn a shared savings incentive based primarily on capacity savings (fewer MW) without reducing sales (relatively stable GWh).

The result of such a rate structure is to encourage a utility to design its energy efficiency programs to maximize capacity savings while minimizing energy savings, which is the component that primarily drives lost revenues. This is a reasonable strategy from a profit-maximization perspective, and can impact program design by increasing the utility's preference for programs whose load shapes have:

- high avoided capacity costs, thus reducing the utility's cost of operation; and
- low avoided fuel-related costs, thus saving customers relatively little in periodic fuel cost adjustments.

In the short run, such a program design offers almost no benefit to customers through rate reductions but potentially large benefits to utility shareholders due to cost savings associated with the cost of service that is normally considered "fixed."

Q. HOW CAN A LOST REVENUE ADJUSTMENT MECHANISM MITIGATE THE FINANCIAL PRESSURE ON A UTILITY TO AVOID HELPING CUSTOMERS SAVE ENERGY?

A. A lost revenue adjustment mechanism is a crude rate structure tool that attempts to replace lost base rate revenues on a dollar-for-dollar basis so that the utility remains whole in terms of its fixed cost revenue requirement. A typical lost revenue adjustment mechanism is calculated as lost revenues net of savings in variable costs (fuel and O&M).[15]

Based on research described in my IRP testimony (Docket No. 31081), I conclude that the actual period during which the lost revenue effect occurs is limited to a period between (a) reductions in sales resulting from an energy efficiency program and (b) the point at which the capital expansion plan is adjusted to fully reflect the impact of that energy efficiency program.[16] I also explained why it is not reasonable to consider lost revenues as a cost past the point at which Georgia Power should have adjusted its capital expansion plan to account for energy efficiency programs.

For these reasons, I believe that a lost revenue adjustment mechanism addresses the impact of an energy efficiency program on the revenue requirement associated with fixed costs in base rates. Also for these reasons, I believe that the adjustment mechanism should be designed to the extent practicable to only redress actual revenue shortfalls.

Q. HOW DO YOU RECOMMEND LIMITING A LOST REVENUE ADJUSTMENT MECHANISM TO REDRESS ACTUAL REVENUE SHORTFALLS?

A. I recommend three limitations on collection of lost revenues through the additional sum. First, I recommend that the lost revenues associated with installation of an energy efficiency measure be collected for a period not to exceed 36 months. Second, I recommend that the collection should be terminated when new rates are established in a general rate case or comparable proceeding and explicitly or implicitly recover those net lost revenues. Third, I recommend that lost revenues only be awarded for the expanded portion of a program as described below.

Q. WHY DO YOU RECOMMEND LIMITING A LOST REVENUE ADJUSTMENT MECHANISM TO 36 MONTHS?

A. I recommend a 36 month limitation on lost revenue recovery as a practical mechanism for balancing several factors that are difficult to quantify. As discussed above, there should

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[15] "Found" revenues resulting from programs or tariffs whose purpose is to build electric load should also be considered in this formula. Several such programs are described in Georgia Power response to data request STF-GDS-3-5, March 22, 2010. Due to the lack of data, I was unable to include these programs in the sample calculations I performed.

[16] Unanticipated changes in market size, such as new wholesale contracts with public utilities, should also be considered in this analysis. "Found" revenues can compensate the utility for "lost" revenues, ensuring that it is able to fully recover its revenue requirement associated with fixed costs in the rate base.

be some limit reflecting the point at which the capital expansion plan is adjusted to fully reflect the impact of the energy efficiency program. However, this is to some extent a subjective question.

Second, utilities have the opportunity to adjust the timing of contracts, plant upgrades, market purchases, and other matters affecting capacity and other costs that are not passed through to the customer through the fuel rate. To some extent, these opportunities are explicitly captured as a benefit of energy efficiency but in other cases the impact of energy efficiency may create unforeseen opportunities that represent what amounts to a windfall for the company.

Third, utilities have the opportunity to acquire new wholesale customers pursuant to regulation which can also mitigate actual lost revenues.

The 36 month limitation has been adopted in settlements with Duke Energy in five states and Progress Energy Carolinas in two states. I have participated directly or indirectly in many of those negotiations and it is my opinion that this period reflects the collective wisdom of professionals with a strong understanding of utility financial performance. Notably, although most of those proceedings were vigorously contested on a number of issues, I am unaware of any party that suggested a shorter or longer period than 36 months.

Q. WHY DO YOU RECOMMEND TERMNATING A LOST REVENUE ADJUSTMENT MECHANISM WHEN NEW RATES ARE ESTABLISHED?

A. If new rates are established that explicitly or implicitly recover the net lost revenues, then sustaining the mechanism would result in duplicate collection of revenues.

Q. WHY DO YOU RECOMMEND LIMITING A LOST REVENUE ADJUSTMENT MECHANISM TO THE EXPANDED PORTION OF A PROGRAM?

A. As Georgia Power points out, its three year accounting order agreement reduces disincentives for energy efficiency because “rates can be periodically adjusted to compensate for lost revenue.”[17]

> Georgia Power currently operates under a three year accounting order agreement with the Commission. Under the terms of the current accounting order, Georgia Power’s rates and revenue allowances are subject to a full base rate filing at the end of the

[17] Georgia Power response to data request STF-GDS-3-7, March 22, 2010.

> three year term to reflect current conditions. In addition, the accounting order allows for the possibility of annual rate adjustments if earnings vary outside a stipulated return on equity ("ROE") band. This accounting order arrangement greatly reduces regulatory and management disincentives for energy efficiency. (p. 13-6)

When energy efficiency programs operate in a relatively steady manner, the impact of those programs can be reasonably anticipated in Georgia Power's accounting order, integrated resource plan, and overall business plan. Under these conditions, the accounting order arrangement may effectively address the lost revenue issue.

However, when the annual, incremental impact of energy efficiency programs is growing, the lost revenue problem creates a disincentive between accounting orders (or rate cases). In this situation, recovery of lost revenues is an appropriate rate structure.

I recommend that the energy savings basis for lost revenue calculation be adjusted by comparing it to the immediately preceding period. For example, to calculate the lost revenues associated with the 36-month period covering years 4-6, the energy savings associated with years 1-3 would be deducted from years 4-6. Only if the energy savings in years 4-6 represent an increase in program impact would Georgia Power be entitled to collect lost revenues.

For these reasons, I believe that a lost revenue adjustment mechanism addresses the impact of an energy efficiency program on the revenue requirement associated with fixed costs in base rates. Limiting the recovery period, furthermore, would ensure that Georgia Power has a strong incentive to adjust other capacity resources to reflect reduced demand. Also for these reasons, I believe that the adjustment mechanism should be designed to the extent practicable to only redress actual revenue shortfalls.

While I recommend a lost revenue adjustment mechanism in this proceeding, I note that SACE considers the use of a full revenue decoupling rate structure to be a more advisable solution to the lost revenue problem. Decoupling is a rate structure that breaks the link between utility revenues and energy sales and thus inherently removes the disincentive to offer energy efficiency programs, aligning the interests of utility shareholders with those of consumers. However, I do not believe it is appropriate to recommend decoupling in this proceeding.

First, at least two utility commissions in the southeast have indicated that they would only consider a decoupling proposal in the context of a general rate case, and I agree that there are a number of advantages to considering decoupling in the context of a rate case rather than an energy efficiency docket.

Second, since decoupling does not appear to qualify as an 'additional sum' under Georgia law, this proceeding is not an appropriate opportunity to recommend a decoupling rate structure.

I consider it likely that the complexity and other fundamental issues associated with the use of net lost revenue recovery will ultimately demonstrate the value of shifting to a decoupling-based utility rate structure, as it has in other states.

Q. WHY DO YOU RECOMMEND A PERFORMANCE-BASED FINANCIAL INCENTIVE STRUCTURE IN ADDITION TO A LOST REVENUE ADJUSTMENT MECHANISM?

A. A performance-based financial incentive structure provides for an earnings opportunity that corresponds to the earnings opportunity that is associated with an investment in a power plant. Without such an earnings opportunity, there is no management incentive to ensure maximum performance from the utility's energy efficiency assets.

When Georgia Power invests in a power plant or some other long-lived asset the Commission allows it the opportunity to recover that investment over its life and to earn an annual return expressed as a percentage of the book value of that capital asset, or "rate base" each year. This is referred to as its return on equity weighted average cost of capital, and includes a component that is the return on debt and a component that is the return on equity (ROE, or simply earnings).

Q. HOW CAN A PERFORMANCE-BASED FINANCIAL INCENTIVE STRUCTURE BE SET AT A LEVEL THAT IS CONSISTENT WITH GEORGIA POWER'S AUTHORIZED ROE?

A. A performance-based financial incentive structure provides for an earnings opportunity that corresponds to the earnings opportunity that is associated with an investment in a power plant. Without such an earnings opportunity, there is no management incentive to ensure maximum performance from the utility's energy efficiency assets.

In a prior proceeding regarding Duke Energy Carolinas, I led an analysis that compared earnings on energy efficiency program costs with a utility's allowed return on equity. In a number of states, a utility may defer and amortize energy efficiency program costs that are intended to produce future benefits. North Carolina, South Carolina and Nevada are states that currently authorize this type of energy efficiency cost recovery. We used that approach as the basis for analyses that provided a basis for comparing earnings on energy efficiency program costs with a utility's return on equity.

For energy efficiency programs, we compared the earnings allowed from Duke's financial incentive mechanism to the earnings that Duke would earn if it "capitalized" its energy efficiency program costs and recovered them over several years using its current capital structure and proposed return on equity in this rate case. Using data provided by Duke, we calculated the post-tax earnings-to-program-cost ratios for conservation programs for amortization periods varying from one to ten years. We tested various amortization periods because neither state prescribes a specific period over which capitalization is allowed; instead, the decision is left to the state commission.

Analysis of amortization periods varying from two to eleven years indicated that the maximum ratio of post-tax earnings to program costs under a capitalization approach would range from 2.0% to 17.5%, as illustrated in Exhibit JDW-DSM-3. Taking into consideration the period over which costs may be recovered, earnings on energy efficiency program costs of 5% to 15% are consistent with a utility's potential earnings if it chose to capitalize its program costs using an amortization period of 4 to 10 years.

Since this consistency is at a general level (no numerical equivalency is implied or may be calculated), and since this calculation is based on the particular circumstances of Duke Energy Carolinas, it provides only a general indication of consistency and not a one-to-one correspondence. Another important factor is that a percentage of program costs cannot be directly converted into a percentage of shared savings, in fact the two are inversely related.

In order to convert the 5% to 15% range into a percentage of shared savings, I estimated those values for each year in the (revised) base case program planning worksheets (public data). I then calculated that the corresponding percentage of shared savings for the 5% level would be 0.45% to 0.66%, and for the 15% level 1.36% to 1.97%.

Q. WHAT PERFORMANCE-BASED FINANCIAL INCENTIVE RATE DO YOU RECOMMEND?

A. I recommend that the “addition sum” include a percentage of shared savings based on Georgia Power’s incremental energy savings achieved through its DSM programs. I recommend that the percentage be set at twice the level of achieved and verified energy savings, with a minimum percentage of 0.5%.

For verified energy savings of 0.5%, for example, Georgia Power would earn an additional sum of 1% of shared savings plus whatever lost revenue recovery it is entitled to, as described above.

Scaling the shared savings financial incentive to performance reflects two issues. First, as a program increases in scale, it typically includes more measures that have lower cost-effectiveness, and hence lower shared savings opportunities. An increased rate of shared savings is appropriate to – at least – ensure steady earnings per kWh saved.

Second, as a program increases in scale, it may require more management oversight, leadership and vision. It is appropriate to reward talent and achievement with a higher rate of return. Based on my review of programs, and the fact that programs often have declining unit costs as they increase in scale, I believe that the actual impact of the sliding scale I recommend would be to result in a gradually increasing incentive on a per kWh basis – assuming the utility manages costs effectively.

A performance-based financial incentive structure provides for an earnings opportunity that corresponds to the earnings opportunity that is associated with an investment in a power plant. Without such an earnings opportunity, there is no management incentive to ensure maximum performance from the utility’s energy efficiency assets. With the structure I propose, the more successful Georgia Power is in achieving energy savings, the greater its earnings opportunity becomes. This approach provides Georgia Power with a strong incentive to achieve high levels of cost-effective energy efficiency as rapidly as possible.

Q. SHOULD THE INCENTIVE BE APPLIED FOR DEMAND RESPONSE?

A. The precedent for Georgia Power’s proposed 15% shared savings programs are a single residential load management program and several power purchase agreements which have substantial capacity value. Demand response and other demand-side capacity programs have different financial characteristics than energy efficiency (kWh savings) programs.

Our organizations agree that some level of financial incentive for demand response programs is justified for two main reasons. First, demand response programs benefit ratepayers by enabling the utility to avoid investments or acquisition of new capacity as well as avoiding higher-than-average fuel costs associated with meeting demand during peak periods. Second, we recognize that the providers of demand response programs view them as a business opportunity. If a utility is going to deliver those programs it is reasonable that it will expect to earn a return commensurate with the risk it incurs to offer them. In some other jurisdictions, unregulated companies, referred to as curtailment service providers, compete to offer demand response programs and have the opportunity to earn a profit on them if they are successful. Thus, in order to attract investment in high quality demand response programs it appears that the program provider should have an earnings opportunity.

Without company-specific data to evaluate the earnings proposal, I am reluctant to make a specific recommendation on this point. However, I have two comments.

First, it is unlikely that demand response type programs would generate significant lost revenues. It would be appropriate to categorically exclude programs from the lost revenue mechanism if they are primarily designed to address peak demand concerns.

Second, the shared savings opportunity associated with demand response – particularly if acquired on the market from a provider such as Enernoc – may be lower than energy efficiency shared savings opportunities. For this reason, a sliding scale beginning at 0.5% and increasing to twice the rate of energy savings should not be applied directly to demand response. It is even possible (albeit unlikely) that the 15% level previously approved by the Commission may be appropriate. Since there was no prior determination as to the basis for approving the 15% shared savings value, I think it is unlikely that it would survive careful scrutiny.

Q. PLEASE SUMMARIZE YOUR 'ADDITIONAL SUM' RECOMMENDATION.

A. I recommend that the Commission approve a lost revenue adjustment mechanism and a performance-based financial incentive structure as an 'additional sum' in this and any future certification of demand-side management resources. As illustrated in Exhibit JDW-DSM-4, the 'additional sum' I recommend would result in about $93 million over 10 years rather than the $257 million recommended by Georgia Power.

I recommend that the specific percentages be established on an interim basis, and that the Commission direct Georgia Power to provide the necessary data to support a final determination. The mechanism should provide for:

- Lost revenue recovery, calculated as lost revenues net of savings in variable costs (fuel and O&M), and accounting for 'found' revenues;
- A limit on lost revenue recovery not to exceed 36 months following the installation of an energy efficiency measure, or when new rates are established in a general rate case or comparable proceeding and explicitly or implicitly to recover those net lost revenues;
- Limiting lost revenue recovery to the expanded portion of a program by comparing it to the immediately preceding period; and
- A performance-based financial incentive, consisting of a percentage of shared savings using the utility cost test based on Georgia Power's incremental energy savings achieved through its DSM programs; and
- Setting the shared savings percentage at twice the level of achieved and verified energy savings, with a minimum percentage of 0.5%.

The Commission should also consider how it wishes to treat demand response and other demand-side capacity programs that do not result in significant energy savings.

Q. TAKEN AS A WHOLE, DOES THE ADDITIONAL SUM PROPOSAL YOU RECOMMEND PROVIDE A FINANCIAL INCENTIVE TO ACHIEVE HIGH LEVELS OF ENERGY EFFICIENCY?

A. Yes. The combination of the performance-based financial incentive and limited lost revenue recovery would provide Georgia Power with the opportunity to maintain or even increase slightly its overall earnings relative to business-as-usual. If the Company fails to achieve high levels of efficiency and its program costs are substantially higher than expected, however, its earnings could decrease.

I base these conclusions generally on my own examination of various scenarios, but most specifically on the findings in a recent report by Lawrence Berkeley National Laboratory, “Financial Analysis of Incentive Mechanisms to Promote Energy Efficiency: Case Study of a Prototypical Southwest Utility” (Cappers et al., LBNL-1598E, March 2009).

The LBNL Report examined several financial structures for utility energy efficiency programs.[18] It should be noted that there are a number of important differences between the “prototypical southwest utility” and utilities in the southeast, although Georgia does have frequent rate cases (or accounting orders), as assumed in the model. I would like to offer several observations based on my review of the report.

First, a positive financial structure is needed for an investor-owned utility to invest in energy efficiency. With no financial incentive, both absolute earnings and ROE are lower than they would be without energy efficiency, illustrating the classic disincentive to energy efficiency facing a vertically integrated utility. (This is illustrated in Figure ES-4 in the report.) In short, the model results demonstrate how important a fair and properly structured utility incentive structure is to energy efficiency.

Second, energy efficiency programs reduce total ratepayer bills for all financial structures studied and at all scenario levels for energy efficiency. Consistent with other studies and historical findings, the reduced revenue requirement occurs even though the model indicates small retail rate increases (see Figure 20 of the report). The original Save-A-Watt (NC) proposal (which SACE opposed) stands out as saving customers less than other financial structures studied, whereas aggressive levels of energy efficiency save customers the most money.

Third, shared savings with decoupling structures perform quite similarly to other structures studied, including cost capitalization with decoupling (includes a bonus ROE), performance target with decoupling (program costs plus earnings), and the Duke Energy Save-a-Watt (OH) structure (similar to the model approved in the Carolinas). All of these financial structures offer an enhanced ROE at any level of energy efficiency performance, thus illustrating that the combination of a shareholder incentive mechanism

[18] I was a reviewer for this report and provided extensive input into the type of analysis that the report ultimately presented, including several of the findings I discuss in my testimony.

with a fixed cost recovery mechanism (decoupling or lost revenue recovery) puts energy efficiency on the positive side of the balance sheet compared to business-as-usual (see Figure ES-7 in the report).

Earlier in my testimony, I recommended a sliding scale shared savings incentive because it would be consistent with Georgia Power's potential earnings if it chose to capitalize its program costs using an amortization period of 4 to 11 years. Based on the LBNL report, I can advise the Commission that the entire financial structure, including net lost revenue recovery, should provide Georgia Power with the opportunity to maintain or increase slightly its overall earnings relative to business-as-usual if it implements programs at reasonable and prudent costs.

Q. DOES THAT CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

Exhibit ____ (JDW-DSM-1)

John D. Wilson — Director of Research, Southern Alliance for Clean Energy

1810 16th Street, NW, 3rd Floor
Washington, DC 20009

202-495-0776
wilson@cleanenergy.org

EXPERIENCE

Southern Alliance for Clean Energy

Director of Research, Asheville, North Carolina and Washington, DC, 2007 – present
http://www.cleanenergy.org/

- Manage energy efficiency programs
- Conduct supporting research and policy development across all program areas

Galveston-Houston Association for Smog Prevention

Executive Director, Houston, Texas, 2001 – 2006
http://www.ghasp.org/

- Member, Regional Air Quality Planning Committee
- Member, Transportation Policy Technical Advisory Committee
- Member, Steering Committee, TCEQ Interim Science Committee
- Published over a dozen reports
- In the media over 250 times
- Awards & recognition from the City of Houston, *Houston Press*, and environmental groups
- First executive director, grew staff to three full time plus several part time & consulting

The Goodman Corporation

Senior Associate, Houston, Texas, 2000 – 2001
http://www.thegoodmancorp.com/

- Project Manager, Houston Main Street Corridor
- Project Manager, Houston Downtown Circulation Study
- Project Manager, Austin Corridor Planning
- Project Manager, Ft. Worth Berry Street Corridor Initiative

Florida Legislature

Senior Legislative Analyst and Technology Projects Coordinator, Office of Program Policy Analysis and Government Accountability, Tallahassee, Florida, 1997- 1999
http://www.oppaga.state.fl.us/

- Coordinator, Florida Government Accountability Report, 1999
- Coordinator, Project Management Software Implementation, 1999
- Creator and Editor, *Florida Monitor Weekly*, 1998 - 99
- Author or team member for reports on water supply policy, environmental permitting, community development corporations, school district financial management and other issues – most recommendations implemented by the 1998 and 1999 Florida Legislatures

Florida State University

Environmental Management Consultant, Tallahassee, Florida, 1997
http://www.pepps.fsu.edu/FACT97/index.html

- Project staff, *Florida Assessment of Coastal Trends*, 1997

Houston Advanced Research Center

Research Associate, Center for Global Studies, Woodlands, Texas, 1992 - 96
http://www.harc.edu/mitchellcenter/index.html

- Performance Award, 1995
- Coordinator, Houston Environmental Foresight, 1993 - 96
- Coordinator, Rio Grande/Rio Bravo Basin Initiative, 1992 - 94
- Secretary, Task Force on Climate Change in Texas, 1992 - 94
- Researcher, *Policy Options: Responding to Climate Change in Texas*, 1992 - 93

US Environmental Protection Agency

Student Assistant, Climate Change Division, Washington, DC, 1991 - 92

- Special Achievement Award, 1991

EDUCATION

Harvard University

Master in Public Policy, John F. Kennedy School of Government, 1992

- Concentration areas: Environment, negotiation, economic and analytic methods

Rice University

Bachelor of Arts, conferred cum laude, 1990

- Majors: Physics (with honors) and history

Additional Training and Experience

Spanish language; Advanced computer skills; Served and led political committees for the Sierra Club and Clean Water Action; Certified Master Wildlife Conservationist, Leon County Extension Service

Exhibit ____ (JDW-DSM-2)

Southern Alliance for Clean Energy Letter of Concern Regarding Demand-Side Management Working Group

1. SACE Letter of Concern re DSMWG
2. DSMWG Comments 10-09
3. GDS Assessment of 9 Step Process-Draft-REV H

February 8, 2010

Chairman Lauren McDonald
Georgia Public Service Commission
244 Washington Street, SW
Atlanta, Georgia 30334-5701

Re: Docket No. 24505, Georgia Power's 2007 Integrated Resource Plan

Dear Chairman McDonald:

Southern Alliance for Clean Energy shares the concerns raised by GDS Associates in the attached document circulated to the Demand Side Working Group by the PSC staff, requesting comments from parties by Feb 8, 2010. We also share the concerns in the second attached memo by John Sibley and Dennis Creech that was circulated to the Demand Side Working Group on Oct. 15, 2009.

Sincerely,

Rita Kilpatrick
Georgia Policy Director

cc: Parties of Record

MEMO

From: John Sibley, Program Director, SEEA
Dennis Creech, Executive Director, Southface
To: DSM Working Group
Re: Concerns about Process
Date: October 12, 2009

At the meeting of the DSMWG on August 25, a number of concerns were raised that the work of the Group is coming to an end without the Group having really been able to do the task with which it was charged. The concerns recorded in the notes of that meeting include lack of adequate information (including information that has been requested a number of times) and inadequate opportunities to review and respond to information. These concerns are not new, and we would like to put them in the context of similar concerns that have been raised throughout the process.

The Order on Waiver of July 15, 2008, gave a new focus to the work of the DSMWG. The work was to "focus on the development of new DSM at the program level." Trying to put together "better and more successful programs" represented a significant departure from prior rounds of DSM analysis, which had focused on detailed screening of individual measures, without much attention to what it takes to have best-in-class programs. We welcomed this new approach and agreed to streamline the consideration of measures in order to spend more time on program evaluation.

In further elaboration of the focus on programs, the Order states: "Georgia Power, along with its consultant, will prepare a proposed program presentation, for review by the DSMWG. Any other member of the DSMWG may propose programs as well. The DSMWG will meet to facilitate sufficient discussion of the programs to be evaluated."

In November, 2008, in response to this opportunity to propose programs and to facilitate discussion, GDS Associates, as consultant to the Staff, provided comprehensive program descriptions for significant enhancement of four residential programs: existing home, new home, lighting and appliance, and refrigerator and freezer recycling. Critical elements of each program included:

- Program description,
- Program goals and objectives,
- Program eligibility criteria,
- Description of program measures,
- Financial incentives,
- Market barriers and mitigation strategies,
- Marketing, education, and training approaches,
- Program metrics, such as participation rates and energy savings,
- Program costs and cost-effectiveness analysis; and
- Approaches to quality assurance, measurement, verification.

GDS suggested that discussion of these descriptions would be a good starting point for developing first-rate programs.

Georgia Power declined to discuss the GDS programs or other programs offered by Brian Henderson, representing NRDC, who has extensive experience in program development from working with NYSERDA and in other roles. Georgia Power proposed instead to work from descriptions of programs that it would develop. We accepted this approach because we understood Georgia Power to have committed to offer comprehensive programs for the Group to review. Through the August 2009 meeting of the Group, however, no program descriptions had been offered to the DSMWG that would permit discussion of the kinds of elements of good programs put on the table by GDS and Mr. Henderson.

This lack of discussion of program designs has been raised before. At the end of a discussion of commercial measures in February, several DSMWG members suggested that it would be more effective to get on with the discussion of program designs instead of focusing on measures. It was suggested that it would be helpful for the next meeting if Georgia Power completed program description forms for the programs that it wanted to pursue. Georgia Power agreed to prepare program submittal forms for residential programs before the next meeting. Those program descriptions were never provided.

At the most recent meeting in August, there still was no discussion of program designs. Georgia Power had available lists of the measures that had been grouped into programs but did not distribute even that limited information until after the meeting. Instead, Georgia Power offered an overview of the results of the economic screening of programs that it had decided upon. The Order on Waiver indicated that, before economic evaluation was done, there would be "sufficient discussion of the programs to be evaluated." That discussion has not occurred.

The August meeting is all too representative of how the process of the DSMWG has unfolded over the last year. Program descriptions that had been promised months earlier were not available. The limited new information on programs that was available (the groupings of measures) was held until after the meeting. No information was provided to the Group before the meeting to facilitate preparation, although requests had been made that information be provided in advance. The information that was provided by Georgia Power at the meeting was a cursory summary of complex analytical information that was difficult to digest or respond to without an opportunity to review it in advance.

At the August meeting, GDS asked whether the DSMWG would ever get an opportunity to review program plans. In response, Georgia Power agreed to add a previously unscheduled meeting on October 16 and to present design plans for just two programs, a new home program and a commercial prescriptive program. In this instance, Georgia Power has provided copies of those two program designs in advance.

Even with this extra meeting, the work of the DSMWG, as currently scheduled, will fall far short of significant participation in developing program designs than can truly be successful. Georgia Power intends to file at least 8 energy efficiency (not demand response) programs in the 2010 IRP. Only 2 detailed program designs will be discussed on October 16. Furthermore, Georgia Power has developed three levels for each program, and the two designs provided for the meeting on October 16 describe only the most basic level.

As indicated by the above list of critical elements included in the GDS program designs, a number of factors must come together to make programs successful. To be constructive in developing first-rate programs, the DSMWG should review and discuss, for each program, comprehensive program descriptions that address each of the critical elements. It is important to discuss how each element will be addressed to be sure that all of the critical elements work together to create best-in-class programs.

The discussion should include the differences in the designs for the different levels of programs that Georgia Power is proposing. These levels include, as required by the Order on Waiver, "an aggressive DSM change case developed with the assistance of the DSMWG." The Group has not been given the opportunity to assist in the development of the aggressive case. The Group should review the designs for programs in the aggressive case, including the levels of investment allocated to each program in putting together the aggressive case.

The level of investment – the program budget – is particularly critical. Underinvestment in even a first-rate design assures lack of success and misses opportunities for economies of scale. It is important to know not only the general level of financial commitment to the portfolio, but also how that investment is allocated to programs, to be sure that the money is being spent where it will be most cost-effective. Also, to benchmark against best practices, it is important to know the energy efficiency budget as a percentage of retail sales.

Budget information has been requested in previous meetings, and the request was renewed in August by Brian Henderson. It appears, however, that the DSMWG will not really be given an opportunity to help with the development of this critical element.

Furthermore, in selecting the best programs and the best measures for programs, it is important to know the cost of each unit of energy saved, that is, the levelized cost per kWh. This information also helps benchmark proposed programs against best practices.

Benchmarks for best programs have been determined by the American Council for an Energy Efficient Economy. In 2004, ACEEE reviewed the levelized cost per kWh saved through ratepayer funded energy efficiency programs in 9 leading states. The utility costs of saved energy ranged from 2.3 cents to 4.4 cents per kWh, with a median of 3.0 cents. In 2009, ACEEE updated and expanded these findings with results from 14 states. The utility costs of saved energy ranged from 1.6 to 3.3 cents, with an average of 2.5. These findings are consistent with the idea that well-run programs become less costly as they mature. See "Saving Energy Cost Effectively: A National Review of the Cost of Energy Saved through Utility-Sector Energy Efficiency Programs," ACEEE Report U092 (September 2009). If costs of programs proposed by Georgia Power vary significantly from these national findings, then the DSMWG should try to figure out why and should help redesign the programs to be more cost-effective.

As early as January, it was requested that the levelized cost per kWh saved be added to the information being given to the Group about the screening of measures. The request was renewed in February. According to the minutes of that meeting, the "Company reiterated that it would add a levelized cost figure on the sheet." In August, however, the Company stated that it "would at least provide the levelized cost data in its 2010 IRP filing." Again, it appears that information needed by the DSMWG to do its task well will not be provided until it is too late to make a difference.

The way the budget and levelized cost information has been handled exemplifies why we are concerned that the process of the DSMWG appears to be coming to an end without the assigned task having been fairly addressed. It seems unlikely that this situation will be remedied at this late date, but we are prepared to discuss on October 16 how the Group might still move forward constructively.

GDS Assessment of the Status of the Nine Step Process
January 15, 2010

1. Georgia Power, using an RFP process, will select a third party consultant to assist in the Technology Catalog update, research active programs nationally, and assist in developing proposed programs.

   Status: Georgia Power did select a third party consultant (Nexant) to assist with developing proposed programs. The third party consultant assisted in updating the Technology Catalog, conducting research on active programs nationally, and developing proposed programs. However, these research and program development activities completed by the consultant did not fully address the recommendations and suggestions of the DSMWG.

   For example, at the October 16, 2008 DSM Working Group meeting, the Working Group requested that the Company examine the successful DSM programs and measures offered by utilities in the South, such as Gainesville Regional Utilities (Florida), the City of Tallahassee (Florida), and the City of Austin (Texas). To our knowledge the Company did not conduct thorough research on these southern programs to understand why they are so successful. Georgia Power only presented three PowerPoint slides that simply listed the programs offered by these utilities. The Company did not present to the Working Group why these programs were so successful. Regarding the Technology Catalog, many of the measures and programs suggested by Working Group members were not examined by the Company. Georgia Power apparently updated the Technology Catalog with some of the measures recommended by the DSMWG; however the Company has not provided the final version of the Technology Catalog to members of the DSM Working Group, so it is not possible for the Working Group members to comment on the final version of this Catalog. Thus, the comments presented here are based on measure lists handed out by the Company at the August 2009 Working Group meeting. And, ultimately, Georgia Power only provided two short program plans to the Working Group. These two program plans did not include all of the information requested by the DSMWG. (Step partially completed.)

2. Georgia Power will utilize a technical and economic potential study for Georgia Power's service territory to assist in targeting DSM programs in the areas where the highest market potential exists. For the 2010 IRP, Georgia Power will use the 2007 AEEPA study.

   Status: Georgia Power did utilize the 2007 AEEPA technical and economic potential study for Georgia Power's service territory to assist in identifying where the highest market potential (for energy efficiency savings) exists in the Company's service area. At the October 16, 2008 meeting of the Working Group, Nexant presented three PowerPoint slides summarizing the achievable energy efficiency potential in the Georgia Power service area based on the 2007 AEEPA study. However, it is unclear whether or not the ultimate programs selected by the Company for inclusion in the 2010 IRP target the areas identified with the highest market potential. For example, many measures, included in some end-use categories with the highest potential, were eliminated from program plans due to RIM results. (Step partially completed.)

3. Georgia Power, along with its consultant, will work closely with the DSMWG to update the Technology Catalog of DSM Measures. The starting point will be the 2007 IRP list of measures. Additional technologies will be added once Georgia Power's consultant is chosen and begins his work. Members of the DSMWG may also propose new measures to be added to the Technology Catalog.

   Status: The DSM Working Group proposed many additional measures and programs to the Company for inclusion in the Technology Catalog. To our knowledge, Georgia Power agreed to include these measures in the Catalog and to analyze most of the measures (as reflected in the minutes); however, several of these measures are still missing in the latest available version of the Technology Catalog and are missing from the portfolio of programs recommended by the Company for inclusion in the 2010 IRP.

   For example, NRDC requested that a Commercial New Construction Program be included in the base case portfolio of programs for the 2010 IRP, but the Company included this program in the Case 2 portfolio. At the September 3, 2008 and October 16, 2008 meetings of the Working Group, Working Group members suggested dozens of additional measures for inclusion in the Technology Catalog (e.g., smart strip, energy efficiency kits, zero energy homes, cool roofs, high efficiency elevator motors, ozone commercial dryers, etc.), but it is not clear if all of these measures are included in the final version of the Technology Catalog. Many of the measures suggested by Working Group Members are not included in the list of measures that the Company handed out at the August 25, 2009 meeting of the Working Group. In addition, on October 13, 2008 SEEA provided the Working Group with a detailed six page memo of additional measures that should be considered by Georgia Power, and many of these measures have not been included in the list of measures considered by the Company. (Step partially completed.)

4. Georgia Power, along with its consultant, will prepare a proposed program presentation for review by the DSMWG. Any other member of the DSMWG may propose programs as well. The DSMWG will meet to facilitate sufficient discussions on the programs to be evaluated.

   Status: Members of the DSM Working Group suggested several programs, and even provided detailed program plans, to Georgia Power early in the Working Group process for consideration and analysis. Georgia Power never proposed a full suite of programs where all of the programs presented had detailed program plans. Additionally, Georgia Power never even populated their own program submittal form for all the program names they listed for review. In fact, only two full program plans were distributed by Georgia Power at the December 17, 2009 final meeting of the DSM Working Group; at this point, the plans were shared too late in the process for any substantive iterative review process to be effective. It is not apparent that Georgia Power ever conducted a thorough analysis of any of the programs suggested and provided by the DSMWG. For example, the Commission staff and NRDC provided Georgia Power with numerous completed program forms (in the format requested by the Company) for analysis by the Company. The Company did not complete benefit/cost analyses of any of the specific programs submitted for consideration by the Staff or NRDC based on the program plans submitted by the Staff or NRDC. (Step partially completed.)

5. When appropriate and as part of the program evaluations, customer data/feedback will be collected and shared with the DSMWG. This could include information obtained from surveys, customer focus groups, Georgia Power Account Representatives, etc.

   Status: Georgia Power did not share any pertinent or specific Georgia Power customer data or feedback from Georgia Power surveys, focus groups or other market research with the DSM Working Group regarding their existing pilot programs or other Georgia Power specific market research. On several occasions, sweeping generalizations were made during Working Group meetings without any detailed or formal information or market research data provided. The company did not provide the Working Group with any copies of program evaluation plans or program evaluation reports for any of the existing pilot programs currently being implemented. However, the Company did file periodic energy efficiency program status reports (for their existing programs) with the Commission. (Step not done.)

6. Once the Company determines which programs are to be analyzed, Georgia Power will perform economic screening of the programs in greater detail using the EnerSim and PRICEM models. The economic screening will include rate impact measure ("RIM"), participants test ("PT"), total resource costs tests ("TRC"), and the Program Administrator Test for use in program evaluations. The results of the economic screening will be shared with the DSMWG for discussion.

   Status: In the last DSMWG meeting (December 17, 2009) held prior to the 2010 IRP filing, the Company did share very limited economic screening results with the DSM Working Group on two Powerpoint slides. The economic screening information was not provided to Working Group members in advance of this 12/17/2009 meeting. According to several members of the DSM Working Group, by not providing this information in advance of the meeting, DSM Working Group members did not have adequate time to review this information and to respond to it at the December 17th meeting.

In addition, the Company did not share input assumptions, the models used to calculate benefit/cost ratios, or any information about the size of the potential market or projected penetration rates used in the final screening analyses for the programs proposed by the Company for inclusion in the 2010 IRP.

Furthermore, the DSM Working Group requested on numerous occasions that the Company provide the levelized cost per lifetime kWh saved for all DSM measures to be analyzed for the IRP. As early as January 2009, it was requested that these cost figures be added to the information being given to the Group about the screening of measures. The request was renewed at the Working Group meeting held in February 2009. According to the minutes of that February meeting, the "Company reiterated that it would add a levelized cost figure on the sheet." In August 2009, however, the Company stated that it "would at least provide the levelized cost data in its 2010 IRP filing." Again, it appears that information needed by the DSMWG to do its task well was not provided to the Working Group until it was too late to make a difference. While the Company initially said it would provide this levelized cost for each measure to the Working Group, the Company never did. (<u>Step partially completed.</u>)

7. Attempts to reach consensus and finalize all programs to be proposed for implementation in the 2010 IRP must be completed by mid 2009 in order to allow the Resource Planning group adequate time for inclusion in their process. Preliminary cost effectiveness tests using PRICEM for revenue and avoided costs inputs will be developed for each program. These programs will be divided into programs that are passive (energy efficiency programs whose response is not controlled) versus active (demand response programs that are generally under dispatch control of the utility). Load reductions associated with passive programs will be used to adjust the load and energy forecast. Capacity associated with active programs will be modeled as resources. This information will be evaluated as two different system configurations with a base case without any new DSM (the base case would include the effects of continuation of existing DSM programs) and a Company DSM change case with both passive and active new DSM.

   Status: The DSM Working Group did not reach consensus on program plans for programs to be proposed for implementation in the 2010 IRP. The Company only provided program plans for two programs. Additionally, programs specifically requested by Working Group members (such as a commercial new construction program) were not included by the Company in the base case portfolio of programs proposed for the 2010 IRP.

   In the view of many members of the DSM Working Group (SEEA, Southface, and NRDC), the work of the DSMWG fell far short of significant participation in developing program designs and program plans than can truly be successful. As of the December 17th Working Group meeting, Georgia Power provided information that it intended to file at least eight energy efficiency (not demand response) programs in the 2010 IRP. Only two detailed program designs have been discussed with the DSM Working Group as of December 17th. Furthermore, Georgia Power has developed three levels of design for the portfolio of programs, and only two basic program plans for the first level of portfolio design were provided to the DSM Working Group. Additionally, this portfolio level and these two program designs describe only the most basic level of implementation.

As indicated by the list of critical elements included in the GDS program designs provided to the Working Group in November 2008, a number of factors must come together to make programs successful. To be constructive in developing first-rate programs, the DSMWG should review and discuss, for each program, comprehensive program descriptions and plans that address each of these critical elements. It is important to discuss how each element will be addressed to ensure that all of the critical elements work together to create best-in-class programs that will achieve the desired level of savings. This discussion for six of the eight proposed Georgia Power programs never occurred at the Working Group meetings.

Last, there were several other programs suggested by the Working Group that the Company did not analyze. (Step partially completed.)

8. As part of the sensitivity analysis, the Company will also analyze at least one aggressive DSM change case developed with the assistance of the DSMWG. The aggressive DSM change case(s) could include technically viable and economically efficient DSM programs and resources that were not included in the Company DSM change case. The aggressive DSM change case(s) could also include higher penetrations of the DSM programs proposed in the Company DSM change case.

   Status: The Company did analyze at least one aggressive DSM case, but did not provide any underlying detail on the assumptions or measures underlying this case. In fact, early in the process the Company agreed to draw up a proposal detailing this aggressive case. That proposal was never delivered. On multiple occasions, the DSMWG suggested target goals for an aggressive case and provided input for general recommendations regarding incentive levels and administrative costs. However, the ultimate aggressive case provided by the Company, as stated earlier, did not provide any detail regarding the underlying assumptions or measures, the estimated market size, projected market penetration rates, etc., and therefore the DSMWG cannot adequately comment on the case. (Step partially completed.)

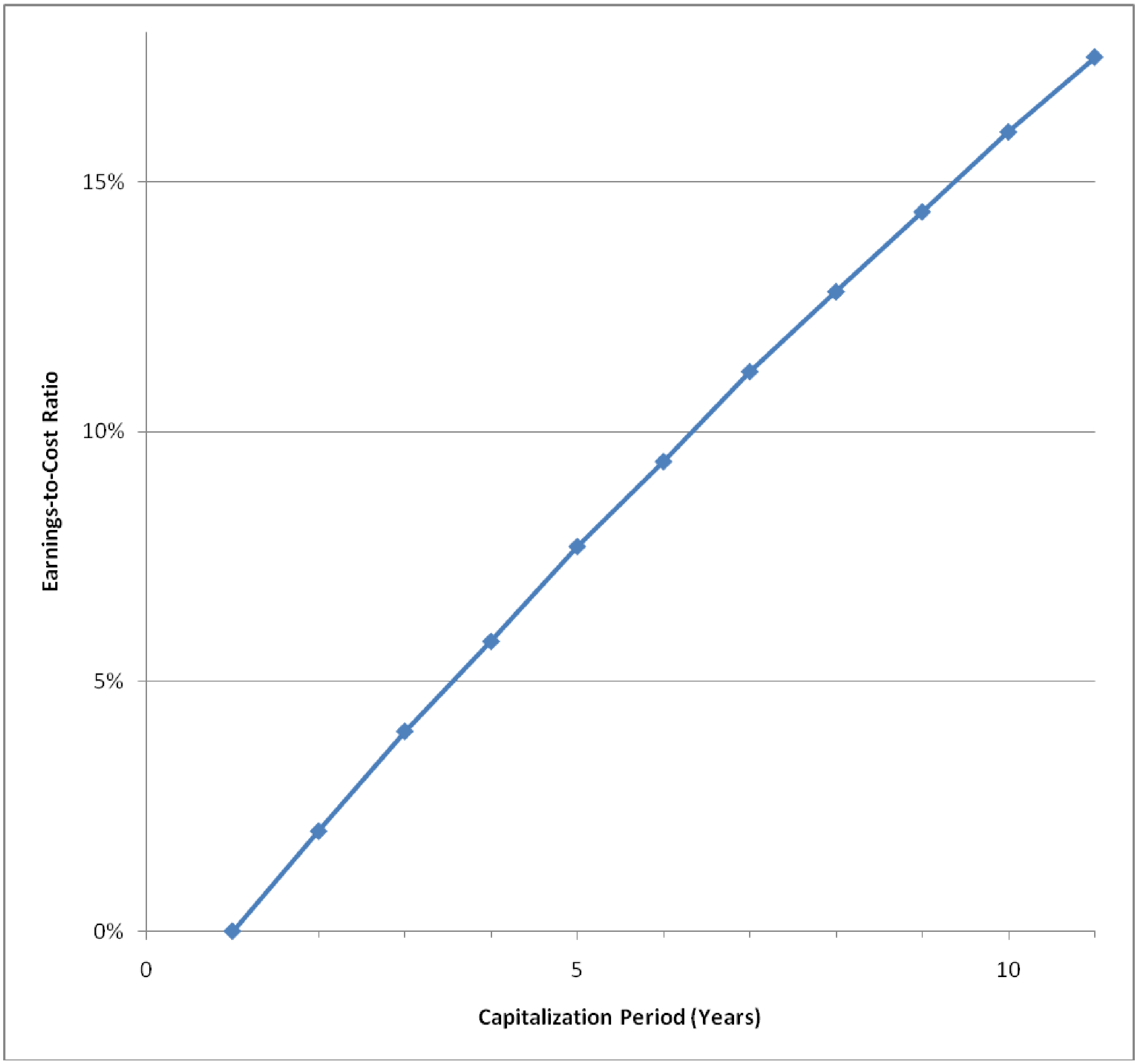
9. The Company will use the difference in costs between the base case and the DSM change case configurations to determine the avoided generation cost impact of the DSM programs in each DSM change case. As the final step, the cost effectiveness tests mentioned in item 6 (above) will be calculated based on the

inputs and adjustments from the system tools. Revenue impacts will be based on current rates and escalations based on the Company's financial projections adjusted for the DSM cost impacts. The avoided generation costs from the system tools and the avoided T&D revenue requirements as estimated by PRICEM will be used to calculate the benefits of the RIM, TRC and Program Administrator test for each DSM change case. The projected deadline for including new programs in the system planning process is mid 2009.

Status: The Company did share very limited economic screening results with the DSM Working Group on two PowerPoint slides. The Company did not share input assumptions, the models used to calculate benefit/cost ratios, or any information about the size of the potential market or projected penetration rates. The DSM Working Group requested on numerous occasions that the Company provide the levelized cost per lifetime kWh saved for all DSM measures to be analyzed for the IRP. The Company said it would provide this levelized cost for each measure, but the Company has yet to do so. (Step partially completed.)

Exhibit ____ (JDW-DSM-3)

Post-tax Earnings-to-Program-Cost Ratios for Duke Energy Carolinas Conservation Programs, Varying Amortization Period from One to Eleven Years



Source: Direct Testimony of John D. Wilson on behalf of Environmental Defense Fund, the Sierra Club, Southern Alliance for Clean Energy and the Southern Environmental Law Center before the North Carolina Utilities Commission, Dockets E-100, Sub 118 and 124, filed February 19, 2010.

Exhibit ____ (JDW-DSM-4)

Recommended 'Additional Sum' Structure:
Lost Revenues Plus Performance-Based Financial Incentive
(with comparison to Georgia Power's Proposal)

Analysis of Additional Sum Financial Data, 2011-2013 and Total for 2011-2020

Georgia Power Additional Sum Request	2011	2012	2013	2011-2020
Electric Avoided Costs	$ 118,496,065	$ 148,950,904	$ 178,428,972	$1,886,658,163
Total Program Costs	$ 13,736,994	$ 16,000,683	$ 17,815,091	$ 174,012,905
Shared Savings	$ 104,759,071	$ 132,950,221	$ 160,613,881	$1,712,645,257
Additional Sum	**$ 15,713,861**	**$ 19,942,533**	**$ 24,092,082**	**$256,896,789**

Calculation of 'Shared Savings' Percentage Rate Based on Percentage of Program Costs				
5% program costs/ shared savings	**0.66%**	**0.60%**	**0.55%**	**0.51%**
15% program costs/ shared savings	**1.97%**	**1.81%**	**1.66%**	**1.52%**

Incremental Energy Savings (MWh)	2011	2012	2013	2011-2020
Residential Programs	20,884	24,522	28,325	242,870
Commercial Programs	80,435	98,486	114,058	1,091,386
Industrial Programs	17,976	17,976	17,976	179,765
Total	**119,295**	**140,985**	**160,360**	**1,514,021**

Source: DSM Programs Application Appendix D-1 (Corrected April 5, 2010).

3-year Lost Revenues	2011	2012	2013	2011-2020
Residential Programs	1,367,636	2,973,545	4,828,530	42,963,665
Commercial Programs	5,125,912	11,402,170	18,670,782	186,847,378
Industrial Programs	516,043	1,032,086	1,548,129	13,933,163
Total	**7,009,591**	**15,407,801**	**25,047,442**	**243,744,206**

Calculated using incremental energy savings and base rates. Base rates calculated using Georgia Pow er Company's 2007 Rate Case, Docket No. 25060-U, M.F.R. Schedule F-4, Part 1, filed June 29, 2007.

3-year Lost Revenues, Net of Prior 3-years	2011	2012	2013	2011-2020
Residential Programs	1,367,636	2,973,545	4,828,530	14,245,836
Commercial Programs	5,125,912	11,402,170	18,670,782	65,417,515
Industrial Programs	516,043	1,032,086	1,548,129	4,644,388
Total	**7,009,591**	**15,407,801**	**25,047,442**	**84,307,739**

Calculated as described in testimony.

SACE Additional Sum Proposal	2011	2012	2013	2011-2020
3-year Lost Revenues	$ 7,009,591	$ 15,407,801	$ 25,047,442	$ 84,307,739
0.5% Shared Savings	$ 523,795	$ 664,751	$ 803,069	$ 8,563,226
Total SACE Recommended Additional Sum	**$ 7,533,387**	**$ 16,072,552**	**$ 25,850,511**	**$ 92,870,965**
Georgia Power Recommended Additional Sum	**$ 15,713,861**	**$ 19,942,533**	**$ 24,092,082**	**$256,896,789**
Difference from Georgia Power	$ (8,180,474)	$ (3,869,981)	$ 1,758,429	$ (164,025,823)

Calculated as described in testimony.

Georgia Power Additional Sum Request and Calculation of Shared Savings Percentage Rate Based on Percentage of Program Costs

Georgia Power Additional Sum Request	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2011-2020
Electric Avoided Costs	$ 118,496,065	$ 148,950,904	$ 178,428,972	$ 184,891,958	$ 191,464,934	$ 198,271,581	$ 205,320,206	$ 212,621,479	$ 220,188,812	$ 228,023,251	$1,886,658,163
Total Program Costs	$ 13,736,994	$ 16,000,683	$ 17,815,091	$ 16,623,476	$ 17,471,872	$ 17,939,477	$ 17,751,033	$ 18,603,897	$ 19,160,715	$ 18,909,668	$ 174,012,905
Shared Savings	$ 104,759,071	$ 132,950,221	$ 160,613,881	$ 168,268,482	$ 173,993,062	$ 180,332,104	$ 187,569,173	$ 194,017,582	$ 201,028,097	$ 209,113,583	$1,712,645,257
Additional Sum	**$ 15,713,861**	**$ 19,942,533**	**$ 24,092,082**	**$ 25,240,272**	**$ 26,098,959**	**$ 27,049,816**	**$ 28,135,376**	**$ 29,102,637**	**$ 30,154,215**	**$ 31,367,037**	**$256,896,789**
Calculation of 'Shared Savings' Percentage Rate Based on Percentage of Program Costs											
5% program costs/ shared savings	**0.66%**	**0.60%**	**0.55%**	**0.49%**	**0.50%**	**0.50%**	**0.47%**	**0.48%**	**0.48%**	**0.45%**	**0.51%**
15% program costs/ shared savings	**1.97%**	**1.81%**	**1.66%**	**1.48%**	**1.51%**	**1.49%**	**1.42%**	**1.44%**	**1.43%**	**1.36%**	**1.52%**

Calculation of 3-year Lost Revenues

Incremental Energy Savings (MWh)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2011-2020
Residential Programs	20,884	24,522	28,325	24,139	24,146	24,153	24,160	24,168	24,181	24,192	242,870
Commercial Programs	80,435	98,486	114,058	114,058	114,058	114,058	114,058	114,058	114,058	114,058	1,091,386
Industrial Programs	17,976	17,976	17,976	17,976	17,976	17,976	17,976	17,976	17,976	17,976	179,765
Total	**119,295**	**140,985**	**160,360**	**156,174**	**156,181**	**156,188**	**156,195**	**156,203**	**156,215**	**156,226**	**1,514,021**

Source: DSM Programs Application Appendix D-1 (Corrected April 5, 2010).

3-year Lost Revenues	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2011-2020
Residential Programs	1,367,636	2,973,545	4,828,530	5,041,753	5,017,154	4,743,930	4,745,280	4,746,721	4,748,522	4,750,593	42,963,665
Commercial Programs	5,125,912	11,402,170	18,670,782	20,813,483	21,805,838	21,805,838	21,805,838	21,805,838	21,805,838	21,805,838	186,847,378
Industrial Programs	516,043	1,032,086	1,548,129	1,548,129	1,548,129	1,548,129	1,548,129	1,548,129	1,548,129	1,548,129	13,933,163
Total	**7,009,591**	**15,407,801**	**25,047,442**	**27,403,366**	**28,371,122**	**28,097,897**	**28,099,248**	**28,100,689**	**28,102,490**	**28,104,561**	**243,744,206**

Calculated using incremental energy savings and base rates. Base rates calculated using Georgia Pow er Company's 2007 Rate Case, Docket No. 25060-U, M.F.R. Schedule F-4, Part 1, filed June 29, 2007.

3-year Lost Revenues, Net of Prior 3-years	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2011-2020
Residential Programs	1,367,636	2,973,545	4,828,530	3,674,117	2,043,609	-84,600	-296,473	-270,433	4,592	5,313	14,245,836
Commercial Programs	5,125,912	11,402,170	18,670,782	15,687,571	10,403,669	3,135,056	992,355	0	0	0	65,417,515
Industrial Programs	516,043	1,032,086	1,548,129	1,032,086	516,043	0	0	0	0	0	4,644,388
Total	**7,009,591**	**15,407,801**	**25,047,442**	**20,393,774**	**12,963,321**	**3,050,456**	**695,882**	**-270,433**	**4,592**	**5,313**	**84,307,739**

Calculated as described in testimony.

SACE Additional Sum Proposal, with comparison to Georgia Power proposal

SACE Additional Sum Proposal	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2011-2020
3-year Lost Revenues	$ 7,009,591	$ 15,407,801	$ 25,047,442	$ 20,393,774	$ 12,963,321	$ 3,050,456	$ 695,882	$ (270,433)	$ 4,592	$ 5,313	$ 84,307,739
0.5% Shared Savings	$ 523,795	$ 664,751	$ 803,069	$ 841,342	$ 869,965	$ 901,661	$ 937,846	$ 970,088	$ 1,005,140	$ 1,045,568	$ 8,563,226
Total SACE Recommended Additional Sum	**$ 7,533,387**	**$ 16,072,552**	**$ 25,850,511**	**$ 21,235,117**	**$ 13,833,286**	**$ 3,952,116**	**$ 1,633,728**	**$ 699,655**	**$ 1,009,733**	**$ 1,050,881**	**$ 92,870,965**
Georgia Power Recommended Additional Sum	**$ 15,713,861**	**$ 19,942,533**	**$ 24,092,082**	**$ 25,240,272**	**$ 26,098,959**	**$ 27,049,816**	**$ 28,135,376**	**$ 29,102,637**	**$ 30,154,215**	**$ 31,367,037**	**$256,896,789**
Difference from Georgia Power	$ (8,180,474)	$ (3,869,981)	$ 1,758,429	$ (4,005,156)	$ (12,265,673)	$ (23,097,699)	$ (26,501,648)	$ (28,402,983)	$ (29,144,482)	$ (30,316,157)	$ (164,025,823)

Calculated as described in testimony.