

STATE OF GEORGIA
BEFORE THE GEORGIA PUBLIC SERVICE COMMISSION

In Re: Georgia Power Company's 2013)
Integrated Resource Plan and) Docket No. 36498
Application for Decertification of Plant)
Branch Units 3 and 4, Plant McManus)
Units 1 and 2, Plant Kraft Units 1-4,)
Plant Yates Units 1-5, Plant Boulevard)
Units 2 and 3, and Plant Bowen Unit 6)
and)
In Re: Georgia Power Company's Application) Docket No. 36499
for the Certification of its Amended)
Demand Side Management Plan)

DIRECT TESTIMONY OF NATALIE A. MIMS
ON BEHALF OF
SOUTHERN ALLIANCE FOR CLEAN ENERGY

May 10, 2013

Direct Testimony of Natalie A. Mims
Southern Alliance for Clean Energy
Georgia PSC, Docket Nos. 36498 & 36499

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1 **I. Introduction**

2 **Q. Please state your name, position and business address.**

3 A. My name is Natalie Mims. I am Director of Energy Efficiency for Southern Alliance for
4 Clean Energy (“SACE”), and my business address is P.O. Box 1842, Knoxville, TN
5 37901.

6 **Q. On whose behalf are you testifying in this proceeding?**

7 A. I am testifying on behalf of SACE.

8 **Q. Please summarize your qualifications and work experience.**

9 A. I graduated from the Pennsylvania State University in 2002 with a Bachelor of Arts
10 degree in English and Political Science. I received a Master of Environmental Law and
11 Policy from the Vermont Law School in 2004. Since 2004, I have worked in the non-
12 profit sector on a wide range of energy and environmental policy issues, including energy
13 efficiency potential studies; energy efficiency program design and implementation; and
14 evaluation, measurement and verification of efficiency programs.

15 I joined SACE in 2010, and became the Director of Energy Efficiency for SACE in 2013.

16 I am the senior staff member responsible for SACE’s utility energy efficiency advocacy
17 across the Southeast, including Georgia, Alabama, Mississippi, Florida, North Carolina
18 South Carolina, and Tennessee. In this capacity, I am responsible for leading dialogue
19 with utilities and regulatory officials on issues related to energy efficiency policy,
20 program design and evaluation. My work includes conducting detailed analysis of

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1 utility-run energy efficiency portfolios; providing written testimony and comments in
2 regulatory proceedings; conducting presentations before regulators and interested
3 stakeholders; and participating in energy efficiency stakeholder working groups,
4 including Demand Side Management (“DSM”) Working Group in Georgia.

5 A copy of my resume is included as Exhibit SACE-NAM-1.

6 **Q. Have you testified previously before the Georgia Public Service Commission (“the**
7 **Commission”)?**

8 A. This is my first time testifying before the Georgia Public Service Commission.

9 **Q. What is the purpose of your testimony?**

10 A. The purpose of my testimony is to present to the Commission my evaluation of Georgia
11 Power Company’s (“Georgia Power” or “the Company”) Application for the Certification
12 of its Amended Demand Side Management Plan (“DSM Application”), and its 2013
13 Integrated Resource Plan (“IRP”) as it relates to energy efficiency. Specifically, I will (1)
14 present an energy efficiency portfolio that I recommend the Company adopt in this
15 proceeding; (2) compare my recommended energy efficiency portfolio to the Company’s
16 Proposed Portfolio, including the rate and bill impacts; (3) discuss the importance of
17 commercial and industrial programs; (4) recommend improvements to the Company’s
18 existing portfolio; (5) present my recommendations for the application of Evaluation,
19 Measurement and Verification (“EM&V”) results; (6) discuss the need for an annual true-
20 up; (7) recommend an alternative Additional Sum mechanism; (8) discuss the need for

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1 clear flexibility guidelines in program implementation; and (9) discuss the importance of
2 the energy efficiency potential study to developing the Company's Proposed Portfolio.

3 **Q. Are you submitting exhibits along with your testimony?**

4 A. Yes. I am submitting the following exhibits with my testimony:

- 5 • SACE-NAM-1: Resume of Natalie Mims
- 6 • SACE-NAM-2: Enhanced DSM Portfolio
- 7 • SACE-NAM-3: DSM Working Group Minutes (Dec. 7, 2011)
- 8 • SACE-NAM-4: Letter to Georgia Power and Commission Staff from Several DSM
9 Working Group Members (May 25, 2012)
- 10 • SACE-NAM-5: Memorandum from Synapse Energy Economics, Inc to SACE re:
11 Georgia Power DSM Program Participants Analysis
- 12 • SACE-NAM-6: Summary of North Carolina Annual DSM/Energy Efficiency Cost
13 Recovery Filing Requirements (NCUC Rule R8-69(f)(1))
- 14 • SACE-NAM-7: National Performance Incentive Comparison
- 15 • SACE-NAM-8: Flexibility Guidelines Reference Documentation for Duke Energy
16 Carolinas, LLC

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1 **II. Summary of Findings and Conclusions**

2 **Q. Please summarize the results of your review of the Company’s 2013 IRP and DSM**
3 **Application.**

4 A. Based on my review of Georgia Power’s IRP and DSM Application and the analysis I
5 have conducted, I reach the following conclusions:

- 6 • The Company should adopt the Enhanced DSM Portfolio proposed in my testimony
7 and also discussed in the testimony of SACE witness John D. Wilson. The Enhanced
8 DSM Portfolio is the best option for the Company and its customers because it
9 provides more savings to more customers than the Company’s Proposed Portfolio
10 without substantially increasing the bill impact to any customers.
- 11 • Commercial and industrial programs play a critical role in energy efficiency
12 portfolios as they often deliver the lowest cost energy efficiency. The average
13 commercial and industrial customer energy efficiency participants could reduce their
14 annual bills by 15-24% if the Company adopts the Enhanced DSM Portfolio.
- 15 • The Company should improve the implementation and increase savings of the current
16 energy efficiency portfolio by adopting recommendations in its EM&V report and
17 trade ally and commercial customer surveys, and by improving the measure offerings
18 in the Home Energy Improvement and Small Business programs.
- 19 • The application of EM&V is critical to ensure that customers are receiving the
20 benefits of cost-effective energy efficiency implementation. The oversight of the
21 application of EM&V should be conducted in a specific proceeding as is done in

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1 other Southeastern states to ensure transparency and allow participation by interested
2 stakeholders.

3 • The Commission should adopt an annual energy efficiency filing requirement similar
4 to what is required in North Carolina. Such an annual filing would include, for
5 example, average savings per program participant, projected and actual energy
6 impacts, and projected and annual expenses incurred.

7 • The Commission should reject the Company’s Additional Sum proposal and approve
8 an alternate performance-based Additional Sum that provides an incentive to the
9 Company for meeting and exceeding its energy efficiency goals.

10 • The Commission should provide clear guidelines on what changes the Company may
11 make to its certified efficiency programs and portfolio between DSM certification
12 proceedings.

13 • The Company should continue to conduct technical, economic and achievable
14 potential studies prior to its IRP analysis, on a three-year cycle.

15 **III. SACE’s Enhanced DSM Portfolio**

16 **Q. What is Georgia Power’s Proposed DSM Portfolio?**

17 A. Georgia Power’s Proposed DSM Portfolio is the energy efficiency portfolio that the
18 Company analyzes and recommends in its IRP, and corresponds to the Amended DSM
19 Plan for which the Company seeks certification in this docket. As shown in Appendix D-
20 1 of the DSM Application, the DSM programs in the Company’s recommended Proposed
21 DSM Portfolio include eight programs—five residential and three commercial—and is

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1 projected to save 297 gigawatt-hours (“GWh”), 320 GWh and 335 GWh in 2014-2016,
2 respectively. Cumulatively, by 2023, the Proposed DSM Portfolio will save 3,143 GWh
3 and 665 megawatts (“MW”).

4 **Q. What is the Aggressive Portfolio?**

5 A. The Aggressive Portfolio is a sensitivity that the Company analyzed, as required by the
6 Nine-Step Process. According to the Company, the Aggressive Portfolio is “a reference
7 point to estimate the maximum achievable potential for increased efficiency and the
8 impacts of such aggressive adoption of DSM.” IRP at 5-72. As provided in the DSM
9 Program Documentation section in Technical Appendix Volume 2 of the IRP, the
10 Aggressive Portfolio has 15 programs: nine residential, five commercial and one
11 industrial program. The Company projects that the Aggressive Portfolio will save [REDACTED]
12 [REDACTED], [REDACTED], and [REDACTED] in 2014-2016, respectively. Cumulatively, by 2023,
13 the Aggressive Portfolio will save [REDACTED] and [REDACTED].

14 **Q. What is the Enhanced DSM Portfolio?**

15 A. The Enhanced DSM Portfolio is a modified version of the Company’s Aggressive
16 Portfolio. SACE developed the Enhanced DSM Portfolio by modifying the Company’s
17 Aggressive Portfolio in three ways: First, SACE reduced the customer incentive forecasts
18 from 100% to more reasonable levels. Second, SACE modified program participation
19 rates to ramp up over several years and to achieve overall program participation levels
20 that better reflect market opportunities, generally below those in the Aggressive Portfolio.
21 These two changes, and the Enhanced DSM Portfolio more generally, are discussed in

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1 more detail later in my testimony. Third, SACE corrected errors in the Company's
2 program economic data, as presented in its DSM Program Planner, such as avoided cost
3 rates. These corrections are discussed in the testimony of Mr. Wilson.

4 The Enhanced DSM Portfolio has the same 15 programs as the Aggressive Portfolio: nine
5 residential, five commercial and one industrial program. The Enhanced DSM Portfolio
6 will save 438 GWh, 723 GWh, and 1,032 GWh in 2014-2016, respectively.
7 Cumulatively, by 2023, the Enhanced DSM Portfolio will save 10,703 GWh and 2,190
8 MW, as shown in Exhibit SACE-NAM-2.

9 **Q. How does SACE's Enhanced DSM Portfolio compare to the Company's Proposed**
10 **Portfolio?**

11 A. The Enhanced DSM Portfolio saves more energy than the Proposed Portfolio, and
12 provides customers with more benefit. The Enhanced DSM Portfolio contains more
13 program offerings in each customer sector (residential, commercial and industrial) than
14 does the Proposed Portfolio. Table 1 shows the costs and benefits of the Proposed
15 Portfolio and the Enhanced DSM Portfolio, which I will discuss in more detail below.

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1 **Table 1. Proposed Portfolio and Enhanced DSM Portfolio Comparison**

	Proposed Portfolio (as filed) ¹	Enhanced DSM Portfolio ²
2023 Total Incremental Savings (GWh)	3,376	13,370
2023 Cumulative Savings (GWh)	3,143	10,703
2023 Cumulative Load Reduction (MW)	666	2190
Program Costs (NPV)*	\$293,053,258	\$1,576,626,797
Program Administrator Test (NPV)	\$2,387,644,800	\$6,218,713,552
Ratepayer Impact Test (NPV)	(\$672,978,739)	(\$758,616,830)

2 *Does not include previously certified programs.

3 **Q. You mentioned that you modified the Company’s Aggressive Portfolio incentive**
 4 **levels in the Enhanced DSM Portfolio. Please discuss this change.**

5 A. The Company’s incentive assumption in its Aggressive Portfolio is not reasonable. The
 6 Company assumed that it must pay 100% of the incremental cost of each measure in the
 7 Aggressive Portfolio.³ Incremental cost is the difference between a standard technology
 8 and an energy efficient technology that provides a comparable service. For example, if
 9 an incandescent bulb that produces 800 lumens costs \$1, and a compact florescent lamp

¹ See Georgia Power’s Application for the Certification of its Amended Demand Side Management Plan, Docket No. 36499, Appendix B-G.

² See Exhibit SACE-NAM-2, Enhanced DSM Portfolio.

³ Georgia Power Trade Secret Aggressive Sensitivity Case program planning spreadsheet. On file with Company.

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1 (“CFL”) produces 800 lumens costs \$3, then the incremental cost for the energy efficient
2 CFL is \$2. Under the Company’s Aggressive Portfolio incentive assumptions, Georgia
3 Power would pay **the full** incremental cost of each CFL light bulb it offers.

4 **Q. Why is this incentive assumption unreasonable?**

5 A. This assumption is unreasonable because a utility can provide a lower incentive, and still
6 motivate consumers to adopt the energy efficient technology. In the DSM Working
7 Group, Nexant (Georgia Power’s consultant), and GDS (Commission Staff’s consultant)
8 recognized that a 50% of incremental cost incentive level is best practice.⁴

9 **Q. What reason did the Company provide for the incentive level in its Aggressive**
10 **Portfolio?**

11 A. The Company did not provide a reason. In its Technical, Economic and Achievable
12 Potential (“TEAPOT”) Study, Georgia Power’s expert used a regression analysis to
13 determine the relative change in savings based on differing incentive levels. The expert’s
14 analysis indicated that in order to achieve 83% of the economic potential, an incentive of
15 100% of incremental cost would be necessary.⁵ The Study also found that 50% of the
16 economic potential could be achieved at an incentive level of 50% of incremental cost,
17 which was the “moderate” incentive level.⁶

⁴ See Exhibit SACE-NAM-3, DSM Working Group Minutes (Dec. 7, 2011) at 16, lines 6-7 and 13.

⁵ See Georgia Power’s Report on Achievable Energy Efficiency Potentials Assessment, GPSC Docket No. 34414 (Jan. 31, 2012), (public disclosure version), TEAPOT Study at Appendix A, A-9.

⁶ *Id.*

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1 **Q. Are you aware of any utility that utilizes a 100% of incremental cost incentive?**

2 A. No, I am not. Top-performing utilities achieve savings that are greater than the savings
3 estimated in the Company's Aggressive Portfolio with less incentive. For example,
4 Efficiency Vermont saved 1.77%⁷ of its annual retail sales in 2011 and its incentive
5 levels were around 65% of the measure's incremental cost on a portfolio basis in 2011, as
6 discussed in a letter that I and other DSM Working Group Members sent to Georgia
7 Power and the Commission Staff last May. This letter is provided in Exhibit SACE-
8 NAM-4 at page 4. In contrast, in the TEAPOT Study achievable high incentive scenario,
9 Georgia Power projects it could save approximately 1.5% annually (assuming a steady
10 state of savings) with incentive levels of 100% of incremental cost.⁸ This is not
11 consistent with best practice planning.

12 **Q. How does the Company's incentive cost assumption impact the overall economics of**
13 **the Aggressive Portfolio?**

14 A. The incentive cost estimates account for more than 80% of annual program cost in the
15 Company's Aggressive Portfolio, and produce inflated overall program costs and rate
16 impacts.⁹

⁷ Efficiency Vermont Annual Plan 2011, p7, available at http://www.encyvermont.com/docs/about_efficiency_vermont/annual_plans/EVT_AnnualPlan2011.pdf (last visited May 7, 2013).

⁸ TEAPOT Study at 4-5.

⁹ Georgia Power Trade Secret Aggressive Sensitivity Case program planning spreadsheet. On file with Company.

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1 **Q. What is an appropriate assumption for incentives?**

2 A. In the Proposed DSM Portfolio, the Company's incremental cost, as a percentage of total
3 incentive cost, ranges from 10-100%, as compared to 100% across the board in the
4 Aggressive Portfolio.¹⁰ As I mentioned earlier in my testimony, during the DSM
5 Working Group process, Georgia Power's DSM experts found that incentive levels
6 roughly equal to 50% of the incremental cost could be used to achieve savings that are
7 approximately the same as the level SACE analyzed in the Enhanced DSM Portfolio.

8 Therefore, I conclude that that Georgia Power should study a portfolio that has incentive
9 levels that are approximately 50% of the incremental costs of the measures. Studying a
10 portfolio with a 50% incentive level does not require that each measure receive a 50%
11 incentive; rather, it provides a reasonable cost benchmark for planning purposes. This
12 would allow the Company to create higher incentives for some programs, such as the low
13 income direct install program and the small business direct install program, and lower
14 incentives for other programs.

15 **Q. Please describe the modification you made to the Company's Aggressive Portfolio**
16 **program participation rates in the Enhanced DSM Portfolio.**

17 A. SACE adjusted the participation rates downward in two ways. First, we assumed that the
18 Enhanced DSM Portfolio would ramp up savings over the 10-year planning period.
19 Second, we scaled down the overall size of the Aggressive Portfolio.

¹⁰ Georgia Power Trade Secret Aggressive Sensitivity Case and Proposed Plan program planning spreadsheet. On file with Company.

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1 **Q. What additional programs are included in the Enhanced DSM Portfolio?**

2 A. As I mentioned earlier in my testimony, the Enhanced DSM Portfolio includes the same
3 programs that are in the Company's Aggressive Portfolio Scenario. In addition to the
4 programs in the Company's Proposed Portfolio, the Enhanced DSM Portfolio includes
5 four residential programs: Behavioral, Low Income, Codes and Standards, and HVAC
6 Service; two commercial programs, New Construction and Commissioning; and an
7 industrial custom program.

8 **IV. Rate and Bill Impacts of SACE's Enhanced DSM Portfolio**

9 **Q. What are the rate impacts of the Enhanced DSM Portfolio?**

10 A. The rate impacts of the Enhanced DSM Portfolio are greater than the rate impacts of the
11 Proposed Portfolio by approximately \$90 million, as shown in Exhibit SACE-JDW-8.

12 **Q. Do you still recommend that the Company adopt the Enhanced DSM Portfolio?**

13 A. Yes, I do. As shown in Mr. Wilson's testimony, and as discussed further below, most
14 customers would experience bill savings in the Enhanced DSM Portfolio, but in the
15 Proposed Portfolio a much smaller number of customers would have significant bill
16 savings. Also, the cost of saved energy of the Enhanced DSM Portfolio for all customer
17 classes is less than the cost of saved energy of the Proposed Portfolio, as also discussed
18 further below. All of this strongly suggests that the Company's Proposed Portfolio
19 significantly underutilizes energy efficiency as a priority system resource.

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1 **Q. Should the RIM test be relied on to determine the level of energy efficiency**
2 **investment?**

3 A. No, I do not believe that the Company should rely so strongly on the Ratepayer Impact
4 Measure Test (RIM) test to determine its level of efficiency investment. It is worth
5 noting that the RIM test is only one aspect of cost-effectiveness. In fact, in the 2010 IRP
6 order, the Georgia Public Service Commission found, “Because the RIM test only
7 indicates whether electric rates may increase if an energy efficiency measure or program
8 is implemented, and not whether the impact may reduce a participant’s overall electric
9 bill, this test will screen out energy efficiency measures that can save significant amounts
10 of electricity and can lower electricity bills.”¹¹

11 In addition, while the Enhanced Portfolio has a slightly higher rate impact as measured
12 by the RIM test, the ratio of economic benefits to rate impact is eight to one, significantly
13 more than the three-to-one ratio that Mr. Legg discussed during the hearing on April 25,
14 2013.¹²

15 **Q. In your opinion, is adopting the Enhanced DSM Portfolio consistent with the**
16 **Commission’s policy on balancing energy efficiency benefits and upward pressure**
17 **on rates?**

18 A. Yes, it is. The Enhanced DSM Portfolio provides more benefits to Georgia Power
19 customers than the Proposed Portfolio even though its rate impacts are 11% greater. The

¹¹ Final Order at 12, GPSC Docket Nos. 31081 and 31082 (July 6, 2010).

¹² See Georgia Power Witness Larry Legg Direct Testimony (Apr. 25, 2013), GPSC Docket No. 36499.

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1 Enhanced Portfolio achieves 70% more savings, and has an economic benefit to rate
 2 impact of eight to one. Further, the Enhanced DSM Portfolio produces lower cost of
 3 saved energy and more customer participation and savings than the Company’s Proposed
 4 Portfolio.

5 **Q. You have discussed rate impacts, but how does the Enhanced DSM Portfolio impact**
 6 **customer bills?**

7 **A.** SACE’s analysis of Georgia Power’s data shows that more efficiency reduces all
 8 customer bills. Table 2 shows both the non-participant and participant bill savings under
 9 the Proposed Portfolio and Enhanced DSM Portfolio. The Enhanced DSM Portfolio
 10 results in 70% more total savings, and approximately *five times* more participants than in
 11 the Proposed Portfolio. Consequently, there are much fewer non-participants in the
 12 Enhanced DSM Portfolio, which reduces the amount of upward pressure on bills
 13 compared to the Proposed Portfolio.

14 **Table 2. Net Present Value of Non-Participant and Participant Bill Savings due to**
 15 **Energy Efficiency in Proposed Portfolio and Enhanced DSM Portfolio**

	Non-Participant Bill		Participant Bill	
	Proposed Portfolio	Enhanced DSM Portfolio	Proposed Portfolio	Enhanced DSM Portfolio
Residential	████	████	████	████
Commercial	████	████	████	████
Industrial	████	████	████	████

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1 **Q. How did you determine the bill impact?**

2 A. SACE integrated several models to calculate the bill impacts. SACE conducted a bill
3 impact analysis to determine the impact of energy efficiency on the bills of both
4 participants and non-participants. Our analysis covers the Company's Proposed DSM
5 Portfolio and SACE's recommendation, the Enhanced DSM Portfolio. SACE contracted
6 with Synapse Energy Economics, Inc. to develop an Energy Efficiency Program
7 Participation Model (Exhibit SACE-NAM-5). The participation model estimates the total
8 number of participating and non-participating customers during a specified period of
9 time.

10 **Q. How will the commercial and industrial customers benefit from Georgia Power's**
11 **energy efficiency portfolio?**

12 A. Based on our analysis, as shown in Exhibit SACE-JDW-2, the average commercial and
13 industrial customer participants in energy efficiency programs under the Enhanced DSM
14 Portfolio could reduce their annual bills by 15-24%.

15 **V. Commercial and Industrial Customers**

16 **Q. What role do commercial and industrial programs play in the energy efficiency**
17 **portfolio overall?**

18 A. Commercial and industrial programs play a critical role in energy efficiency portfolios as
19 they often deliver the lowest cost energy efficiency. This also holds true for Georgia

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1 Power’s Proposed Portfolio, as shown in Table 3 below.¹³ Similarly, the Enhanced DSM
 2 Portfolio also relies on the low cost commercial and industrial energy efficiency savings,
 3 and, provides greater savings at a lower cost of saved energy, as shown in Table 3.

4 **Table 3. Comparison of Annual Average Cost of Saved Energy of Energy Efficiency**
 5 **Programs by Customer Class**

	Proposed Portfolio*	Enhanced DSM Portfolio
Residential	\$0.04/kWh	\$0.05/kWh
Commercial	\$0.01/kWh	\$0.02/kWh
Industrial	\$0.02 /kWh**	\$0.01/kWh

6 *Does not include prior approved DSM expenses.

7 **From Aggressive Portfolio because there is no industrial program in Proposed Portfolio.

8 **Q. The Enhanced DSM Portfolio contains several additional commercial programs and**
 9 **includes an industrial program. Did SACE develop those programs?**

10 A. No. All of the programs that are included in the Enhanced DSM Portfolio were
 11 developed by Georgia Power. We believe that the Company did a good job of
 12 developing a portfolio of programs that will serve their diverse customers. In particular,
 13 by including an industrial energy efficiency program, as well as a commercial new
 14 construction program, Georgia Power would be reaching out to new markets that it has
 15 not served in the past.

¹³ Levelized cost calculations for Proposed Portfolio, Aggressive Portfolio and Enhanced DSM Portfolio are all derived from Exhibit SACE-JDW-6.

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1 Also, we believe that it is important for Georgia Power to lay the groundwork for
2 increased savings by building the infrastructure to implement commercial and industrial
3 energy efficiency that goes beyond lighting measures. Currently, the Proposed Portfolios
4 commercial prescriptive and custom programs are both very heavy on efficient lighting
5 measures. This creates a gap in the portfolio because lighting retrofits are often the first
6 measures that are completed at any facility. After businesses adopt these measures, they
7 are limited in their participation in Georgia Power's energy efficiency programs under the
8 Proposed Portfolio.

9 Under the Enhanced DSM Portfolio, customers would have several other efficiency
10 options to pursue through the more robust offerings in the commercial prescriptive and
11 custom programs, the commercial commissioning and new construction program, and the
12 industrial program.

13 **VI. Existing Program Improvements**

14 **Q. What kind of improvements do you suggest to Georgia Power's existing energy**
15 **efficiency programs?**

16 A. I would like to begin by complimenting the Company on its energy efficiency
17 performance. The Company's gross savings in 2011 and 2012 exceeded its goals, and the
18 Company has been diligently building an energy efficiency delivery infrastructure. In
19 addition, although the Company met its residential lighting goals very early in 2012, it
20 did not completely shut down the program, a decision SACE commends. Finally, the

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1 Company is also proposing a new small business program in its Proposed Portfolio, the
2 Small Business program, and SACE supports that effort as well.

3 However, I have several recommendations for program improvement. First, the
4 Company's EM&V process report provides a number of suggestions that the Company
5 should consider. For several programs, Georgia Power's Evaluation Team (including
6 Nexant, Inc., in association with The Cadmus Group and Abt SRBI) identified
7 opportunities to capture additional savings. For example, the Company could streamline
8 internal processes to achieve greater savings in the Commercial Energy Efficiency
9 Program ("CEEP") and Lighting and Appliance Programs; add additional measures to the
10 CEEP Program, such as heating and cooling equipment, high efficiency motors, shell
11 measures and controls; and reduce participation barriers to the Home Energy
12 Improvement Program by providing tips about frequent application errors and actions to
13 ensure the timely delivery of incentives.

14 Second, based on the trade ally and commercial program participant feedback the
15 Company received,¹⁴ the commercial programs could be enhanced. Trade allies and
16 participants felt that the programs were [REDACTED]
17 [REDACTED]
18 [REDACTED]. Suggestions from Georgia
19 Power's allies and customers included [REDACTED]

¹⁴ See Georgia Power Response to Data Request No. STF-3-34, GPSC Dockets No. 36498 & 36499, *Attachment G: GPC Trade Ally Program Focus Group Report* (July 2012) (Trade Secret).

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[REDACTED]

all of which I support.

Third, the commercial programs had high free-ridership rates—a clear area for improvement for the Company to achieve greater energy impacts and increase the cost-effectiveness of the commercial programs. The Company’s EM&V report states, “Free ridership data analysis from participants’ self-reports indicated nearly 47% of customers had already purchased or installed energy-efficient equipment prior to learning about the program.”¹⁵ When the Company allows these participants to receive the rebate for installed efficiency equipment, it is clearly not using the incentive to influence the customers’ actions. This is poor energy efficiency program management, and more importantly, drives up the cost of the program on a levelized basis.

In addition, the Residential Home Energy Improvement Program (HEIP) has low savings per participant. Based on Synapse’s analysis (Exhibit SACE-NAM-5), the average participant savings is only about 5% in both the Proposed Portfolio and Enhanced DSM Portfolio, and only about 9% per customer when accounting for repeat participation over time. Residential retrofit programs are traditionally a hallmark of DSM programs, through which program participants can expect to experience substantial savings. Georgia Power should offer more aggressive measures and savings to participants within this program.

¹⁵ Nexant, *Impact Evaluation of Georgia Power Company’s 2011 DSM Programs* (Dec. 21, 2012), submitted by Georgia Power in GPSC Docket No. 31082 (Dec. 28, 2012), at 48.

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1 Finally, there are opportunities that the Company may not be capturing in the small
2 business proposed program. For example, Georgia Interfaith Power and Light (“GIPL”)
3 conducts audits for faith-based groups across Georgia through its Power Wise Program,
4 and has saved a significant amount of electricity through the audits and the resulting
5 energy efficiency plans. Georgia Power’s proposed small business program does not
6 appear to offer incentives on several of the measures that GIPL suggests in its audits,
7 including building energy management systems, attic insulation, and HVAC units. While
8 HVAC unit incentives are offered in the proposed Commercial Prescriptive program, it is
9 not clear if the faith-based groups that GIPL works with would qualify for this program.

10 **VII. Application of Evaluation, Measurement and Verification Results**

11 **Q. What is EM&V?**

12 A. EM&V stands for “Evaluation, Measurement and Verification,” which is a critical
13 component of the energy efficiency program cycle. EM&V allows the Company,
14 regulators and interested stakeholders to understand how the energy efficiency programs
15 are performing and what changes could optimize program implementation.

16 **Q. When did Georgia Power file its EM&V report?**

17 A. Georgia Power filed its EM&V report for 2011 programs in Commission Docket 30182
18 in December 2012. This is the first major EM&V report that Georgia Power has publicly
19 filed. It constitutes a comprehensive review of all seven of its Certified DSM programs,
20 and is both an impact and process evaluation.

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1 **Q. Does the Company apply the EM&V results to the Proposed Portfolio?**

2 A. Based on testimony and data responses from the Company, it is unclear whether and to
3 what extent the Company applied EM&V results from this report to the program plans in
4 its 2013 IRP and DSM Application.

5 It is best practice to apply the EM&V results, in a transparent matter, in planning future
6 program participation, energy and demand savings forecast. By using lessons learned
7 from one program year to inform the forecasts of the next year, the Company could refine
8 its efficiency forecasts on an annual basis, increasing their accuracy and reliability each
9 year.

10 A thorough review of EM&V is crucial to ensuring that the energy efficiency programs
11 are delivering savings to as many ratepayers as possible, at the lowest cost. The results of
12 the EM&V report are used both to determine program costs and to serve as inputs into the
13 Company's performance incentive. Because IRP and DSM certification dockets raise
14 numerous important issues, I am concerned that the EM&V report is not receiving the
15 necessary level of attention. If the Company is applying conclusions from the EM&V
16 report to the DSM Program Plan forecast, it seems that the Company essentially asking
17 Staff and the Commissioners to approve the EM&V in the DSM proceeding as well.

18 **Q. How is EM&V reported in other jurisdictions?**

19 A. In other Southeast jurisdictions, the EM&V report is a key piece of the annual tariff filing
20 for energy efficiency. In both North and South Carolina, there is a single proceeding in
21 which the Company's performance incentive, lost revenues, program benefits and

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1 efficiency forecasts are reported and addressed together. This simplifies the energy
2 efficiency cost-recovery process because all the pieces necessary to determine the annual
3 tariff are considered in one setting.

4 **Q. What do you recommend?**

5 A. I recommend that the EM&V review occur in a separate proceeding prior to the DSM
6 tariff filing in November, particularly due to the short timeframe that the Commission
7 and Staff have to review tariff proceedings. This will allow the Company, Staff and
8 interested stakeholders the appropriate amount of time to review the results and
9 application of EM&V in the Company's efficiency portfolio.

10 **VIII. Annual True-Up**

11 **Q. How does the Company currently "true-up" its energy efficiency spending?**

12 A. There doesn't appear to be a public proceeding dedicated to reviewing the Company's
13 proposed and actual spending, program participation, and application of EM&V for its
14 energy efficiency programs. My understanding is that the DSM tariff is handled in the
15 rate case, and that the Commission Staff reviews the Company's EM&V, but that there is
16 no formal proceeding.

17 **Q. Is there a true-up proceeding in other states in the Southeast?**

18 A. Yes. I am most familiar with the requirements in North and South Carolina. Investor
19 owned utilities in these states must make an annual cost recovery filing that provides a
20 review of the estimated spending on energy efficiency, and compares those estimates to

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1 what the company actually spent. In addition, these proceedings include a review of how
2 the programs are performing, in terms of participation and savings (projected vs. actual)
3 on a measure, program and portfolio level.

4 **Q. Are these types of proceedings open to all stakeholders?**

5 A. Yes. Interested parties can petition the Commission to intervene and can provide
6 testimony or public comments on a utility’s energy efficiency costs, programs,
7 participation and evaluation. It is a useful forum to review how well energy efficiency
8 programs are performing. It allows the utility, the regulators and interested parties to
9 track how efficiency is being used, and to determine whether the utilities are over or
10 under performing.

11 **Q. Does Georgia Power propose an annual “true-up” proceeding in its DSM**
12 **Application?**

13 A. No. The Company proposes submitting an annual report to the Commission updating
14 projected program costs for the following year and allowing the Commission to
15 subsequently adjust the tariff(s) as it deems appropriate.¹⁶

16 **Q. What do you recommend in regard to an annual “true-up”?**

17 A. I recommend that the Commission require the Company to provide annual filings similar
18 to what is required in North Carolina, as shown in Exhibit SACE-NAM-6. Although I
19 understand that the applicable rules and laws in North Carolina may be different, an

¹⁶DSM Application at 5.

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1 annual filing similar to the type that North Carolina utilities submit would provide the
2 Commission with important information about the Company's programs and how they
3 are performing, including, for example, average savings per program participant,
4 projected and actual energy impacts, and projected and annual expenses incurred.

5 **IX. Additional Sum**

6 **Q. Please describe Georgia Power's Additional Sum proposal.**

7 A Georgia Power has proposed an Additional Sum equal to 10% of the net present value of
8 program benefits, using the Program Administrator Test, up to 100% of the cost of
9 programs, and then 5% of the Net Present Value (NPV) of program benefits thereafter.
10 The Company proposes to use gross savings to calculate the NPV of program benefits,
11 which is a departure from the Company's use of net savings in 2010.

12 **Q. How does the proposed Additional Sum compare to other costs of the programs?**

13 A. The Additional Sum requested by Georgia Power represents 24-27% of its total DSM
14 tariff, including the cost of previously certified DSM programs. This is the second
15 largest component of the total DSM tariff and therefore deserves a high degree of
16 scrutiny.

17 **Q. Do you endorse Georgia Power's Additional Sum proposal?**

18 A. I support Georgia Power receiving an Additional Sum because without such an earnings
19 opportunity, there is no management incentive to ensure maximum performance from the

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1 utility's energy efficiency assets. However, I do not support the Company's Additional
2 Sum proposal in this docket.

3 **Q. Please explain why you do not support the Company's Additional Sum proposal.**

4 A. First, I think that the Additional Sum proposal may not divide the benefits between
5 consumers and the Company fairly. Allowing the Company to earn more than its
6 expenditures in program cost is an unusual model. As shown in Exhibit SACE-NAM-7,
7 most states that allow an incentive link it to the Company's performance (i.e. savings as a
8 percentage of sales or attainment of stated goal) with the total incentive level capped at a
9 percentage of program costs. No other state allows the utility to collect above 30% of
10 total program costs.

11 Second, in the 2010 IRP, the Company proposed that its Additional Sum be calculated
12 based on the net benefits; in essence, after free-ridership has been accounted for. In this
13 filing, however, the Company has proposed that its Additional Sum be calculated based
14 on the gross benefits. This means reduced accountability for the Company to ensure that
15 its programs are cost-effective. Given the Company's poor performance with free-
16 ridership in its commercial programs, as I discussed earlier in my testimony, I do not
17 think the Company should earn an incentive that does not account for free-ridership.

18 **Q. What do you recommend?**

19 A. I recommend an alternative performance-based structure in which the Additional Sum
20 provides an incentive to the Company for meeting its energy efficiency goals, and
21 rewards it for going above its goals, as shown in Table 4.

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1 **Table 4. Additional Sum Recommendation**

Savings as a percent of prior year sales	Pre-tax return on NPV of Program Costs
<0.25%	8%
0.25 – 0.49%	12%
0.50 – 0.74%	16%
0.75 – 0.99%	20%
1.0 – 1.24%	24%
<1.25%	28%

2

3 The structure that I propose has a number of advantages over the structure that Georgia

4 Power proposed. Under the structure I propose, the more successful Georgia Power is in

5 achieving energy savings, the greater its earnings opportunity. This approach provides

6 Georgia Power with a strong incentive to achieve high levels of cost-effective energy

7 efficiency as rapidly as possible. Also, as the portfolio increases in scale, it may require

8 more management oversight, leadership and vision. It is appropriate to reward talent and

9 achievement with a higher incentive.

10 Furthermore, the overall size of the proposal is consistent with the Staff recommendation

11 in the 2010 DSM Certification proceeding. Staff recommended a shared savings model,

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1 capped at 25% of program costs.¹⁷ The 8-28% of program cost scale that we recommend
2 would offer similar earnings opportunities to the Company, but would be simpler to
3 implement.

4 **Q. How will your proposed incentive impact the absolute dollar amount that Georgia**
5 **Power receives as the Additional Sum?**

6 My proposed Additional Sum will result in greater savings accruing to customers and less
7 to Georgia Power’s shareholders. However, the 8-28% of program cost scale is sufficient
8 to motivate Georgia Power to pursue energy efficiency.

9 **Table 5. Comparison of SACE Additional Sum and Georgia Power Additional Sum**

2014 -2023 NPV	SACE Proposal	Georgia Power Proposal
Proposed Portfolio	\$21,514,225	\$216,773,688
Enhanced DSM Portfolio	\$353,148,799	\$621,871,355

10

11 **X. Program Flexibility**

12 **Q. What has the Company proposed for program flexibility?**

13 The Company has indicated that the program design or implementation plan for all
14 programs in the Proposed Portfolio may be modified for a variety of reasons during the
15 three-year period between now and the next IRP. The Commission has rules on when the

¹⁷ See Direct Testimony of Richard F. Spellman, Caroline L. Guidry and John L. Kaduk on Behalf of GPSC Public Interest Advocacy Staff, GPSC Docket No. 31081 (May 7, 2010), at 49.

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1 Company must submit an amended application for certification of a demand side
2 resource,¹⁸ but it does not provide much guidance on flexibility program changes that do
3 not require an amendment.

4 **Q. What do you recommend for program flexibility guidelines?**

5 A. I recommend that the Commission more clearly define criteria for allowing Georgia
6 Power to make changes in its energy efficiency portfolio. By providing clear criteria, the
7 Commission will allow Georgia Power to be flexible and dynamic in its response to
8 market and customer needs. In addition, by providing flexibility around program savings
9 and spending, the Company is not strictly bound to program cost projections. I
10 recommend that the Commission use the recent North Carolina flexibility guidelines as a
11 starting point for developing its criteria.

12 **Q. What are the North Carolina flexibility guidelines?**

13 A. Recently, SACE was a party to a proceeding in North Carolina that clearly outlined when
14 and how the utility needed to provide advance notice and make changes to its portfolio.
15 In addition, the flexibility guidelines provided guidance as to when the Commission
16 needed to approve changes to the portfolio, and when it simply needed to be informed of
17 changes. The Flexibility Guidelines, as approved by the North Carolina Utilities
18 Commission, are provided in Exhibit SACE-NAM-8.

19 Commission approval is required only for a few actions under the North Carolina
20 Flexibility Guidelines. The primary change requiring Commission approval is if there is

¹⁸ See Ga. Comp. R. & Regs. r. 515-3-4.10 Filing Requirements for a Demand-Side Resource Certificate Amendment.

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1 a DSM Tariff revision. In addition, there are a number of different portfolio changes
2 outlined in the flexibility guidelines, all of which are acceptable without Commission
3 approval unless the change results in the forward looking-present value of program costs
4 or NPV avoided costs increasing by more than 20%, or the TRC test ratio decreasing by
5 more than 20%.

6 **Q. Under the North Carolina flexibility guidelines, are the utilities required to inform**
7 **other parties about changes to their portfolio?**

8 A. In North Carolina, there is a Collaborative, where stakeholders and Duke Energy meet
9 once a quarter to discuss their energy efficiency programs. The purpose of the
10 Collaborative is to ensure that there are open lines of communication between the
11 stakeholders and the Company on energy efficiency design, implementation and
12 evaluation. In the flexibility guidelines, there are a number of changes to the portfolio
13 that require that the Company provide a 45-day notice to Collaborative members to allow
14 them an opportunity to comment on a proposed change.

15 **Q. Would a Collaborative or similar process be helpful in Georgia?**

16 A. Yes, I think it would. The purpose of the DSM Working Group seems to be tied to the
17 Nine-Step process, whereas a Collaborative could serve to inform and engage
18 stakeholders on energy efficiency program design, implementation and evaluation. It
19 would provide the Company, its consultants, energy efficiency contractors and other
20 energy efficiency experts with a venue to have open and useful conversations about
21 Georgia Power's efficiency programs. Alternatively, perhaps the scope of the DSM

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1 Working Group could be expanded to allow for additional stakeholders to participate that
2 might not otherwise be interested in the regulatory side of energy efficiency.

3 **XI. TEAPOT Study Requirements**

4 **Q. What changes to the TEAPOT Study did the Company propose?**

5 A. The Company proposes eliminating the need for a technical, economic and achievable
6 potential study at the beginning of each IRP cycle.

7 **Q. Do you agree with this change?**

8 A. No. I believe that the Company should continue to conduct an energy efficiency
9 potential study prior to the triennial IRP filing. Energy efficiency potential studies are
10 critical to developing accurate efficiency inputs for the IRP. According to the National
11 Action Plan on Energy Efficiency, energy efficiency potential studies serve as “the
12 analytic basis” for “integrat[ing] energy efficiency into utility, state and regional planning
13 activities” and “develop[ing] long-term energy saving goals as part of energy planning
14 processes.”¹⁹

15 **Q. How was the TEAPOT Study used in the development of the Proposed and**
16 **Aggressive Portfolios?**

17 The TEAPOT Study was used to inform the Proposed and Aggressive Portfolios. Per the
18 Nine-Step Process, the TEAPOT Study assists in targeting DSM programs in areas where
19 the highest market potential exists. While the Company argues that the Technology

¹⁹ National Action Plan for Energy Efficiency, *Guide for Conducting Energy Efficiency Potential Studies* (Nov. 2007) at 1-1.

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1 Catalog is the best place to identify new measures, the TEAPOT Study evaluates where
2 the largest opportunities exist across the entire efficiency portfolio. For example, the
3 TEAPOT Study identified that there is significant industrial efficiency potential in
4 Georgia Power's service territory. The Technology Catalog does not provide this big
5 picture overview.

6 **Q. Does this conclude your testimony?**

7 **A. Yes.**