Chapter 8 Need for Power

Chapter 8 presents the need for power evaluation based on Georgia Power Company's Integrated Resource Plan (IRP). As discussed in Chapter 1 Georgia Power Company (GPC), through the Georgia Public Service Commission's Integrated Resource Planning process, has identified that an economic need for additional base load generation is identified no later than June 2015. The addition of new baseload generation at VEGP will represent the first addition in baseload generation since 1989. GPC is a regulated utility and must satisfy the State of Georgia's detailed review considering future power needs and also must seek state approval to pursue new nuclear generation at the VEGP site. The State of Georgia retains approval authority over the types of electric generation that will be constructed and operated within its border. NUREG-1555 proposes that a state-approved IRP can support the NRC need for power evaluation if it is (1) systematic, (2) comprehensive, (3) subject to confirmation, and (4) responsive to forecasting uncertainty. It is SNC's determination that the GPC IRP satisfies these criteria and therefore no additional independent review by the NRC is required. The following sections discuss how the IRP process satisfies the need for power analysis.

- SNC Approach (Section 8.1)
- Integrated Resource Planning in Georgia (Section 8.2)
- Georgia Power Integrated Resource Plan (Section 8.3)
- Other Planning (Section 8.4)
- Conclusion (Section 8.5)

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8.1 SNC Approach

NRC Regulation 10 CFR 52.17(a)(2) indicates that an early site permit (ESP) application need not include an assessment of need for power, allowing applicants to defer the analysis until submittal of a combined construction and operating license (COL). However, the applicant may address Need for Power in the ESP application, if desired. Southern Nuclear Company (SNC) intends to apply for a COL for the Vogtle Electric Generating Plant (VEGP) in 2008 and therefore has included need for power in its ESP application.

SNC has been authorized to submit the ESP application by Georgia Power, acting as agent for the co-owners of the existing VEGP: Georgia Power Company (GPC), Oglethorpe Power Corporation (OPC), the Municipal Electric Authority of Georgia (MEAG), and the City of Dalton, an incorporated municipality in the State of Georgia acting by and through its Board of Water, Light, and Sinking Fund Commissioners (Dalton Utilities).

The co-owners support the development of additional nuclear units at VEGP. In May, 2005, the co-owners entered into a Development Agreement that contemplates the licensing, design and engineering, construction, and operation of up to two additional units at the site. The Development Agreement also grants the requisite rights to use the VEGP site and authorizes GPC to perform development activities on behalf of the co-owners, including preparing and filing ESP and COL applications, and developing and constructing infrastructure improvements as authorized by the NRC in an ESP and related limited work authorizations.

The Development Agreement created a schedule for the co-owners to reach more detailed agreements and a mechanism for the co-owners to elect to participate in the new units. The co-owners have the right to participate up to their current interests in VEGP Units 1 and 2 (i.e., GPC 45.7%, OPC 30%, MEAG 22.7% and Dalton Utilities 1.6%). In December, 2005, the co-owners indicated their current intent to participate in this power project at their pro-rata interests.

Collectively, the co-owners have a service area that encompasses the entire state of Georgia, except for the northwest corner (see Figure 8.1-1), and they supply electricity to approximately 6.2 million people or 76 percent of Georgia's year 2000 population (not including Savannah Electric and Power customers). Savannah Electric and Power merged with GPC on July 1, 2006, adding an additional 320,000 residents in a 2,000-square mile region along the Georgia coast. Demand for electricity in Georgia is expected to grow by an annual average rate of 1.8 percent per year through 2030 **(EIA 2005)**.

In order to ensure that the need for power analysis provides a high level of assurance that capacity from the new units would be needed, SNC has first prepared the need for power analysis as if GPC were to be the sole owner of the potential additional units at the VEGP site, and then analyzed the effect that other ownership needs would have on this analysis.

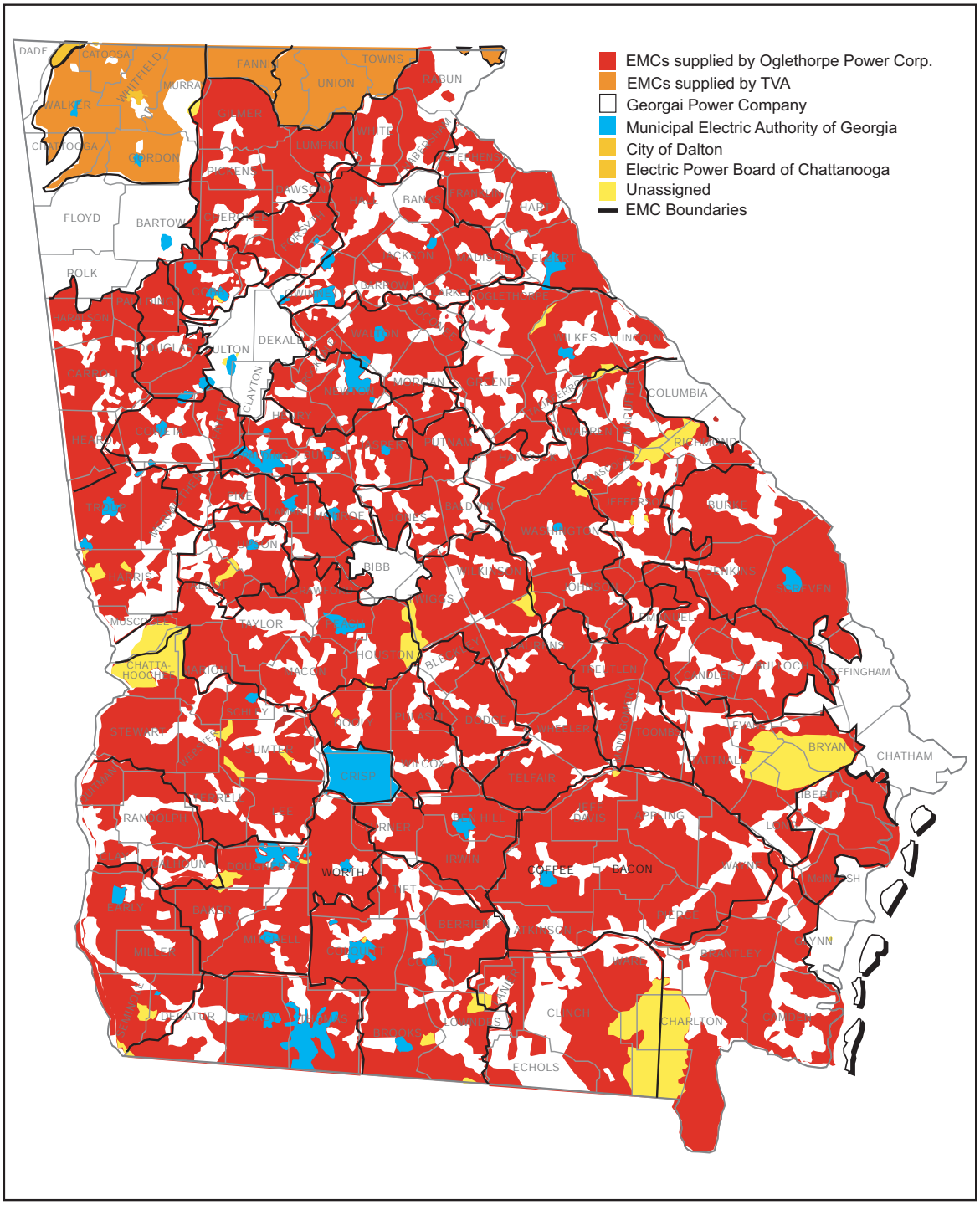

Figure 8.1-1 Georgia Electric Suppliers Assigned Service Areas

Section 8.1 References

(EIA 2005) Energy Information Administration, Annual Energy Outlook, Electric Generation and Renewable Resource, Table 68, Electric Power Projects by Electricity Module Region – Southeastern Electric Reliability Council, Washington, D.C. December.

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8.2 Integrated Resource Planning in Georgia

The mission of the Georgia Public Service Commission (GPSC) is to ensure that consumers receive safe, reliable and reasonably-priced electric services from financially viable and technically competent companies subject to its jurisdiction. The GPSC has the authority to set rates and require long-range plans and projections. The GPSC expects the electric industry in Georgia to remain traditionally regulated in its present form **(GPSC 2005)**.

The GPSC fully regulates GPC **(GPSC 2005)**. By statute, GPC must submit to the GPSC at least every 3 years an Integrated Resource Plan (IRP) that:

- Includes the utility's electric demand and energy forecast for at least a 20-year period,
- Includes the utility's program for meeting the requirements shown in its forecast in an economical and reliable manner,
- Includes the utility's analysis of all capacity resource options, including demand-side and supply-side options, and
- Sets forth the utility's assumptions and conclusions with respect to the effect of each capacity option.[1]

Provisions in the statute require the GPSC to hold a public hearing on the IRP and establish criteria for the GPSC to use in determining whether to approve and adopt the plan.[2] A related provision prohibits the utility from constructing an electric plant, or increasing the capacity of an existing plant, without first obtaining from the GPSC a certificate of public convenience and necessity. A certificate application must include the current IRP and a cost-benefit analysis for the proposed additional capacity.[3]

By statute, the Consumer's Utility Counsel Division of the Governor's Office of Consumer Affairs represents state residents and small commercial customers in utility proceedings, including IRP review, before the GPSC **(CUC 2006)**. This provides a viewpoint that might not otherwise be present in the review process for IRPs.

The GPSC has established detailed regulatory requirements for IRPs.[4] The requirements include the following:

- Energy and demand forecasting – The plan must report and use 3 years of historic data and address each of the next 20 years. Forecasting must be weather-normalized and address the

1. Official Code of Georgia (OCG) Title 46, Chapter 46-3A is available on the Georgia General Assembly website at http://www.legis.state.ga.us/cgi-bin/gl_codes_detail.pl?code=46-3A-1. Accessed May 23, 2006, [OCG 46-3A-1(7)].
2. Ibid. at OCG 46-3A-2(b) and -2(c). Updated annually to reflect changes in the triennial base plan approved by the commission.
3. Ibid. at OCG 46-3A-3(a) and -3(b).
4. Georgia Public Service Commission Regulation Chapter 515-3-4 is available on the Georgia Public Service Commission website at http://rules.sos.state.ga.us/cgi-bin/page.cgi?g=GEORGIA_PUBLIC_SERVICE_COMMISSION%2FGENERAL_RULES%2FINTEGRATED_RESOURCE_PLANNING%2Findex.html&d=1. Accessed May 23, 2006. (GPSC 515-3-4).

jurisdictional area, retail and wholesale loads, customer classes, and annual load factors. The regulation specifies forecasting methodology and determinants, and standards for data inputs. Finally, the plan must include an evaluation of the sensitivity of the results to changes in major assumptions and estimates used. The sensitivities must include a reasonable range of sales and demand and include base growth, high-growth, and low-growth scenarios.[1]

- Capacity resource identification – The plan must identify existing resources, including power purchases, sales and exchanges, demand-side programs, cogeneration, standby generation, interruptible service, pooling or coordination agreements, generation, and transmission. It must address potential new supply- and demand-side resources and the associated decision-making process (the regulation details the process for securing long-term new supply-side options).[2]
- Integrated plan development and filing – In addition to energy and demand forecasting and capacity resource identification, the plan must address alternatives to proposed generation; environmental impact of proposed and alternative generation; economic, environmental, and other benefits to the state and consumers; and financial information. The plan must identify the integrated combination of demand- and supply-side resources selected to satisfy future energy demands. Periodically after plan approval, the utility must report on actions taken to implement the plan and any deviations from the plan.[3] A new plan must be filed every 3 years.[4]

The GPSC staff retains experts to assist in reviewing the utility's IRP, developing data requests and reviewing responses, providing reports to and testimony before the GPSC, and responding to GPSC requests. The GPSC can approve the plan, approve it subject to stated conditions or modifications, approve it in part and reject it in part, reject it in its entirety, or provide an alternate plan. The review process takes approximately 150 days.

In addition to IRP requirements, the GPSC has detailed requirements for obtaining GPSC approval, called certification, of new supply-side resources.[5] An application for GPSC certification for constructing or purchasing additional capacity, called a power purchase agreement, must include a discussion of how the proposed application is consistent with the current IRP, a cost-benefit analysis, and detailed information about the proposal and alternatives.[6] Once the GPSC certifies a power purchase agreement, that capacity is added to the plan, called the "base case", for meeting forecast loads. Adding capacity to the base case lags much of the forecast timeline. For example, the current GPC forecast extends to the year 2025 and GPC just applied for GPSC certification of agreements to add capacity beginning in 2009 **(GPC 2006)**.

1. Ibid. at GPSC 515-3-4-.03.
2. Ibid. at GPSC 515-3-4-.04.
3. Ibid. at GPSC 515-3-4-.05.
4. Ibid. at GPSC 515-3-4-.06.
5. Ibid. at GPSC 515-3-4-.07, -.08, -09, and -10.
6. Ibid. at GPSC 515-3-4.07(2).

Section 8.2 References

(CUC 2006) Consumer's Utility Counsel Division, Georgia's Office of Consumer's Affairs, available online at http://consumer.georgia.gov/00/channel_modifieddate/0,2096,5426814_38871066,00.html, accessed June 6, 2006.

(GPC 2006) Georgia Power Company, 2006, Georgia Power Company's Application for the Certification of 2009 Capacity Resources and Certification of the Upgrade to the Rocky Mountain Pumped Storage Hydroelectric Generating Facility; Docket No. 22528-U, Letter, Fletcher (GPC) to McAlister (Georgia Public Service Commission), May 10, available online at Georgia Public Service Commission website at http://www.psc.state.ga.us/cgi-bin/docftp.asp?txtdocname=92034, accessed June 6, 2006.

(GPSC 2005) Georgia Public Service Commission, Georgia Public Service Commission 2005 Annual Report, Atlanta, available online at http://www.psc.state.ga.us/pscinfo/2005Annual.pdf, accessed June 6, 2006.

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8.3 Georgia Power Integrated Resource Plan

With the merger with Savannah Electric and Power, GPC now serves over 2 million retail customers in all but several counties in northwest Georgia. In July 2004, the GPSC issued its final order approving the fifth GPC IRP **(GPSC 2004)**. The order is an excellent explanation of the proceedings and conclusions, and SNC has included a copy in Appendix C. The following paragraphs summarize the order, which SNC is adopting by reference, and aspects of the related docket on the GPSC website **(GPSC 2004)**.

The 2004 IRP approval was the culmination of GPSC and staff review of the GPC plan and application for approval **(GPC 2004)**; GPC responses to 11 sets of staff requests for additional information; motions, briefs, and other submittals by 10 interveners; GPC and intervener testimony during 5 days of hearings; and staff reports. The approval process took 5 months. A redacted version of the GPC plan and formal documentation associated with its approval are available on the GPSC website **(GPSC 2006)**. GPC and the GPSC also maintain a trade-secret version of the plan. Table 8.3-1 is a summary outline of the 2004 IRP; the actual plan is contained in several book volumes.

The GPSC final order summarizes the proceedings and the GPSC authority to impose the IRP process on GPC. The order discusses the models used to forecast demand, analysis of the accuracy of past forecasts, the weather normalization process, and a PSC-staff requested addition of a higher growth projection. The GPSC approved a 13.5 percent reserve margin for planning within 3 years and a 15 percent margin for longer forecasts and approved planning that identifies the need for new resources beginning in 2009 and continuing through 2023. The GPSC noted testimony expressing concern over relying totally on natural gas for future resource additions, due to its expected continued high prices. The order approves several demand-side measures being implemented and directs consideration of additional measures; approves pricing tariffs and green power initiatives; concurs with transmission system planning; and assesses GPC's planning for costs and other impacts that future environmental protection requirements might pose. The order reaffirms previous GPSC direction that GPC own 70 percent of capacity relied upon, limiting purchased power to no more than 30 percent of total supply-side resources. Finally, the order directs actions to be taken before the next triennial IRP update and format changes for that update.

In 2006, GPC submitted to the GPSC a revised energy and demand forecast **(GPC 2006)**. This submittal updates the forecast in the 2004 IRP and will form the basis for the next triennial plan update, in 2007. The load forecast includes underlying assumptions of load growth by customer class and of fuel prices. Because of the sensitive nature of the contents, the load forecast is available only as a "trade secrets" document.

In January 2007, GPC filed the 2007 Integrated Resource Plan (IRP) with the Georgia Public Service Commission **(GPC 2007)**. The IRP includes nuclear generation and shows nuclear additions using the Westinghouse AP-1000 nuclear technology as a base case option, with

commercial generation starting in year 2015/2016. The IRP also discusses Georgia Power's active pursuit of the nuclear option at the existing Vogtle plant site, including the filing of the Early Site Permit application for the Vogtle site and plans for filing a Combined Construction and Operating License (COL) in 2008. The IRP indicates that the additional capacity needed in year 2015/2016 may be either baseload coal or nuclear, depending on future circumstances. In March 2007, the NRC visited the GPC office in Atlanta and reviewed the 2007 IRP submittal. The 2007 IRP is currently under review by the Georgia Public Service Commission, with a decision expected in the latter half of 2007.

Table 8.3-1 Contents, Georgia Power 2004 Integrated Resource Plan

Main Report	
Section 1	Summary of 2004 Integrated Resource Plan
Section 2	Integrated Resource Planning Process Overview
Section 3	Budget 2004 Load and Energy Forecast
Section 4	Comparison of the Forecast with Existing resources
Section 5	Demand-Side Plan
Section 6	Supply-Side Plan
Section 7	Integration of Demand-Side Programs into the Benchmark Supply-Side Plan
Section 8	Integrated Resource Plan
Section 9	Summary of Transmission Planning
Section 10	Renewable Resources
Section 11	Hydro Electric Operation and Re-Licensing
Section 12	Action Plan
Section 13	Attachments
Technical Appendix Volume 1A	
2004 IRP Plan & Mix Study	
Generation Technology Book	
Financial Review	
Technical Appendix Volume 1B	
Environmental Compliance Strategy	
Unit Retirement Study	
Reserve Margin Study	
Technical Appendix Volume 2	
2004 Budget Load & Energy Forecast	

Section 8.3 References

(GPC 2004) Georgia Power Company, 2004 Integrated Resource Plan, Atlanta, January 30, 2004 (date received by Georgia Public Service Commission), Redacted version available on Georgia Public Service Commission website at http://www.psc.state.ga.us/cgi-bin/docftp.asp?txtdocname=70086, accessed May 25, 2006.

(GPC 2007) Georgia Power Company, 2007 Integrated Resource Plan, Atlanta. Redacted version available at http://www.psc.state.ga.us.

(GPSC 2004) Georgia Public Service Commission, Final Order, Docket No. 17687U, Document No. 74366, available on Georgia Public Service Commission website at http://www.psc.state.ga.us/cgi-bin/docftp.asp?txtdocname=74366, accessed June 21, 2005.

(GPSC 2006) Georgia Public Service Commission, Georgia Public Service Commission Docket No. 17687, Atlanta, available online at http://www.psc.state.ga.us/cgi-bin/documentresults.asp, accessed June 6, 2006.

8.4 Other Planning

GPC, OPC, and MEAG are members of the Southeastern Electric Reliability Council, Inc. (SERC). Dalton Utilities is represented at SERC by Southern Company. SERC is the regional reliability organization responsible for promoting, coordinating, and ensuring the reliability and adequacy of the bulk power supply systems in the area served by the member systems and is one of eight such councils that comprise the North American Electric Reliability Council, Inc. (NERC). SERC maintains a website with council information **(SERC 2006)**.

SERC members submit demand, energy, aggregate capacity and transmission line information to SERC for compilation into regional input for submittal to the U. S. Energy Information Administration (EIA).[1] The members also submit unit data directly to EIA.[2] SERC publishes load growth, net energy, and peak demand forecasts for the region **(SERC 2005)** based on member-submitted data but does not perform any independent analysis.

Southern Company, through its subsidiaries, is one of the largest producers of electricity in the United States, with a 120,000-square mile service territory served by its four regulated retail electric utility subsidiaries: Alabama Power, GPC, Gulf Power, and Mississippi Power.

Southern Company performs integrated planning and system operations for its subsidiary utilities. Through a contractual arrangement, the utilities in each state share their capacity resources to benefit from the economies of scale associated with a large system **(FPSC 2005)**. Southern Company has established a subsidiary, SNC, to operate company nuclear power plants **(Southern Company 2006)**; the co-owners have formally agreed that, if constructed, SNC will operate the additional units.

8.4.1 Co-owner Planning

The GPSC is reviewing a 2006 GPC application for certification (i.e., approval) of three power purchase agreements that would provide a total of 1,039 megawatts of additional generating capacity for 15 years beginning in 2009. The application includes an update of the load forecast that the GPSC approved in the 2004 IRP. The updated GPC load forecast shows that by 2015, GPC will need to add or procure [confidential commercial information] megawatts of capacity **(GPC 2006)** because of load growth and expiring power purchase agreements. If the GPSC certifies the pending agreements, GPC will still need to add or procure [confidential commercial information] megawatts of capacity by 2015, the earliest date that VEGP Unit 4 would go commercial. VEGP Units 3 and 4 would each generate approximately 1,000 megawatts electric net, or 2,000 megawatts combined. Thus, the GPC forecast of absolute demand supports the addition of both units, with [confidential commercial information] megawatts to be met by other capacity additions.

1. Form EIA-411, *Coordinated Bulk Power Supply Program Report.* SERC submits to NERC, which submits to EIA a form for each regional council.
2. Form EIA-860, *Annual Electric Generator Report*.

The 2004 IRP did not include nuclear power as an option for meeting future demand and, consistent with the IRP, GPC has begun planning for capacity additions in 2010 and 2011 that do not account for new nuclear power capacity.[1] However, the GPSC has reviewed GPC costs for pursuing VEGP Units 3 and 4 licensing and has authorized GPC to record these as capital costs for future recovery in rates[2]. In addition, the Georgia legislature recently passed resolutions urging the GPSC to encourage utilities to consider building new nuclear plants in Georgia.[3] GPC has committed to the GPSC that GPC's next triennial IRP, due to the GPSC in January 2007, will address the nuclear option. Should the GPSC approve of incorporation of VEGP Units 3 and 4 into the GPC planning for future capacity, GPC would plan other capacity additions around Units 3 and 4 coming on line as scheduled for operation.

If GPC owned both units outright, it could make beneficial use of the generating capacity within the GPC service territory. As an alternative, GPC would also have recourse to the Southern service territory (the Southern system shows a cumulative need for [confidential commercial information] megawatts of additional capacity by 2015 **[GPC 2006]**) and to electricity sales on the open market. However, GPC does not expect that this will be necessary.

OPC, MEAG, Dalton Utilities, and some of the OPC and MEAG members each have their own process for determining their individual needs for power. If these co-owners of VEGP Units 1 and 2 finalize their ownership in Units 3 and 4 as planned, their need for power would displace some of the GPC need and GPC would have to seek other capacity additions to compensate.

Although the ultimate participation percentages of each co-owner in Units 3 and 4 has not been determined, and likely will not be decided until 2008, the co-owners support additional nuclear generating capacity, based on their analyses of future needs for power. MEAG and OPC members are located throughout Georgia. The customers served by the co-owners and their members represent most of the population of Georgia, assuring that the additional units will be dedicated to the State's electric power needs.

MEAG has 49 members (48 cities and one county) who provide electricity to retail customers in small to moderate-sized Georgia municipalities. These members must purchase their power from MEAG. OPC is an electric membership corporation owned by 38 retail electric membership corporations. Through commercial agreements, OPC supplies electricity to these electrical utilities from its existing generating capacity and through purchased power contracts. OPC supplies approximately 70% of the total load of its members. Dalton Utilities operates its independent municipal electric authority and is not a member of MEAG.

MEAG owns about 1,600 megawatts of capacity from several facilities that provide energy to its members of approximately 600,000 retail customers; OPC counts approximately 1.5 million

1. Georgia Public Service Commission, Docket Nos. 21447 and 21448. Available on Georgia Public Service Commission website at http://www.psc.state.ga.us. Accessed June 16, 2006.
2. Georgia Public Service Commission, Order, Docket No. 22449U, decided June 22, 2006. Available on Georgia Public Service Commission website at http://www.psc.state.ga.us. Accessed June, 2006.
3. Georgia Senate Resolution 865, 2006. The Georgia House passed a similar resolution.

customers in the State through its members, with 5,878 megawatts of owned or managed capacity. Taken together with GPC's approximately 2 million customers and Dalton Utilities' 13,200 customers, the four co-owners essentially serve the entire State of Georgia other than a small area in the northwestern portion of the State which is served by the Tennessee Valley Authority. This is the same geographical region that will be served by the additional units at the VEGP.

Each of the VEGP co-owners, as part of their resource planning, have estimated their current peak capacity needs, and their projected capacity needs in 2015, the nominal in-service date of VEGP Unit 3:

Forecasted Approximate Peak Load/Need in MW (2006)
CONFIDENTIAL COMMERCIAL INFORMATION

Dalton	[Confidential commercial information]
MEAG	[Confidential commercial information]
OPC	[Confidential commercial information]
GPC	[Confidential commercial information]

Forecasted Approximate Peak Load/Need in MW (2015)
CONFIDENTIAL COMMERCIAL INFORMATION

Dalton	[Confidential commercial information]
MEAG	[Confidential commercial information]
OPC	[Confidential commercial information]
GPC	[Confidential commercial information]

As shown in Table 8.4-1, SNC has collected data from the co-owners that support their projected estimates that, in total, [confidential commercial information] MW of generating capacity need to be added or procured by the year 2015. Based upon the percentages indicated, the co-owners have more need than the bounding analysis. Participation of the other co-owners would result in an overwhelming case for the need for Unit 3 and 4 capacity but would not change the conclusion of SNC's need for power analysis.

In summary:

- Georgia has an integrated resource planning process that satisfies NRC criteria for eliminating the need for additional, detailed NRC review;
- Co-owner GPC is subject to the state process, has a demonstrated need for additional capacity that VEGP Units 3 and 4 would provide, and would need GPSC approval prior to proceeding with the project with or without participation by the other co-owners;
- The state process gives NRC assurance that the project would not proceed without state concurrence that the need for power is real and that the benefits of satisfying that need would be realized; and

- With the participation of the other co-owners, as envisioned, the additional generating units will provide the relevant service area with only a portion of the co-owners projected need for power.

See Section 10.4 for discussion of additional benefits of co-owner participation in the proposed action.

Table 8.4-1 Information Supporting the Estimated Need for Power in Georgia in 2015

CONFIDENTIAL COMMERCIAL INFORMATION

Year	Total Accredited Generating Capacity (MW)	Accredited Baseload Generating Capacity (MW)	Peak Demand (MW)	Net Capacity Needed for Baseload (MW)	Net Capacity Needed for Peak Power (MW)	Required Reserve Margin (percent)
			GPC[a] (45.7 percent ownership)			
2006	20,070	11,001	[confidential commercial information]	[confidential commercial information][b]	[confidential commercial information]	[confidential commercial information][c] %
2015	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]	[confidential commercial information][b]	[confidential commercial information]	[confidential commercial information][c] %
			OPC (30 percent)			
2006	6,584	3,433	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]%
2015	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]%
			MEAG (22.7 percent)			
2006	2,409	1,519	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]%
2015	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]%
			Dalton Utilities (1.6 percent)			
2006	317	241	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]%
2015	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]	[confidential commercial information]%

a. Georgia Power data includes both GPC and Savannah Electric.
b. Estimated average demand during summer months of June through September.
c. Target reserve margin for 2006 planning. Through Georgia Power's participation in the Southern Power pool, reserves are shared with other Southern Company operating companies resulting in a lower effective reserve margin requirement (as shown above) for an individual entity such as Georgia Power. The Southern pool has a target reserve margin of 13.5% in the 0-3 year timeframe and 15% beyond 3 years.

Section 8.4 References

(FPSC 2005) Florida Public Service Commission, A Review of Florida Electric Utility 2005 Ten-Year Site Plans, December 2005, available online at http://www.psc.state.fl.us/general/publications/reports.cfm#eng, accessed June 6, 2006.

(GPC 2006) Georgia Power Company, 2006, Georgia Power Company's Application for the Certification of 2009 Capacity Resources and Certification of the Upgrade to the Rocky Mountain Pumped Storage Hydroelectric Generating Facility; Docket No. 22528-U, Letter, Fletcher (GPC) to McAlister (Georgia Public Service Commission), May 10, available online at Georgia Public Service Commission website at http://www.psc.state.ga.us/cgi-bin/docftp.asp?txtdocname=92034, accessed June 6, 2006.

(SERC 2005) Southeastern Electric Reliability Council, Inc., Southeastern Electric Reliability Council 2005 Information Summary, July, available online at http://www.serc1.org/Pages/DocumentSearch.aspx?FN=SERC/SERC%20Publications/Information%20Summary, accessed May 25, 2006.

(SERC 2006) Southeastern Electric Reliability Council, Inc., available online at http://www.serc1.org/Pages/Homepage.aspx, access May 25, 2006.

(Southern Company 2006) Southern Company, available online at http://www.southernco.com/ accessed June 6, 2006.

8.5 Conclusion

The Georgia integrated resource planning process satisfies the NRC need for power analysis and meets the NRC criteria for an acceptable state plan.

The following paragraphs demonstrate that the Georgia integrated resource planning process meets the NRC criteria for an acceptable state plan:

- Systematic – Georgia law and GPSC regulations, orders, and requests prescribe the Georgia integrated resource planning process that includes evaluation of the need for additional electric generation capacity. Planning, as currently structured, dates to 1992 and is updated every three years. Each triennial review culminates in a GPSC order approving (with modifications as necessary) and adopting the plan. The GPSC approval process involves prescribed reviews and hearings and typically takes 150 days. SNC has concluded that the statutory, regulatory, and administrative requirements that make up the Georgia process comprise a methodical state process for regularly reviewing, in a thorough fashion, the need for power that GPC is responsible for satisfying.
- Comprehensive – The State of Georgia's planning encompasses energy and demand forecasting, capacity resource identification, integrated plan development, supply-side and demand-side resource evaluation, renewable resource assessment, and includes comparisons of historic forecasted versus actual load results. The plan looks forward 10 years for transmission and 20 years for demand and energy planning. SNC has concluded that the Georgia need-for-power planning process encompasses all of the components that NRC would cover if NRC had to perform a detailed review, covering the subject completely.
- Subject to Confirmation – The utility prepares the plan. The GPSC staff and outside experts review the plan and perform their own analyses, as needed. The GPSC solicits public comment and utility, staff, and public testimony, and maintains supporting documentation on a publicly available website. A division of the Governor's Office represents state residents and small commercial customers in the proceedings. The Georgia integrated resource planning process is subject to confirmation in multiple ways; several entities review the utility-prepared plan, the GPSC review is conducted in a public forum, and the GPSC requires interim reviews on plan implementation. SNC concludes that the resultant need-for-power analysis is fully corroborated, including supporting evidence.
- Responsive to Forecasting Uncertainty – Planning begins with an evaluation of the accuracy of past forecasts and incorporates lessons-learned into current forecasting. The plan also must include an analysis of the sensitivity of all major assumptions and estimates used and include, at a minimum, base case, high-growth, and low-growth scenarios. Uncertainty factors evaluated include population and demand growth, customer mix changes, weather normalization, gas fuel cost volatility, reserve margins, unit retirements, conservation impacts, and environmental compliance costs. SNC concludes that Georgia's use of established models capable of performing sensitivity analyses, together with GPSC-required uncertainty

analysis, ensures that the state process responds appropriately to uncertainty that is inherent in the forecasting process.

SNC concludes that Georgia, having opted to retain traditional regulation of its investor-owned utility, has the kind of integrated resource planning process that meets the NRC need for power evaluation and satisfies their criteria for an acceptable state need for power analysis.