

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2008-196-E

IN RE: Combined Application of South Carolina) Electric and Gas Company for a Certificate)) of Environmental Compatibility and Public)) Convenience and Necessity and for a Base) Load Review Order for the Construction) and Operation of a Nuclear Facility in) Jenkinsville, South Carolina) _____)	SOUTH CAROLINA OFFICE OF REGULATORY STAFF'S FIRST CONTINUING "CHG" AUDIT INFORMATION REQUEST
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**TO: BELTON T. ZEIGLER, K. CHAD BURGESS, AND MITCHELL WILLOUGHBY,
ATTORNEYS FOR SOUTH CAROLINA ELECTRIC & GAS COMPANY:**

The South Carolina Office of Regulatory Staff ("ORS") hereby requests, pursuant to S.C. Code Ann. § 58-4-55 (Supp. 2007) that South Carolina Electric & Gas Company (hereafter referred to as "SCE&G" or "the Company") provide responses in writing and under oath and serve the undersigned within ten (10) days after service of this request to ORS at 1441 Main Street, Suite 300, Columbia, South Carolina, 29201. If you are unable to respond to any of the audit requests, or part or parts thereof, please specify the reason for your inability to respond and state what other knowledge or information you have concerning the unanswered portion.

As used in these audit requests, "identify" means, when asked to identify a person, to provide the full name, business title, address and telephone number. As used in these audit requests, "address" means mailing address and business address. When asked to identify or provide a document, "identify" and "provide" mean to provide a full and detailed description of the document and the name and address of the person who has custody of the document. In lieu of

providing a full and detailed description of a document, you may attach to your responses a copy of the document and identify the person responsible for it. When the word "document" is used herein, it means any written, printed, typed, graphic, photographic, or electronic matter of any kind or nature and includes, but is not limited to, statements, contracts, agreements, reports, opinions, graphs, books, records, letters, correspondence, notes, notebooks, minutes, diaries, memoranda, transcripts, photographs, pictures, photomicrographs, prints, negatives, motion pictures, sketches, drawings, publications, and tape recordings.

IT IS THEREFORE REQUESTED:

- I. That all information requested below, unless otherwise specified, shall be limited to Company's South Carolina Electric Retail Operations in this docket or other period identified in the question.
- II. That all information shall be provided to ORS in the format requested.
- III. That all responses to the audit requests below be labeled using the same numbers as used herein.
- IV. That the requested information be punched for 3-ring binders with numbered tabs between each question.
- V. That if information requested is found in other places or other exhibits, reference shall not be made to those; instead, that the information be reproduced and placed in the audit request in the appropriate numerical sequence.
- VI. That any inquiries or communications relating to questions concerning clarification of the information requested below should be directed to John W. Flitter or Shannon Bowyer Hudson, of ORS.
- VII. That this entire list of questions be reproduced and included in front of each set of responses.
- VIII. That each question be reproduced and placed in front of each response provided.
- IX. That unless otherwise specified the Company provide seven (7) paper copies of responses to ORS. In addition and if technically feasible, it is requested that the Company provide one (1) electronic version of the responses.

- X. That all exhibits be reduced or expanded to 8 ½" x 11" format, where practical.
- XI. If the response to any request is that the information requested is not currently available, please state when the information requested will be available and provided to the ORS.
- XII. That in addition to the signature and verification at the close of the Company's responses, the Company witness(es) or employee(s) or agent(s) responsible for the information contained in each response be indicated.
- XIII. This audit request shall be deemed to be continuing so as to require the Company to supplement or amend its responses as any additional information becomes available.
- XIV. For information requested herein where the information is kept, maintained, or stored using spreadsheets, please provide electronic versions of the spreadsheets, including the formulas used and embedded in the spreadsheet.
- XV. Each answer should incorporate the requested information for South Carolina Generating Company, Inc. ("GENCO"), where applicable.

REQUESTS:

- CHG-1-1 Please provide all documents that describe the development of the load forecast utilized in the May 2008 Update to SCE&G's Integrated Resource Plan ("IRP").
- CHG-1-2 Did SCE&G evaluate the impacts of any load forecast other than the load forecast shown on page 2 of the May 2008 Update to SCE&G's IRP? For example, did SCE&G consider a "Low Forecast" and/or a "High Forecast" in addition to the base forecast?
- CHG-1-3 What level of confidence does SCE&G attribute to the load forecast shown on page 2 of the May 2008 Update to SCE&G's IRP?
- CHG-1-4 Was SCE&G able to include the impact of the recent economic downturn in the load forecast utilized in the May 2008 Update to SCE&G's IRP? If so, please describe the impacts to the load forecast. If not, please explain.
- CHG-1-5 For each customer class, please provide the actual monthly energy sales for January 2000 through the most recent month available.
- CHG-1-6 For each customer class, please provide the forecasted monthly energy sales for January 2008 through December 2022.
- CHG-1-7 Please provide the monthly and annual system peaks for January 2000 through the most recent month available.

- CHG-1-8 Please provide the day and hour in which the monthly system peaks occurred for January 2000 through the most recent month available.
- CHG-1-9 Please provide the SCE&G FERC Form 1 for the years 2000 through 2007.
- CHG-1-10 Please provide in electronic format (via CD) all spreadsheets used to develop the load forecast utilized in the May 2008 Update to the SCE&G IRP.
- CHG-1-11 Please provide in electronic format (via CD) all models utilized to develop the load forecast used in the May 2008 Update to SCE&G's IRP.
- CHG-1-12 Please provide the five most recent SCE&G load forecasts.
- CHG-1-13 For each DSM program that SCE&G evaluated and rejected, please provide a detailed description of the program, the basis for the program's rejection and all spreadsheets and models (in electronic form via CD) used to evaluate the program.
- CHG-1-14 For each load management program that SCE&G evaluated and rejected, please provide a detailed description of the program, the basis for the program's rejection and all spreadsheets and models (in electronic form via CD) used to evaluate the program.
- CHG-1-15 Please provide the efficiency for the Fairfield Pumped Storage Plant.
- CHG-1-16 Please provide actual hourly system loads for each hour in the calendar year 2007.
- CHG-1-17 Please provide the basis for the capacity ratings shown on page 11 of the May Update to SCE&G's IRP.
- CHG-1-18 Please provide the most recent capacity test for each of SCE&G's generating units.
- CHG-1-19 Do any of SCE&G's generating units have additional capacity (in addition to the capacities shown on page 11 of the May Update to SCE&G IRP) that is available in the summer for short periods of time? If so, please list each such generating unit and the amount of additional capacity available.
- CHG-1-20 Please provide the anticipated retirement dates for each SCE&G generating unit.
- CHG-1-21 Please provide all studies, reports, analyses, memos and documents that support SCE&G's "12 to 18 percent" reserve capacity requirement.
- CHG-1-22 Please describe in detail the development of SCE&G's supply-side expansion plan described in the May 2008 Update to SCE&G's IRP.
- CHG-1-23 Please provide all studies, reports, analyses, memos and documents that support SCE&G's selection of additional nuclear capacity in 2016 and 2019.

- CHG-1-24 Please describe each computer model utilized to support SCE&G's selection of additional nuclear capacity in 2016 and 2019.
- CHG-1-25 Please provide in electronic form (via CD) all spreadsheets used to develop or analyze SCE&G's supply-side expansion plan given in the May 2008 Update to SCE&G's IRP.
- CHG-1-26 For each supply-side option that SCE&G considered in the development of the supply-side expansion plan given in the May 2008 Update to SCE&G's IRP, please provide the following:
- a) A description of the supply-side options
 - b) Construction costs
 - c) Fixed O&M cost
 - d) Variable O&M cost
 - e) Fuel utilized
 - f) Fuel costs
 - g) Average and incremental heat rates
 - h) Startup costs or startup energy
 - i) Minimum down time
 - j) Minimum up time
 - k) Operational limitations
 - l) Equivalent forced outage rate
 - m) Scheduled maintenance requirements
- CHG-1-27 Please provide all reports, documents, studies, analyses and memos that support the information provided in response to CHG-1-26.
- CHG-1-28 Please describe all sensitivity analyses that were performed as a part of the development of the supply-side expansion plan.
- CHG-1-29 Please provide the five best supply-side expansion plans that were rejected in favor of the selected supply-side expansion plan.
- CHG-1-30 Please provide, in electronic form, the historical values of territorial sales, by class (residential, commercial, industrial, street lighting, other public authorities, municipalities and cooperatives), also by individual categories as outlined in Table 1 "Short Term Forecasting Groups" in SCE&G's IRP May 2008 Update.
- CHG-1-31 Please provide, in electronic form, short-term baseline forecasts of territorial sales – aggregate, by class and by individual categories as outlined in Table 1 in SCE&G's IRP May 2008 Update.

- CHG-1-32 Please provide, in electronic form, the historical values of customers, average usage and total usage by classes and/or individual categories utilized as a basis in the planning model.
- CHG-1-33 Please provide, in electronic form, the forecasts of customers, average usage and total usage by classes and/or individual categories for the planning horizon utilized in this proceeding.
- CHG-1-34 Please provide, in electronic form, the detailed adjustments to baseline forecasts generated by short-term forecasting models. Please provide all work-papers in electronic form.
- CHG-1-35 Please explain how the non-model adjustments (adjustments due to AC and heat pump efficiency standard change, improved lighting efficiencies, addition of several large industrial loads and any others) were calculated. Specify why a particular amount of reduction or addition has been adopted (see table on page 5 of the IRP May 2008 Update). Please provide all relevant work papers in electronic form.
- CHG-1-36 Please provide model specifications for each of the short-term models (customers, average usage and total usages). Please specify the variable names, estimation periods, and any data transformations that might have been utilized in model estimations.
- CHG-1-37 Please provide, in electronic form, estimation results of models of short-term sales (by class, by individual categories) for both regression and ARIMA models. These results should include, but not limited to, the following: estimation summary table, ANOVA table and coefficient tables, as output by the SAS software.
- CHG-1-38 Please provide, in electronic form, the historical values of all variables (weather, economic, demographic, and other relevant variables such as dummy variables) used in the estimation of the short term models. Please also provide in electronic form the forecasted value of the independent variables used for the forecast of short-term sales. Please provide all information, in electronic form, that can be used to replicate the model results.
- CHG-1-39 Please provide, in electronic form, work papers that detail the process of obtaining the final forecast of territorial sales by class and individual categories.
- CHG-1-40 Please provide the out-of-sample forecast performance of the short-term model of territorial sales since 2000.
- CHG-1-41 Are there any previous versions of the short-term models used in previous IRP's? If there are, were adjustments made to the earlier version of the models? If so, please specify and explain what adjustments were made and why the adjustments were made.

- CHG-1-42 Please show, in electronic form, the detailed process of developing HDD and CDD to account for billing cycles. Please include all relevant work papers.
- CHG-1-43 Please provide, in electronic form, the plots of average use by month and the resulting summer and winter groups mentioned on bottom of page A-2 and top of page A-3 in the May 2008 Update of IRP.
- CHG-1-44 Please be specific about the effect of time on average use as described in the middle section of A-3 in the May 2008 Update of IRP. Please provide an electronic version of the models estimate using the three groups of time variables mentioned, and the variable values used in the regressions.
- CHG-1-45 Please explain what statistics were involved in selecting appropriate ARIMA models. Were the final models selected mainly by the software automatically or by the analysts? What main statistic was used in determining the final version of the models?
- CHG-1-46 Does the load forecast in Exhibit G of the Application (Docket No. 2008-196-E) reflect the short term forecasts? How have the long-term and short-term load forecasts been reconciled for consistency? If adjustments were made in this regard, please explain in detail and provide any work papers in electronic form to this effect.
- CHG-1-47 Please provide, in electronic form, the historical values of the variables (dependent and independent variables) used in the long range sales forecasts by class and appropriate subgroup. Also provide in electronic form the forecasts for each group.
- CHG-1-48 Please provide, in electronic form, the forecast models of long-term sales including model specification, variables definitions, estimation periods, estimation results and diagnostic statistics. Please explain any tests that have been used to determine the degree of statistical problems such as autocorrelation and heteroscedasticity. If problems existed, provide any corrective procedures that have been adopted?
- CHG-1-49 Are any of the time-series variables nonstationary? Please explain if any tests have been performed.
- CHG-1-50 Please provide more details regarding the appropriateness of the models as mentioned on pages B-3 and B-4 in the May 2008 Update of the IRP. Please provide examples of the appropriateness of the elasticity coefficients against studies of electricity sales. Please provide the sources of these studies.
- CHG-1-51 Please explain why different methods were used to forecast summer and winter peak demands. Were the decisions based on statistical tests or judgment? If they were based on statistical tests, what tests have been performed? Please provide the tests' results. If they were based on judgment, please explain.

- CHG-1-52 Please provide, in electronic form, the calculation of load factors for different categories.
- CHG-1-53 Please provide, in electronic form, the calculation of the firm summer territorial peak demand including the forecasts of individual customer demand, incremental reduction in demand and the final peak demand estimates as outlined on page B-7 of the May 2008 Update of IRP.
- CHG-1-54 Please provide, in electronic form, the historical summer and winter peaks used in the determination of peak demand hours as outlined on pages B-6 and B-7 of the May 2008 Update of IRP.
- CHG-1-55 Please provide, in electronic form, the correlations between winter peaks and total territorial energy and weather. Please also provide the data used in calculation.
- CHG-1-56 Please provide the data (including historical values of variables and the forecasted input variable values for forecast) and model estimation results for the winter peak demand in electronic form. Specify any adjustments and data transformations that have been performed.
- CHG-1-57 Please provide long-term forecasts of territorial sales and demand from previous annual runs, and actual values of sales and demand since year 2000.
- CHG-1-58 Please provide all information, in electronic form, related to graphs on pages 7 (Average Cost of Fuel) and 8 (Projected Fuel Costs) in Exhibit H. Please specify the source of fuel forecasts. Please provide the basis for gas price forecasts.



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