DIRECT TESTIMONY OF

STEPHEN A. BYRNE

ON BEHALF OF

SOUTH CAROLINA ELECTRIC & GAS COMPANY

DOCKET NO. 2009-489-E

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

A. My name is Stephen A. Byrne and my business address is 220 Operation Way, Cayce, South Carolina. I am Executive Vice President and Chief Nuclear Officer of South Carolina Electric & Gas Company (“SCE&G” or the “Company”).

Q. DESCRIBE YOUR EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCE.

A. I have a Chemical Engineering degree from Wayne State University. After graduation, I started my nuclear career working for the Toledo Edison Company at the Davis-Besse Nuclear Plant. I was granted a Senior Reactor Operator License by the Nuclear Regulatory Commission (“NRC”) in 1987. From 1984 to 1995, I held the positions of Shift Technical Advisor, Control Room Supervisor, Shift Manager, Electrical Maintenance Superintendent, Instrument and Controls Maintenance Superintendent, and Operations Manager. I began working for SCE&G in 1995 as the Plant Manager at the V. C. Summer plant. Thereafter, I was promoted to Vice President at the
V. C. Summer plant. In 2004, I was promoted to the position of Senior Vice President of Generation, Nuclear and Fossil Hydro. I was recently promoted to the position of Executive Vice President for Generation.

Q. WHAT ARE YOUR DUTIES WITH SCE&G?

A. I am in charge of overseeing the generation of electricity for the Company, and as Chief Nuclear Officer, I also oversee all nuclear operations.

Q. HAVE YOU EVER TESTIFIED BEFORE THIS COMMISSION?

A. Yes. I have testified before the Public Service Commission of South Carolina (the “Commission”) in several past proceedings, including the Company’s last rate case in Docket No. 2007-229-E.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to discuss the operating performance and current state of the Company’s electric generating units and the environmental regulations and compliance issues facing the Company. My testimony has two broad themes: (1) the Company has made significant investments since the last electric rate case to comply with increasingly stringent environmental and safety laws and regulations; and (2) the Company has experienced increased costs in continuing to provide safe and reliable service to its customers. I will also provide the details related to several specific generation related pro-forma adjustments, including the environmental upgrades at the Williams, Wateree, and Cope Plants; the
new peaking units at Plant Hagood; the revised turbine maintenance
accrual; the Company’s coal inventory levels. I will also briefly discuss the
construction of V.C. Summer Station Units 2 & 3.

GENERATION

Q. PLEASE GIVE A SHORT DESCRIPTION OF THE COMPANY’S
ELECTRIC FACILITIES.

A. SCE&G owns and/or operates ten (10) coal-fired fossil fuel units
(2,404 MW), one (1) cogeneration facility (90 MW), eight (8) combined
cycle gas turbine/steam generator units (gas/oil fired, 1,326 MW), sixteen
(16) peaking turbines (348 MW), five (5) hydroelectric generating plants
(221 MW), and one (1) Pump Storage Facility (576 MW). The total net
non-nuclear summer generating capability rating of these facilities is 4,965
megawatts. In addition, SCE&G operates the V.C. Summer Nuclear
Station (“VCSNS” or “Summer Station”) which it owns jointly with the
South Carolina Public Service Authority or Santee Cooper. Summer
Station was originally rated to generate 900 MW but over the years
SCE&G and Santee-Cooper have invested capital to increase the net
dependable output of the plant to 966 MW on a sustained, reliable basis.
Combining SCE&G’s fossil-hydro capacity with its two-thirds interest in
the V.C. Summer plant, the total net generating capability of all SCE&G
facilities is 5,609 MW.
Q. HOW MUCH ELECTRICITY WAS GENERATED BY SCE&G IN 2009?

A. In 2009, SCE&G’s 74 fossil, hydro, biomass and nuclear generation units generated 24,871,750 megawatt hours (“MWH”) of electricity. Of this amount, the coal plants generated approximately 50%, the combined cycle units generated approximately 26%, the gas peaking turbines and hydro facilities generated approximately 4%, the nuclear plant generated approximately 19%, and a biomass generation facility generated approximately 1%.

Q. PLEASE DISCUSS THE AVAILABILITY OF SCE&G’S FOSSIL PLANTS.

A. Availability is a measure of the actual hours that the generation units are ready and able to provide electricity divided by the total hours in the twelve-month review period. SCE&G’s coal and combined cycle gas fleet had an availability factor of 87.15% in 2009. Availability is not affected by how the unit is dispatched or by the demand from the system when connected to the grid. However, it is impacted by the planned maintenance shutdown hours. For comparison purposes, the North American Electric Reliability Council (“NERC”) national five-year average (2004-2008) for availability from all units was 87.32%. SCE&G’s availability factor was slightly lower than the NERC national five-year average due to a number of major planned outages. However, during the summer peak period, June 1,
2009 through September 30, 2009, SCE&G operated at an availability factor of 96%.

Q. WHAT WAS SCE&G’S FOSSIL SYSTEM FORCED OUTAGE RATE FOR 2009?

A. The system forced outage rate for SCE&G’s coal and combined cycle gas units during 2009 was 1.42%. This forced outage rate is extremely favorable when compared to the national five-year average for forced outage rates on all fossil units which is 5.92%. These are very good results given the age of our base-load fleet. All of our coal fired generation stations except for Cope were built between 1953 and 1973 and VCSNS Unit 1 has been in operation for over 27 years. These older plants continue to provide reliable service because of careful maintenance, conservative operation, and continued capital investment in renewing and replacing the systems on which their reliability depends.

Q. WHAT IS HEAT RATE AND WHAT WAS THE HEAT RATE OF THE FOSSIL UNITS DURING THE PAST YEAR?

A. Heat rate is a way to measure thermal efficiency of a power plant fuel cycle. It is the number of British Thermal Units (Btu) of fuel required to generate one (1) kilowatt-hour (kWh) of electricity. Lower heat rates indicate more efficient utilization of fuel. The average heat rate for the SCE&G coal fired units during 2009 was 9,772 Btu/KWh which compared to the 2008 national average heat rate of 10,364 for all coal units. The 2009
national average heat rate has not yet been published. When compared to
the 2008 national average heat rate, SCE&G’s average heat rate for 2009
resulted in a savings of 291,826 tons of coal which equals a cost savings to
SCE&G and its customers of $32,847,086.

The heat rates for several of our plants put them among the most fuel
efficient coal plants in the nation. In 2009, Electric Light and Power trade
publication issued its heat rate rankings for the year 2008. Out of a total of
1,249 plants nationally, McMeekin Station was ranked as the 4th most
efficient plant in the country and Cope Station was ranked as the 12th most
efficient plant in these rankings. In the heat rate rankings for the year 2007,
Cope Station was the 4th most efficient plant in the country, McMeekin
Station was the 11th, and Williams Station was 16th.

Q. HAS THE COMPANY RECEIVED ANY OTHER AWARDS OR
RECOGNITION FOR ANY OF ITS GENERATING PLANTS?

A. Yes. The Company’s Jasper Generating Station received the 2009
Combined Cycle Journal Best Practice Award in O&M for the
implementation of an innovative make-up water degasification system to
prevent boiler corrosion and boiler tube leaks. More recently, Combined
Cycle Journal has awarded three 2010 Best Practice Awards to Jasper in the
areas of Safety, O&M and Design, and it is in contention for three “Best of
the Best” awards in those categories at the Journal’s annual meeting to be
held in April 2010.
Q. PLEASE DESCRIBE THE PERFORMANCE OF THE COMPANY'S NUCLEAR OPERATIONS.

A. During the test period, VCSNS generated 8,553,990 MWHs of electricity. As defined by Section 58-27-865 of the South Carolina Code of Laws, as amended, Summer Station’s net capacity factor based on reasonable excludable nuclear system reductions was 101.1% during the test year. VCSNS is typically rated in the top 20 nuclear units by capacity factor in non-refueling outage years; the last such year was 2007 when the plant was rated 3rd in the country with a 99.07% capacity factor for that period. During the test period, VCSNS achieved its longest period of continuous full power operations since it was placed in commercial operation in 1984.

Q. PLEASE EXPLAIN THE ROLES OF INPO AND THE NRC WITHIN THE NUCLEAR INDUSTRY AND DESCRIBE ANY RANKINGS RECEIVED BY VCSNS FROM THOSE AGENCIES.

A. VCSNS has continuously met or exceeded all Nuclear Regulatory Commission (“NRC”) requirements and Institute of Nuclear Power Operations (“INPO”) standards. INPO is a nonprofit corporation established by the nuclear industry to promote the highest levels of nuclear safety and plant reliability. INPO promotes excellence in the industry in the operation of nuclear generating plants. In VCSNS’s two most recent ratings, in 2007 and 2009, INPO rated its overall performance as excellent,
with no significant weaknesses noted. The NRC is responsible for the licensing and oversight of the civilian use of nuclear materials in the United States. During each year since SCE&G’s last rate proceeding, the NRC has found that VCSNS operated in a manner that preserved public health and safety and fully met all the reactor oversight process (“ROP”) cornerstone objectives.

Q. PLEASE DESCRIBE WHAT NEW GENERATION FACILITIES THE COMPANY HAS PLACED OR IS EXPECTED TO PLACE INTO SERVICE.

A. In order to continue to meet its energy production needs in the near future, the Company has recently purchased two (2) 23 MW (nameplate capacity) peaking turbines which are locating at the Company’s Hagood Gas Generating Station facility in North Charleston, South Carolina, where they will be available to support service to the Charleston peninsula. These units replace older units that were taken out of service due to safety issues. The expected net dependable summer time capacity for these units is approximately 34 MW. One turbine is designed to be permanently mounted while the other is a trailer mounted unit. Both have quick-start and black-start capability which makes them particularly useful in responding to system emergencies and events. Black-start units can be started when there is no electrical service to the site of the units’ location.
Q. WHEN WERE THESE PEAKING TURBINES PLACED IN SERVICE?

A. These units were placed in service earlier this year. As Mr. Swan will testify, we are asking that the costs associated with these units be added to plant in service as a known and measurable change to our investment in generation assets. The capital cost of these two generating units as installed is approximately $45 million.

ENVIRONMENTAL AND SAFETY REQUIREMENTS

Q. PLEASE DISCUSS THE CAPITAL INVESTMENT THE COMPANY HAS RECENTLY MADE IN ENVIRONMENTAL AND SAFETY UPGRADES AT ITS FACILITIES.

A. Since 2007, the Company has undertaken environmental and safety related projects representing approximately $634.3 million in capital spent by SCE&G. The bulk of these projects were required by State and federal regulators to reduce emissions of criteria air pollutants such as Nitrogen Oxides (NOx) and Sulfur Dioxide (SO2) from its coal fired electric generating units. The principal projects during this period were:

• In order to reduce emissions of SO2, a flue gas desulphurization unit and related facilities (“scrubber”) were installed at Williams Station. Williams Station is a single unit 610 megawatt (“MW”) coal-fired generating plant located at Bushy Park, in Berkeley County. The cost of the scrubber at Williams was approximately $258.9 million.
• A scrubber was also installed at Wateree Station. Wateree Station is a 700 MW dual unit coal-fired generating plant, located in Richland County, South Carolina. The cost of the scrubber at Wateree Station is expected to be approximately $283.4 million.

• A selective catalytic reactor (“SCR”) was installed at Cope Station, in order to reduce emissions of NO\textsubscript{x}. Cope Station is a single unit 420MW coal-fired generating plant located in Orangeburg County, South Carolina. The cost of this project was approximately $70.1 million.

• SCE&G has also invested in a number of other smaller environmental projects at its plants whose total capital cost is approximately $21.9 million.

The total aggregate cost of the above projects is approximately $634.3 million.

In addition to these projects, SCE&G completed the construction of a back-up dam at the site of the Saluda Hydro Project at Lake Murray in Lexington County in 2005. The construction of this supplementary dam was required by order of the Federal Energy Regulatory Commission (“FERC”) to protect down-stream residents and infrastructure in case of a cataclysmic earthquake in the area. The total cost of the Saluda Dam Remediation Project, as of September 30, 2009, was approximately $328.6
SCE&G elected to use synthetic fuel tax credits it earned through investments made outside of its regulated activities to defray much of the cost of this project. Other utilities used the tax credits to increase earnings with no direct benefit to customers. SCE&G’s tax credits have been sufficient to defray approximately $254.4 million or 77% of the cost of the dam remediation project, thereby keeping the vast majority of this project out of rate base. After application of the tax credits, the net unrecovered capital cost to SCE&G’s electric system for this $328.6 million safety improvement is approximately $74.2 million.

Q. WHY HAS THE COMPANY INSTALLED THE TWO SCRUBBERS AND NEW SCR UNIT AT ITS PLANTS?

A. Under the Clean Air Act, the United States Environmental Protection Agency (“EPA”) has regulated NOx and SO2 discharges and has required certain states including South Carolina to enact a State Implementation Plan to address air quality issues. The South Carolina State Implementation Plan (the “Plan”) became effective in May 2004 and required, among other things, the reduction of NOx emissions from coal-fired generating facilities in the months of May through September until 2009 when the EPA’s Clean Air Interstate Rule (“CAIR”) limits would become effective. The EPA issued CAIR in March 2005 to require the District of Columbia and twenty-eight states, including South Carolina, to attain mandated air quality levels by reducing SO2 and NOx emissions.
CAIR established emission limits to be met in two phases for NO\textsubscript{x} (2009 and 2015) and two phases for SO\textsubscript{2}, (2010 and 2015). A federal appeals court has ruled that current CAIR rules are flawed and has ordered the EPA to reconsider them. However, the initial CAIR rules remain in effect pending reconsideration. CAIR and the Plan directly impacted SCE&G and GENCO.

In addition, the Clean Air Mercury Rule ("CAMR") applies to coal fired-generating plants and limits total mercury emissions from all such plants in the United States to 38 tons by 2010, and to 15 tons by 2018. While the CAMR was vacated by the courts in 2008, new rules are expected from EPA in the near future.

The two scrubbers at Williams and Wateree are necessary to meet the current CAIR requirements and any revised requirements that EPA may impose when CAIR and CAMR are reissued. The Williams and Wateree scrubbers are expected to reduce SO\textsubscript{2} emissions from each plant by approximately 95% and emissions from SCE&G’s entire generation system by approximately 56%. These scrubbers also will reduce mercury emissions from each plant by more than 80%. The SCR at Cope Station will reduce NO\textsubscript{x} emissions from that plant by approximately more than 70%.

**Q. PLEASE DESCRIBE THE COMPONENTS INCLUDED IN THE CAPITAL INVESTMENT TOTAL FOR THE SCRUBBERS.**
A. Included in the costs listed above are the costs of the scrubbers and SCR’s themselves, the cost of a new induction draft fan for Williams Station that was necessitated by the operating requirements of the scrubbers, and the cost of disposal facilities for scrubber wastes at Williams and Wateree Stations. All of these are necessary components of the overall scrubber projects.

Q. WHAT IS THE CURRENT STATUS OF THE SCRUBBERS?

A. The Williams scrubber was tested and tuned beginning in the fall of 2009 and has operated reliably since that time. At the conclusion of testing and tuning in February 2010, it was placed in commercial service. The Wateree scrubber was essentially completed in early 2009 but startup was delayed by the permit appeals from a local landowner which held up final landfill and National Pollution Discharge Elimination System (“NPDES”) discharge pond construction. The scrubber cannot run without these items. The administrative law judge ruled in SCE&G’s favor in December 2009 on the permit appeals and the Company is moving forward with the landfill and pond final construction. The Company has applied for a modification of the NPDES permit associated with these facilities to reflect current discharge limits. At this point in time, we estimate scrubber initial startup may occur as early as May of 2010 and an estimated in-service date could be as early as August of 2010.

Q. WHAT IS THE CURRENT STATUS OF THE SCR?
A. The Cope SCR was placed into service in December 2008 and operated reliably during the test period.

Q. WHAT OTHER ENVIRONMENTAL IMPROVEMENT PROJECTS DOES THE COMPANY HAVE PLANNED?

A. The Company will continue to invest in environmental improvements on its system as required. At present, however, the Company does not have any plans to install additional scrubbers or SCRs on its other coal fired generation fleet. The completion of Summer Station Units 2 & 3 will add 1,228 MW of new, non-emitting base load generation to SCE&G’s fleet. That new nuclear generation will substantially reduce SCE&G reliance on older, coal-fired generation.

SALUDA DAM REMEDIATION PROJECT AND SYNFUEL TAX CREDITS

Q. PLEASE DISCUSS THE COMPANY’S REQUEST REGARDING THE CAPITAL COSTS ASSOCIATED WITH THE SALUDA DAM REMEDIATION PROJECT.

A. In Commission Order No. 2005-2, the Commission approved the request of the Company to establish an account outside of rate base where all costs related to the remediation project at the Company’s Saluda Dam would be accumulated. The Commission approved the Company’s request to hold these costs in a separate account outside of rate base to allow an offset of the after-tax construction costs with federal income tax credits
generated by the Company’s involvement in partnerships that produce synthetic fuels consumed on the Company’s system, net of the operating losses incurred by these partnerships (“synthetic fuel tax credits”). These partnerships were non-regulated ventures for which SCE&G’s electric customers were not responsible. SCE&G decided, nonetheless, to use tax benefits generated by these partnerships to reduce costs to its customers related to the remediation project.

Q. **WHY WAS THE REMEDIATION PROJECT NECESSARY?**

A. This project was undertaken pursuant to orders of the FERC, which regulates dam safety for hydroelectric projects of this size. FERC determined that the Saluda Dam, which was placed in service in 1930, would not withstand an earthquake of the magnitude of the Charleston Earthquake of 1886 and thus, to protect the downstream population, ordered the Company to construct a second dam to impound water from Lake Murray in the event of a breach of the original Saluda Dam. The second dam was constructed solely to meet FERC safety requirements and does not increase generation at the Saluda Hydro Station.

Q. **WHAT IS THE NET SAVINGS TO SCE&G’S CUSTOMERS IN THE TEST YEAR AS A RESULT OF SCE&G’S USE OF THE SYNTHETIC FUEL TAX CREDITS TO OFF-SET DAM REMEDIATION COSTS?**
Had the full $328.6 million cost of the dam remediation been added to rate base, the resulting revenue requirement, including taxes and depreciation would have been nearly $40 million higher.

**TURBINE MAINTENANCE**

**Q.** PLEASE DISCUSS THE COMPANY’S REQUEST REGARDING THE TURBINE MAINTENANCE ACCRUAL.

**A.** In Commission Order No. 2005-2, the Commission approved SCE&G’s request to levelize over an 8 year maintenance cycle the costs associated with major maintenance of the turbines at its fossil fuel generating facilities. Turbine maintenance is critical to maintaining the reliability of SCE&G coal and combined cycle generation fleet, and preventing destructive failures in the turbines that power these units. While in operation, these turbines rotate at high speeds under heavy loading and if they experience a mechanical failure, the resulting damage can be extensive.

For those reasons, turbine maintenance is a necessary expense of power generation that is both known and measurable since turbine maintenance costs and schedules are well understood in the industry. However, the amount of turbine maintenance expense incurred in any given test period varies significantly according to which plants have scheduled outages during the test period and where those plants are in their turbine maintenance cycles when those outages occur. In addition, as discussed at
length in the 2004 rate proceeding, SCE&G has been offered turbine maintenance agreements with annual payments that would levelize the cost contractually. However, in some cases, the Company has concluded that it can perform the work less expensively if it retains the role of prime contractor. The turbine maintenance accrual removes what would otherwise be a regulatory disadvantage from SCE&G pursuing the least-cost alternative in providing for turbine maintenance.

In the 2004 rate proceeding, SCE&G requested that it be allowed to set a levelized amount for turbine maintenance expense and record in a regulatory asset or liability account the differences between the levelized amount and the actual amount of turbine O&M expenses incurred. The goal of annualizing the turbine O&M expenses was to properly match maintenance expenses with the year-by-year use of the plants that cause such expense to be incurred. The Commission also found the annualization of these O&M expenses to be just and reasonable and ordered that the requested accounts be established, subject to review following the submission of a report filed by SCE&G with ORS and the Commission concerning the results of this treatment at the end of calendar year 2007.

SCE&G filed the required report with ORS and the Commission and, in Order No. 2008-528, the Commission found that the actual maintenance expenditures were not significantly different from the annual expenditure levels anticipated when the accruals were established. No
adjustment in the amount of the accrual was necessary. An updated version of the report, as required by Order No. 2008-528, is attached as Exhibit ___ (SAB-1). It shows that during the first four years of the accrual there continued to be a close match between actual turbine maintenance costs and accrued cost.

Q. WHY IS A CHANGE REQUIRED?

A. As I discuss in more detail below, the more intense usage of its combined cycle plants, the aging of its generating fleet, and the inclusion of Williams Station turbine maintenance expenses in the annual turbine maintenance expense calculation have increased the amount of the annual accrual necessary to levelize SCE&G’s maintenance expense. For that reason, in this proceeding SCE&G is asking to increase the turbine maintenance accrual to reflect updated projections of actual expenses going forward. To mitigate the impact of these changes, SCE&G is asking to establish an accrual period through 2018. I would emphasize that turbine maintenance is not optional. Our proposal simply levelizes the costs to customers.

Q. WHAT WAS THE ANNUAL ACCRUAL FOR TURBINE MAINTENANCE DURING THE TEST YEAR?

A. The annual accrual for turbine maintenance expense during the test period was $8.5 million.
Q. WHAT IS THE INCREASE IN ANNUAL ACCRUAL THAT THE COMPANY IS REQUESTING?

A. In order to properly match maintenance expense with the year-by-year use of the plants that cause such expenses to be incurred, an increase of approximately $10.8 million is being requested.

Q. PLEASE DISCUSS THE REASONS FOR THIS INCREASE.

A. Part of the reason for the requested increase is that as system demand grows, the Company is becoming more reliant on its combined cycle plants. The Company anticipates this increased usage to continue for the foreseeable future. Turbine maintenance is a function both of the number of times a unit starts and the number of run hours for the units. In 2009, SCE&G ran combined cycle gas plants much more than in the past. In addition, as demands increase on our system going forward, both the number of starts and run times of these combined cycle units increase. Our generation planning forecasts establish the expected use of our plants over the 10-year levelization period. These forecasts show the effects of this increased usage of combined cycle units. The turbine maintenance schedules on which the updated accrual amounts are based have been generated using current generation planning forecasts.

Also included in updated accrual is the anticipated cost of maintenance of the Williams Station turbines which are being included in the turbine maintenance cost calculation for the first time. Williams Station
is owned by GENCO, which is a wholly owned subsidiary of SCANA. SCE&G pays all costs of power provided by Williams Station, including turbine maintenance expense, under a formula rate approved by the FERC. SCE&G is proposing to include turbine maintenance expense for Williams in the turbine maintenance calculation to levelize these costs for the same reasons that it levelizes the costs for its sister plants.

Q. WHAT HAS THE COMPANY DONE TO TRY TO MINIMIZE THE INCREASE IN TURBINE MAINTENANCE COSTS?

A. The Company has, where possible and where it makes good economic sense, entered into maintenance agreements with third parties for the provision of certain maintenance and monitoring services. For example, the Company has entered into a long-term maintenance agreement with General Electric ("GE") at the Company’s Urquhart Combined Cycle Plant. Under this maintenance agreement, in addition to regular maintenance, GE provides the Company with a dedicated maintenance engineer and dynamic monitoring of the plant at no additional cost and provides for discounts on equipment costs. Often, however, SCE&G can obtain better prices for ancillary parts of a maintenance project than it can obtain where an original equipment manufacturer serves as prime contractor. When that is the case, SCE&G serves in that role.
COAL INVENTORIES

Q. WHY ARE COAL INVENTORIES IMPORTANT?
A. Coal is the primary fuel for much of the Company’s baseload capacity and without adequate coal supplies the Company cannot meet its obligation to provide reliable service to its customers. Coal, however, is not a “just-in-time” fuel like natural gas. Coal is delivered in dedicated rail shipments or barge shipments with volumes in the range of 10,000 tons to 50,000 tons. These shipments must be contracted for and scheduled months in advance of delivery. After it is delivered, coal is stored on the coal pile located at each plant. The Company’s ability to depend on a coal plant to provide service when needed depends in turn on having an adequate inventory on the coal pile to absorb problems in coal delivery or to provide reserves during periods of unexpectedly high coal “burn rates” that occur during times of high demand for electricity. Providing for a sufficient supply of coal, with sufficient reserves on the coal pile, is one of the key requirements for the Company to operate its system efficiently.

Q. HOW DOES THE COMPANY APPROACH COAL PROCUREMENT?
A. Coal is procured with long-term agreements (more than one year) and spot purchase agreements (up to one year) to achieve a balance of reliable supplies, while maintaining flexibility to react to market changes or
short-term system needs. The Company’s goal is for long-term purchases to represent approximately 75 to 80 percent of projected system demand. These long-term contracts provide a base of dependable, committed supply. Most long-term contracts are for deliveries over three years, and the Company attempts to stagger its contracts so that one-third of its contracts are renegotiated every year.

Spot purchases provide the mechanism to manage inventories and react to short-term changes in the marketplace. The Company can increase its spot purchases if needs are greater than projected, or forego them if requirements fall below projections. By utilizing a combination of long term contracts and spot purchases, SCE&G has been successful in managing its inventory levels in most periods.

Q. **HOW DOES SCE&G INSURE THAT THE RIGHT QUANTITY OF COAL SUPPLIES IS AVAILABLE TO MEET GENERATION DEMANDS?**

A. SCE&G uses several methods to bring the fuel supply and demand factors together. Fuel usage levels are calculated for future years based on the system resource modeling that is performed by our Resource Planning Department. This modeling takes forecasted customer demands and determines how our generation resources will be dispatched to meet those demands. The resulting forecasts show how intensely our coal plants and other plants will be used, and the anticipated coal burn for each plant can
be calculated from these forecasts. Coal inventories are then validated and contract quantities are summed and compared against system coal usage to determine coal needs going forward. With this information, Fuel Procurement determines whether contract options, spot purchases or additional long term agreements are appropriate.

Q. PLEASE SUMMARIZE THE QUANTITY AND TERM OF THE COMPANY’S COAL PURCHASES.

A. During 2009, the Company took delivery of approximately 4.5 million tons of coal under long-term agreements and 1.2 million tons of spot purchases, all of which had been contracted before 2009. Long-term agreements provided approximately 79% of the requirement for the Company’s five coal-fired stations, and GENCO’s Williams Station.

For the period of January 2010 through December 2010, the Company has long-term contracts with 10 suppliers totaling 5.2 million tons of coal and representing approximately 97% of expected total receipts. Most of these contracts are for a period of three years with some options to renew.

For the January 2011 through December 2011 period, the Company projects to have long-term contracts with 9 suppliers totaling approximately 3.9 million tons of coal and representing approximately 80% of the total anticipated coal receipts depending on final contract negotiations.
Q. PLEASE IDENTIFY WHAT FACTORS HAVE IMPACTED THE COMPANY’S CURRENT COAL INVENTORY.

A. In 2009, the use of coal dropped dramatically on our system. In fact, in 2009 the total burn of coal was approximately 25.5% less than in 2008. This reduction equates to 1,633,847 tons or approximately 14,600 rail cars of coal. This reduction in coal consumption was largely due to reduced demand for energy caused by the economic recession coupled with very low prices for natural gas during much of the test year. The low natural gas prices meant that SCE&G’s combined cycle natural gas plants displaced a significant amount of coal generation for extended periods during the test year, resulting in much less coal leaving the coal piles than forecasted. Consequently, coal inventories grew as SCE&G continued to receive coal under contracts negotiated in prior periods.

Q. PLEASE BRIEFLY DISCUSS HOW THE COAL MARKET HAS CHANGED OVER THE PAST SEVERAL YEARS.

A. Coal prices were quite stable until recent years but began to experience extreme volatility beginning in 2007. From November 2007 to July of 2008, free-on-board (“f.o.b.”) mine prices rose from about $40 per ton to over $150 per ton. The f.o.b. mine price is the price of coal loaded “free on board” rail cars at the mine before transportation costs are included. These price increases were driven by increased global demands for energy, mining and transportation problems in foreign coal producing
countries, coal mining constraints in the U.S. and an unprecedented increase in U.S. coal exports. During that period, the United States became a major exporter of coal to Europe largely to replace coal supplies from other regions that had been diverted to Asia. Rail transportation costs increased dramatically during that time also.

Q. WHAT EFFECT DID THESE CHANGES IN COAL MARKETS HAVE ON SCE&G?

A. In 2007 and 2008, U.S. coal exports rose to unprecedented high volumes, and large quantities of coal were diverted to lucrative export markets. Expansion of production was limited in the Central Appalachian coal fields which serve SCE&G by several factors, including deteriorating geologic conditions, the inability to secure mining permits in a timely fashion, increased mining rules and regulations, and a “tight” labor market. Problems with railroads further complicated the situation as rail resources proved inadequate to meet the requirement of both domestic markets and shipments of coal to ports for export. During this period, SCE&G experienced significant problems with rail deliveries of coal. Also during this period, certain of SCE&G’s suppliers gave notice that they would be unable to perform under the terms of their contracts for coal supply with SCE&G. These non-performance events resulted in significant interruption of SCE&G’s expected deliveries of coal supplies and the Company
experienced levels of coal inventory that were substantially below its
targets.

When the current economic crisis reduced demand for coal both
globally and domestically, the situation reversed itself. The export market
contracted and spot prices fell sharply. Rail delivery problems disappeared.
SCE&G’s long-term suppliers insisted on delivering all the coal that they
could require SCE&G to accept under the long-term contracts in place at
that time. At the same time, demand for coal on our system dropped
dramatically due both to lower energy usage and changes in the relative
prices of coal and natural gas. The result was increasing inventory levels as
coal deliveries exceeded the burn rate of our plants.

Q. PLEASE ELABORATE ON THE ROLE THAT GAS PRICES
PLAYED IN THIS RESULT.

A. Beginning around March 2009, the monthly cost of natural gas
dropped below the cost of delivered coal. As gas became more affordable
in relation to coal, the Company adjusted the dispatch order of its plants
and began dispatching its gas operated facilities before it dispatched its
coal-fired ones. This resulted in a reduction in the coal burn well below
anticipated levels and a gradual build up of the coal inventory. The price of
gas remained lower relative to the price of coal through the end of the test
year. The chart below demonstrates the relative costs of gas and coal for
the past three years.
Q. WHAT STEPS HAS SCE&G TAKEN TO MANAGE ITS INVENTORY LEVEL?

A. First of all, SCE&G did not contract for any new spot coal supplies in 2009. Also, during 2009, SCE&G renegotiated several long-term coal contracts. As explained earlier, the Company staggers its long-term coal contracts so that approximately one-third of the contracts expire each year. In renegotiating contracts, the Company worked with suppliers to defer current coal deliveries to later periods wherever reasonably possible.
Moreover, the Company will continue to manage the inventory level throughout 2010 as we strive to return the inventory level to our traditional goal of a 708,333 ton yearly average. As of the end of the test period, the coal inventory level was at 1,257,492 tons due to the factors discussed above.

**Q. WHAT IS THE COMPANY’S PLAN AND FORECAST FOR COAL GOING FORWARD?**

**A.** Looking forward into 2010, we expect our needs for coal will be primarily met by deliveries under our long term contracts. Spot purchases in 2010 are projected to be approximately 3%, which is a minimal amount compared to our goal of 20% to 25%.

**Q. HOW DOES THE COMPANY PROPOSE TO TREAT ITS COAL INVENTORY IN ITS APPLICATION?**

**A.** In this filing, the Company has adjusted the test period inventories to reflect average forecasted coal inventories for the period October 2009 to November 2011. Given the rapidly rising size and value of the inventory during the test period, setting rates based on the average inventory value over the test period would understate the true level of expected inventory when new rates will be in effect. A more realistic assessment of expected inventories requires looking at inventory levels when rates will be in effect. To make this assessment, the Company has chosen the period October 2009
to November 2011. This period allows for a representative and reasonable measure of the likely value of coal inventory levels when rates are in effect.

**GENERATION PLANNING**

**Q.** PLEASE DESCRIBE THE CURRENT STATUS OF SCE&G’S NEW NUCLEAR CONSTRUCTION.

**A.** As the Commission is aware, SCE&G recently filed its Quarterly Report for the period ending December 31, 2009 regarding the ongoing construction of two new Westinghouse AP1000 units at the Company’s V.C. Summer Nuclear Station. As described in more detail in the report, the construction is on schedule to achieve substantial completion in 2016 and 2019 for the two units. As of the end of the 4th quarter 2009, the Company had met all current milestones approved by the Commission in Order No. 2010-12, as adjusted pursuant to contingencies authorized in Order No. 2009-104(A). The Company, the industry, Westinghouse and the NRC continue to work together to ensure that the Combined Operating License for the units will be issued in a timely fashion. The Company is confident that this can be done and that the units can be completed on time and within the Commission approved cost schedule.

**Q.** WHAT ARE THE COMPANY’S ANTICIPATED PLANS FOR ADDING NEW GENERATION, IF ANY, IN ADVANCE OF THE OPERATIONAL DATES FOR THE NEW NUCLEAR UNITS?
A. We have no plans to add any additional generating capability prior to the operational date for the second new nuclear unit in 2019.

CONCLUSION

Q. IN SUMMARY, WHAT ARE YOU ASKING THIS COMMISSION TO DO?

A. On behalf of SCE&G, I would ask the Commission to approve the Application in this matter as filed.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.
# Major Maintenance Accrual

$67,711,280 over 8 years  
2005 - 2012

<table>
<thead>
<tr>
<th></th>
<th>Balance @ 12/31/07</th>
<th>2008 Activity</th>
<th>2009 Activity</th>
<th>Balance @ 09/30/09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual Expenses</td>
<td>(23,710,713.90)</td>
<td>(7,714,485.95)</td>
<td>(9,326,019.59)</td>
<td>(40,751,219.44)</td>
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<tr>
<td>Accrued Expenses</td>
<td>25,391,729.96</td>
<td>8,463,910.00</td>
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<tr>
<td>Regulatory Liability - Major Maint Accrual</td>
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<td>Regulatory Asset - Major Maint Accrual</td>
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<td>547,646.98</td>
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<tr>
<td>Regulatory Liability - MJM Accrual Interest</td>
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<td>(191,266.45)</td>
<td>(59,717.93)</td>
<td>(1,175,796.02)</td>
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<tr>
<td>Total Major Maintenance and Interest Accrual</td>
<td>(2,605,827.70)</td>
<td>(940,690.50)</td>
<td>2,918,369.16</td>
<td>(628,149.04)</td>
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