SCE&G plans no new coal retrofits, makes changes in coal purchasing

02/27/2012 by Barry Cassell

Since 2007, **South Carolina Electric & Gas** (SCE&G) has undertaken several environmental related projects aimed at reducing emissions at SCE&G's coal-fired plants, but has no future such projects firmly in mind right now, said Joseph Todd, the utility's General Manager, Fossil & Hydro Operations.

SCE&G on Feb. 17 **filed testimony** with the South Carolina Public Service Commission from Todd and others about power plant performance during a calendar 2011 review period. This case is an annual review of base rates for fuel costs of SCE&G, a unit of **SCANA Corp.** (NYSE:SCG).

SCE&G operates 10 coal-fired fossil fuel units (2,434 MW), eight combined-cycle gas turbine/steam generator units (gas/oil fired, 1,327 MW), 16 peaking turbines (355 MW), four hydroelectric plants (218 MW), and one pumped storage facility (576 MW). In addition, SCE&G owns an electric generator at a biomass cogeneration facility which has an output of 85 MW using a mixture of wood products and coal for fuel.

In the 2011 review period, SCE&G generated 25,930,287 MWh of energy. Of this energy, the coal-fired plants generated about 49%, the combined-cycle units about 28%, the nuclear plant about 19%, the peaking gas turbines and hydro facilities generated about 3%, and the biomass fuel contribution portion of the cogeneration facility generated about 1%.

To meet various clean-air needs, the company has installed wet scrubbers at the Williams and Wateree coal plants to reduce emissions of SO2, Todd noted. An additional selective catalytic reduction (SCR) installation for NOx control was done at Cope. Each of these pollution control devices continues to run well, Todd added. “SCE&G has also invested in a number of other smaller environmental projects and will continue to invest in environmental improvements on its system as required,” he said. “At present, however, the Company does not have any plans to install additional scrubbers or SCRs on any of its other coal-fired units in its generation fleet.”

The U.S. Environmental Protection Agency's new Cross-State Air Pollution Rule (CSAPR), covering South Carolina, was due to take effect Jan. 1, but that rule has been stayed by a federal appeals court pending oral arguments on various appeals of the rule. In December 2011, the EPA also finalized the Mercury and Air Toxics Standards (MATS), with a deadline of at least three years for compliance. “SCE&G is studying the effects of CSAPR and MATS on its fossil/hydro units and is committed to complying with all state and federal environmental laws,” Todd noted.

SCE&G burns less coal in 2011, plans Illinois Basin test in 2012

Michael Shinn is employed by **SCANA Services Inc.** as General Manager of the Coal and Oil Procurement Department. He manages the purchase and delivery of coal, No. 2 fuel oil and limestone on behalf of SCE&G, and as agent for **South Carolina Generating Co.** (GENCO), which controls the coal-fired Williams plant.

In 2011, SCE&G consumed 4,929,754 tons of coal in the production of electricity for its customers, Shinn noted in **Feb.**

17 testimony. The burn rate for coal in 2011 was 6.7% lower than in 2010, which is a decrease in coal consumption of 356,402 tons.

During the 2011 review period, the company took delivery of 3,942,393 tons of coal under long-term agreements and about 835,536 tons of coal through spot purchases. All together, long-term agreements provided 82.51% of the requirement for the company's five coal-fired stations and GENCO's Williams plant, while spot purchases accounted for the remaining 17.49% of coal requirements during 2011.

In calendar 2012, the company has long-term contracts with seven suppliers for the delivery of 3.4 million tons of coal. This quantity represents approximately 68% of SCE&G's expected total coal receipts for 2012. The coal purchased under these contracts ranges in quality from 12,300 to 12,700 Btu/lb and sulfur contents from 0.75% to 1.60%. Most of these contracts are for an initial period of two years with some options to renew.

Looking forward into 2013, the company has long-term contracts with three suppliers totaling about 2 million tons of coal. This quantity represents about 61% of SCE&G's expected total coal receipts for 2013. The coal purchased under these contracts is expected to range in quality from 12,300 to 12,700 Btu/lb and sulfur contents from 0.75% to 1.60%.

In 2011, **CSX Transportation** remained the primary rail transporter of coal for SCE&G. While the CSX contract rates remained relatively stable during 2011, these rates are subject to quarterly adjustments according to published indices. SCE&G took delivery of about 4.8 million tons of coal under this rail contract during 2011, representing 100% of the company's total receipts of coal.

Norfolk Southern Railway, the other major railroad in the eastern U.S., has only one delivery point in SCE&G's service territory. This delivery point is at Wateree and could account for nearly one-third of the company's need for coal deliveries in some years. However, in 2011 SCE&G was unable to use Norfolk Southern's rail services due to minimum transportation requirements under the CSX contract. Shinn said the company will utilize the rail services of Norfolk Southern to maximize benefit to its customers in the short- and long-term as agreements are negotiated where NS is the most economic and reliable transporter.

Given the current and anticipated demand for coal in international markets, SCE&G projects that the delivered price per MMBtu for foreign coal will exceed domestic prices at least in the short term. Thus, it does not currently expect to purchase any imported coal via waterborne vessel in 2012. However, Shinn said SCE&G will continue to monitor price changes in foreign markets to ensure that SCE&G and its customers may take advantage of delivered competitive prices in these markets.

Notwithstanding the growing demand for U.S. coal in foreign markets, SCE&G's coal prices for the forecasted period are expected to remain stable or trend downward slightly due to projections that it may increase spot coal purchases at prices below its long term contract prices. For example, over the past 12 months, the price for Central Appalachia coal decreased from $75/ton on Jan. 31, 2011, to $68.25/ton on Dec. 31, 2011. Spot coal prices have further moderated in early 2012, decreasing to around $60/ton. “While we do not expect any further substantial reduction in prices in 2012, we do believe spot prices will remain favorable and relatively stable,” Shinn added.

Shinn noted that factors like a dwindling coal reserve base, tougher U.S. Mine Safety and Health Administration mine safety enforcement and more stringent EPA oversight over coal mining impacts on water quality are putting upward pressure on coal production costs. “Notwithstanding these upward pressures, the Company expects coal prices to remain relatively stable in 2012,” Shinn added. “This expected stability in coal prices in 2012 is driven primarily by the low cost of natural gas coupled with the addition of new combined cycle gas generation coming on line outside of SCE&G's service area, resulting in reductions in the demand for coal.”

SCE&G continues to expand its coal specifications by purchasing coal of lower quality where practical and acceptable to a coal-burning plant. During 2011, SCE&G took delivery of 908,874 tons with contracted Btu/lb values less than its traditional specifications. A substantial portion of this coal was blended and consumed at Cope.

SCE&G is also evaluating the fuel flexibility for all of its coal-fired plants, looking for coals from outside its traditional Central Appalachia supply region. “In 2012, SCE&G will test burn an Illinois Basin coal blend at Cope Station to gauge the impact on operational costs and plant reliability," Shinn said. “Although coal from the Illinois Basin does not meet SCE&G's system coal quality specifications, this coal could yield a very competitive delivered cost per million when compared to Central Appalachian coals, if our test burns demonstrate that operational costs and reliability are not adversely impacted.”

In 2009, the SCE&G initiated legal action against several unnamed coal suppliers for non-performance. The company's claims against all suppliers but one have either been settled or litigated before the American Arbitration Association. The one unresolved case is scheduled to be heard, subject to any scheduling delays that may arise, later this year before the American Arbitration Association, Shinn wrote.

Natural gas prices tumbled in last half of 2011

Rose Jackson, employed by SCANA Services as General Manager, Supply and Asset Management, pointed out in companion **Feb. 17 testimony** how natural gas prices have tumbled lately. The year 2011 began with natural gas prices in the $4.65/Dt area as cold weather boosted demand and prices at the end of 2010, Jackson noted. Moderate weather in February caused prices to dip to $3.73/Dt. Due to an increase in demand for natural gas at natural gas-fired electric generating facilities, the market peaked for the year at $4.98/Dt in early June. During the remaining half of the year, prices were less volatile and trended down. The combination of an uneventful hurricane season, mild temperatures, high storage levels and strong production led prices to the lowest point for natural gas prices for the year at $2.96/Dt on Dec. 31.

“The near term forecast indicates natural gas prices are likely to remain fairly flat due to domestic production from shale supply,” Jackson added. “However, short term price volatility can result from dramatic changes in either supply or demand components. The fundamental factors of such changes may include, but are not limited to, weather, increases in consumption associated with an economic recovery, increases in supplies from shale production, changes in storage inventory levels, and/or constraints in pipeline capacity.”

ABOUT THE AUTHOR

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Barry Cassell is Chief Analyst for *GenerationHub* covering coal and emission controls issues, projects and policy. He has covered the coal and power generation industry for more than 26 years, beginning in November 2011 at *GenerationHub* and prior to that as editor of SNL Energy's *Coal Report*. He was formerly with *Coal Outlook* for 15 years as the publication's editor and contributing writer, and prior to that he was editor of *Coal & Synfuels Technology* and associate editor of *The Energy Report*. He has a bachelor's degree from Central Michigan University.

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