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ELECTRIC UTILITIES

Constellation Energy (\$28-CEG-Hold)

Exelon Corp. (\$53-EXC-Buy)

NRG Energy (\$25-NRG-Not Rated)

Scana Corp. (\$34-SCG-Buy)

Southern Co. (\$32-SO-Buy)

Other References

Financing Nuclear Generation (7/23/08)

AFUDC and the Other Side of Competitive Generation (7/8/08)

Part II Financing Nuclear Generation Utility versus Non-Regulated

Introduction

In early 2008, there were no fewer than 24 applications for US Nuclear Reactors, but many have fallen to the wayside. The short list for Nuclear Regulatory Commission (NRC) approval for combined construction and operating licenses and eligibility for yet undetermined government guaranteed debt includes two traditional integrated utilities: 1) **SCANA Corp.'s (SCG-\$34-Buy)** subsidiary, South Carolina Electric & Gas and 2) **Southern Company's (SO-\$32-Buy)** subsidiary, Georgia Power. Others in the queue include **UniStar Nuclear Energy**, a joint venture between **Constellation Energy (CEG-\$28-Hold)** and **EDF (Électricité de France)** and **NRG Energy (NRG-\$25-not rated)**, an independent power producer that fought off an unfriendly takeover attempt by **Exelon Corporation (EXC-\$53-Buy)**.

Integrated Utilities

Georgia Power Co. will own 45.7% of two 1,100 megawatt units (Vogtle #3 and #4). Its partners include Oglethorpe Power, the Municipal Electric Authority of Georgia, and the City of Dalton. All in costs, assuming Construction Work in Progress (CWIP), are estimated at \$4.8 billion (\$4,774 a kilowatt). South Carolina E&G's commitment is 55% of two 1,100 megawatt units (total capacity is closer to 2,234 megawatts) with Santee Cooper owning the remaining 45%. South Carolina estimates capital costs, including CWIP in rate base, are similar to Georgia Power, at \$6.3 billion (\$5,138 a kilowatt).

Nuclear capital commitment is substantial. For Georgia Power, the \$4.8 billion project represents 32% of December 31, 2008 capitalization of \$14.8 billion, and 70% of common equity of \$6.9 billion. In the case of SCE&G, it's even greater -- 121% of capitalization and 241% of common equity. Either way, it's a lot of risk.

The economics behind nuclear is simple -- higher upfront capital but lower variable costs than fossil fuels. The keys are to complete projects on time and operate at high capacity factors. If construction is delayed or capacity factors drop, economies decline and/or disappear. In the prior construction cycle, nuclear projects were plagued by 1) mandated revisions during the construction cycle, exacerbating an already rising cost spiral, 2) regulatory, environmental and consumer opposition to nuclear in general, and 3) operating licenses being granted only upon completion and extended review by regulators. Utilities were penalized for imprudencies during construction and poor planning as demand growth slowed and reserve margins were deemed excessive. Dividend cuts/eliminations and even bankruptcy (PS New Hampshire) followed.

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See page 3 of report for Analyst's Certification, page 3 for Important Disclosures and pages 3-4 for Other Disclosures and Disclaimers

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In this cycle the NRC issues a combined construction and operating license before construction. On the regulatory front, both Georgia Power and South Carolina Electric & Gas, not to mention their influential co-owners, worked with regulators and legislatures. State regulatory commissions are apprised of cost and escalation of costs and sign off on capital expenditures during the process, thus minimizing the danger of imprudency penalties. Moreover, the companies can avoid rate shock as legislatures approved the inclusion of Construction Work in Progress in rate base. Rates rise steadily during the construction cycle, hopefully 5 years, generating revenues to pay financing costs during construction.

Non-Regulated Generators

Neither Georgia Power nor South Carolina Electric & Gas require Federal subsidies such as production tax credits, loan guarantees or government-backed insurance. Not so with the non-regulators. Non-regulated generators got off to a great kick start. Generation was purchased or set apart from T&D investment at depressed values as 1) deregulation programs incorporated write-downs of stranded investment paid by regulated consumers, 2) assets were written-down coincident with mergers, 3) lower depreciation rates increased earnings as operating licenses were extended 20 years, and 4) sales prices reflected strategy based on higher-cost fossil fuels.

Leverage though works both ways. New nuclear generation costs exceed embedded costs. Non-regulated generators run the very real risk of having to sell into a market where capital costs are not fully recouped. Nuclear generators should attract high/risk, high/reward investors, but construction on "spec" may be another matter. One solution may be for the non-regulated generator to line up purchase power arrangements prior to moving dirt. The downside is that the purchaser would negotiate price arrangements that would sharply dampen profit potential, in other words, making the generator look a lot like a utility. Off balance sheet project financing may be possible but not without debt guarantees by a viable entity like Uncle Sam.

Table 1
Georgia Power-South Carolina E&G
Estimated Capital Cost of Nuclear Projects

Column	(1)	(2)
	Southern Ga. Power \$-Mil	Scana SCE&G \$-Mil
Project		
Capacity	2,200	2,234
% Ownership	45.7%	55%
Capacity (mw share)	1,005	1,229
Investment Share	4,800	6,313
Per Kilowatt	4,774	5,138
Capitalization (12/31/08)		
Debt	7,864	2,493
Preferred	45	113
Common	6,879	2,622
Total	14,788	5,228
Capital Structure		
Debt	53.2%	47.7%
Preferred	0.3%	2.2%
Common	46.5%	50.2%
Total	100.0%	100.0%
Investment Share		
% Common equity	70%	241%
% Capitalization	32%	121%

Analyst's Certification

I Raymond E. Moore certify that the views expressed in this research report accurately reflect my personal views about the subject companies and their securities. I also certify that I have not been and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendations in this report.

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Buy Total return is expected to exceed significantly the average total return of the analyst's industry coverage universe over the next 12 months.

Market Perform & Hold Total return is expected to equal the average total return of the analyst's industry coverage universe over the next 12 months.

Sell Total return is expected to significantly under perform (15% plus) the total return of the industry coverage universe over the next 12 months.

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Hold	75%	0%
Sell	0%	0%

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