EXHIBIT H

CONTRIBUTION TO SYSTEM EFFICIENCY AND FUEL TYPE

Combined Application of South Carolina Electric & Gas Company for a Certificate of Environmental Compatibility and Public Convenience and Necessity and for a Base Load Review Order
Public Service Commission Docket No. 2008-196-E

1. INTRODUCTION

This **Exhibit H** provides information concerning the contribution that the proposed Virgil C. Summer Nuclear Station (VCSNS) Units 2 & 3 (the Facilities or Units) will make to the economy and reliability of the integrated electric system that serves the energy needs of SCE&G's customers and the people of the State of South Carolina. This exhibit also reviews various alternative sources of electric generation capacity and energy considered by SCE&G in choosing the proposed AP1000 Advanced Passive Safety Power Plants (AP1000) as the units to construct as VCSNS Units 2 & 3.

2. SYSTEM ECONOMY AND RELIABILITY

These nuclear facilities will serve system reliability because they will provide needed capacity as shown in **Exhibit G**. In addition SCE&G has more than twenty-five years experience operating a nuclear facility and has demonstrated its ability to operate a nuclear plant efficiently and reliably.

System economy is served by the addition of these nuclear facilities because:

- These nuclear facilities are the most economical form of generation to add under reasonable assumptions about the future.
- These nuclear facilities meet the Company's need for more base load capacity.
- These nuclear facilities are non-emitting resources and therefore serve to protect the environment while at the same time mitigating exposure to the cost of complying with future environmental regulations.
- These nuclear facilities support the need for fuel diversity in SCE&G's capacity mix.
- Renewable power, increased demand side management (DSM) and potential energy efficiency gains are not capable of replacing the need for more base load generation; however, they could fit nicely into the expansion plan by displacing some of the purchased power currently shown in the plan.

These matters are discussed in more detail below.

Regarding the Need for Base Load Capacity

The Company's need for base load capacity can be seen in the following table which shows the historical levels of base load capacity in SCE&G's resource mix, its current mix and the 2020 mix with and without these nuclear facilities. Base load capacity is defined as capacity which is intended to run at least 65-75% of the time in a given year. Historically on SCE&G's system only nuclear and coal capacity would meet this definition.

Percent of Base Load Capacity in Resource Portfolio				
1980	2000	Current	2020 with VCSNS Units 2 & 3	2020 Without VCSNS Units 2 & 3
68	74	56	63	45

As shown in the above table, SCE&G has maintained its base load capacity in the 68%-74% range historically. In part because of environmental pressures related to coal, SCE&G has added more gas capacity in recent years resulting in a 56% ratio of base load to total capacity which is low for our system. Clearly there is a need for additional base load capacity, that is, capacity that can generate energy at low cost.

This need for base load capacity is exacerbated by the age of SCE&G's existing base load plants. The table below shows the percent of base load capacity that is more than 40 years old currently and in 2020 with and without these nuclear facilities.

Percent of Base Load Capacity Over 40 Years Old			
2000	Current	2020 with VCSNS Units 2 & 3	2020 Without VCSNS Units 2 & 3
11	23	46	64

While no particular plant has been identified for retirement, the Company does expect to have to retire some capacity during the 40-year planning horizon evaluated in this filing.

Regarding Natural Gas Capacity
SCE&G has evaluated natural gas capacity as a potential economical alternative to these nuclear facilities. However as shown in the following table, adding significantly more gas capacity to the SCE&G system does not support the goal of fuel diversity and would subject SCE&G's customers to the volatility of the gas market at an unacceptable level.

% of Total Capacity	Current Mix	2020 with VCSNS Units 2 & 3	2020 Without VCSNS Units 2 & 3
Nuclear	11	27	9
Coal	43	37	37
Gas	30	24	42

In addition, the volume of gas that is required to replace the electrical output of these nuclear facilities is substantial and certainly would require investment in gas infrastructure.

The following table illustrates this point.

Illustration with Volume of Gas Equivalents	
2,234 MW Nuclear Output at 92% capacity factor	18,004.3 GWH
Equivalence in Millions of Dekatherms	127,900,000 DTs
Equivalence in Residential Customers	2,804,688 residences
Number of SCE&G Residential Customers 2007	273,000 residences
2007 Total SCE&G Gas LDC Sales	40,700,000 DTs

The following table compares the amount of annual emissions generated by the two nuclear plants compared to a similar amount of energy generated by gas.

Emissions	2,234 MWs of Nuclear	2,234 MWs of Natural Gas	
		Annually	60 Year Life
CO_2	0	8,500,000 tons	510,000,000 tons
SO_X	0	55 tons	3,300 tons
NO_X	0	1,350 tons	81,000 tons

Regarding Renewable Power

SCE&G considers non-traditional sources of generation in its planning. In fact it depends on 90 MWs of co-generation capacity in its Cogen South facility. This facility co-fires coal and the biomass waste from a paper manufacturing plant. Some proposed bills in Congress have defined renewable as: geothermal, hydro, wind, solar and biomass. Unfortunately there are no sites for geothermal generation available in South Carolina. SCE&G generates about 5% of its energy from hydro power. The Company has invested in its existing hydro sites and increased hydro output as a result. The Company will continue to pursue other such economic opportunities but no sites have been identified for a new hydro facility. Both wind and solar have been considered but because of the high capital costs and the limited energy production caused by low wind speeds and insufficient solar radiation, these generation sources are not economical within the SCE&G service territory with current and foreseeable technologies. SCE&G has also evaluated new potential biomass applications in recent years, but none have proven economically feasible and operationally practical yet, but SCE&G continues to examine proposals and opportunities as they are identified.

As potentially valuable as renewable power may be in the future in South Carolina, it is important to keep in mind that it is not likely in the near future to approximate the amount of clean energy that can be produced by the two nuclear units described in this Application.

The following table provides some indication in terms of area of how much solar or wind power would be required.

Renewable Power: To Get Equivalent Energy As 2,234 MW Nuclear		
	Area	Description of Need to Generate 18,004 Million KWH
Solar	61,656 acres	10,276 MWs of solar panels using 6 acres of land per MW generating at a 20% capacity factor.
Wind	120,192 acres	2,284 off-shore wind turbines rated at 3 MWs each generating at a 30% capacity factor.

Since there are about 640 acres in a square mile, the area of 61,656 acres for solar is also 96.3 square miles and the area of 120,192 acres for wind is also 187.8 square miles. Furthermore, the required wind turbines must be given a one-quarter mile spacing for proper operation and so if placed off-shore would cover the length of the South Carolina coast line with three rows of turbines.

These proposed nuclear units also displace a significant amount of CO_2 that might otherwise have been emitted by a fossil plant. The following table shows how many trees would need to be planted to offset an equivalent amount of CO_2 on an annual basis.

Carbon Offsets: Using Equivalent Energy As 2,234 MW Nuclear			
Generation Source	CO_2 Emitted in millions of Tons	Number of Trees in millions	Land Area in Acres
Coal	19.1	795	1,766,000
Gas	8.5	350	778,000
Note: A mature tree consumes 48 lbs of CO_2/year and about 450 trees require one acre of land.			

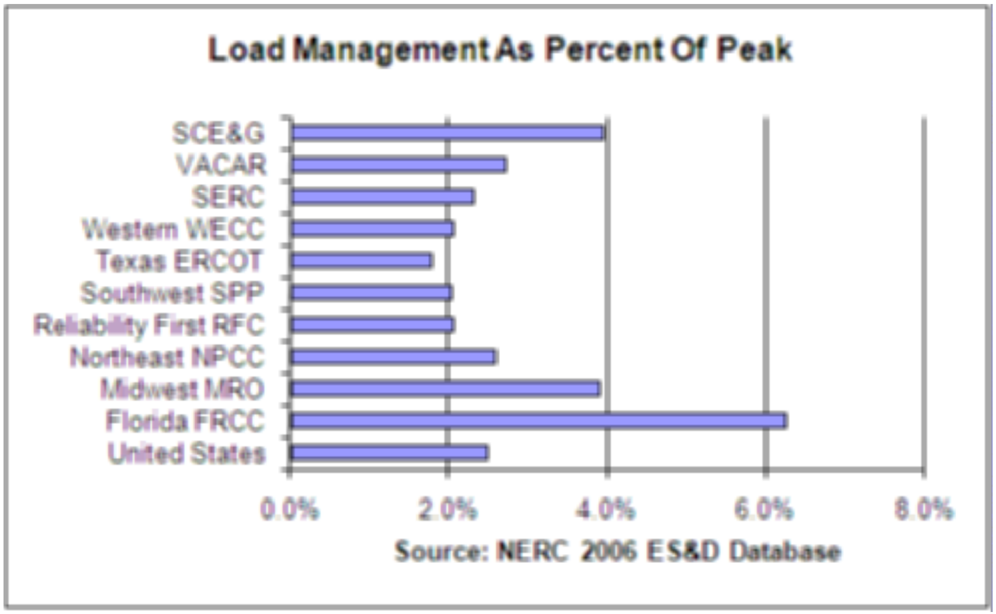
Regarding Demand Side Management
SCE&G has had a demand side management program in place for many years and has reported on it in its integrated resource plans which are currently filed annually. Below is an outline of these DSM programs.

1. Customer Information Programs
    a. Annual Energy Campaign
    b. Internet-Based Information and Use Analysis
2. Energy Conservation Programs
    a. Value Visit Program
    b. Energy Saver Rate
    c. Seasonal Rates
3. Load Management Programs
    a. Standby Generator Program
    b. Interruptible Load Program
    c. Real Time Pricing (RTP) Rate
    d. Time of Use (TOU) Rates

A few measures of success of these programs are the following:

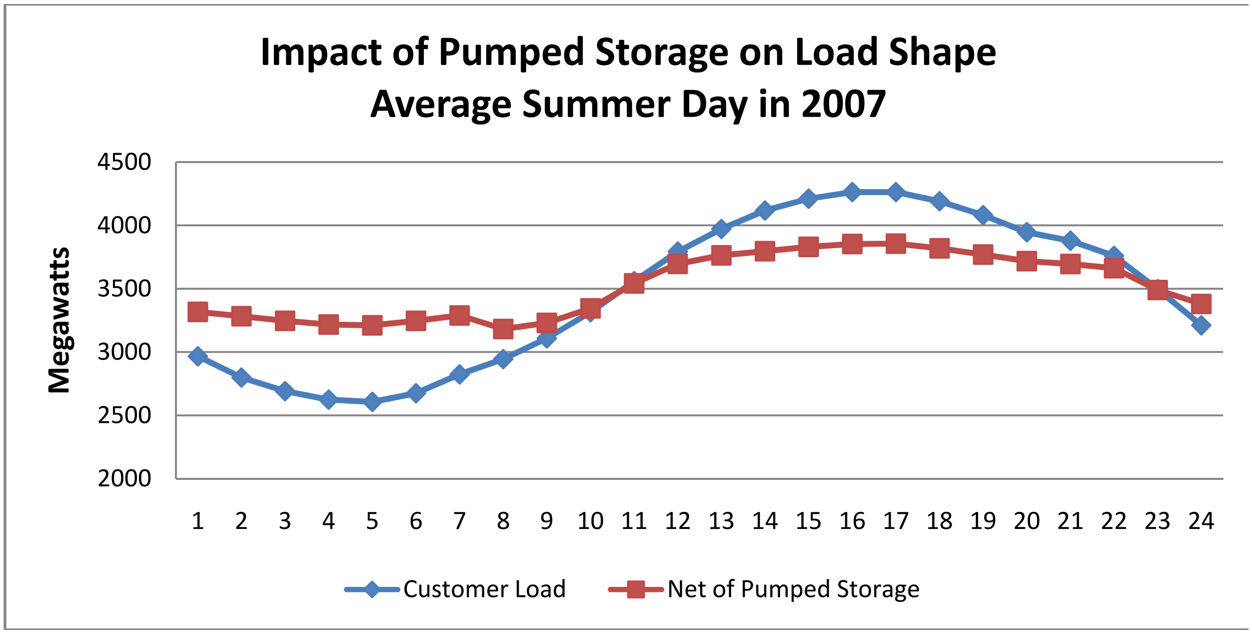
- Almost 200,000 customers are registered for internet access;
- Over 50,000 customers are on the Conservation Rate; and
- 20% of commercial sales are served on TOU or RTP rates.

Through our load management program, also known as demand response, we are able to avoid 234 MWs of capacity in the form of interruptible load and standby generation. To put this in perspective the following graph compares the magnitude of SCE&G's demand response program to other areas of the country.



As can be seen in the graph only Florida with its winter morning spikes in load has more demand side load management.

One other advantage that SCE&G has over many other utilities is its pumped storage facility in Fairfield County. The following graph shows the impact that this unit had on the system load shape during the summer of 2007.

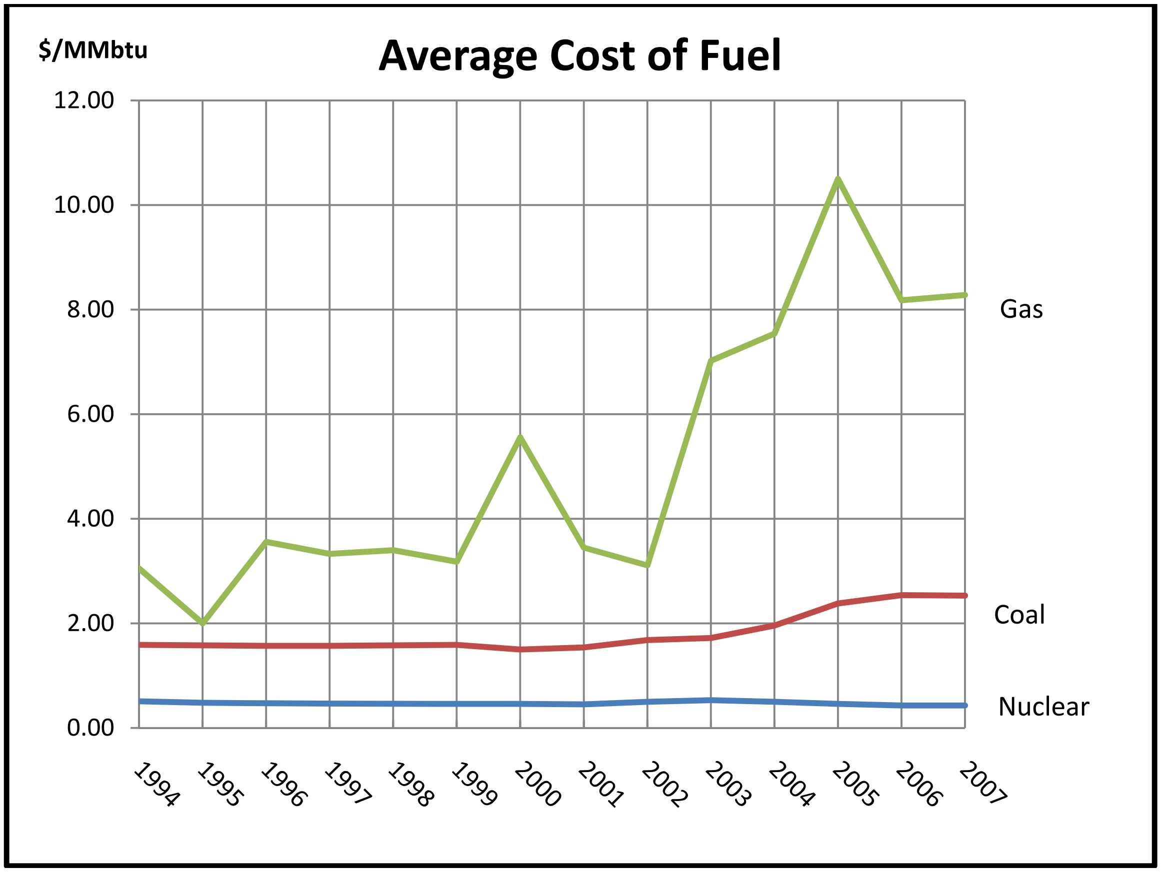


In effect the Fairfield Pumped Storage Plant shaved about 400MWs of load from the daily peak times of 2:00pm through 6:00pm and moved almost 4% of customer's daily energy needs to the off peak. Clearly it would take a demand-side program of significant size to produce an equivalent peak load shifting effect on the system.

In addition to the above the company is taking steps to revise and expand its collection of DSM programs. A new department has been created within the Company this year with the mission of developing the best portfolio of DSM programs to serve SCE&G's customers. As indicated above, DSM can play a useful and important role in reducing the demand for electricity on SCE&G's system. Reasonably anticipated gains from DSM programs, while quite beneficial, would not displace the need for the new nuclear units.

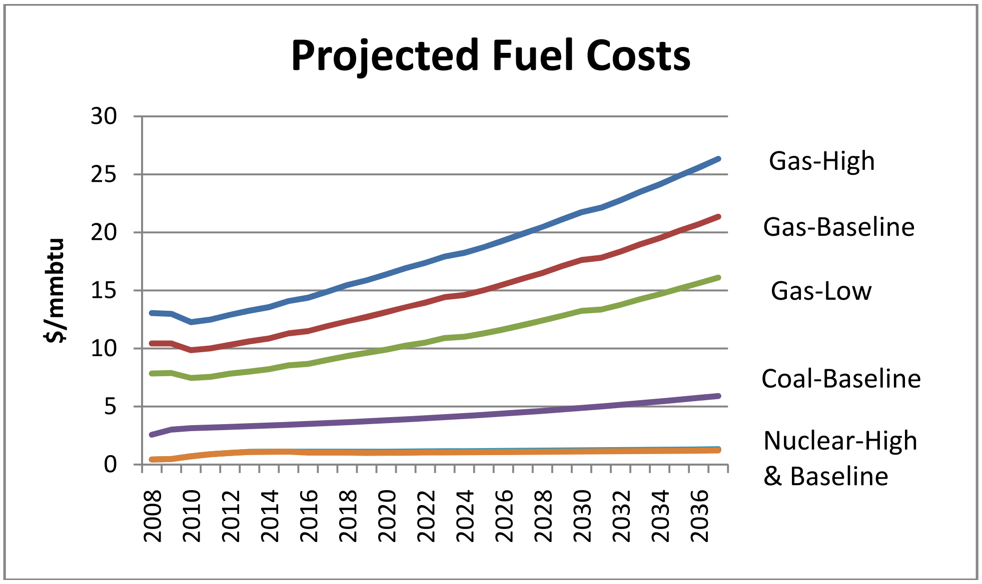
Regarding the Cost of Fuel

A significant advantage of nuclear power over gas in particular is the low cost and stability of the fuel price. The following graph shows SCE&G's experience with the cost of natural gas, coal and nuclear power over the last 15 years. The volatility of natural gas prices is shown in stark contrast to the relative stability of both coal and nuclear costs. The significant increase seen in natural gas prices especially in the last 5 years provides a strong argument for more fuel diversity away from reliance on natural gas generation.



Sources: Annual 10-K reports sent to Securities and Exchange Commission (nuclear, coal, gas:2001-2007)and FERC Form 1 annual reports (gas:1994-2000).

There were three scenarios of projected natural gas prices and two scenarios of nuclear prices constructed for the economic analysis that is discussed in the next section. The high and low gas price forecast is plus and minus 25% respectively of the baseline gas price forecast. The high nuclear price forecast is about 10% higher than the baseline forecast. Both nuclear price forecasts are purchased from the UX Consulting Company.



The high and baseline nuclear price forecasts are almost indistinguishable in the graph because of the scale required to include the higher gas prices even though the high nuclear price is almost 10% greater than the baseline price.

Regarding the Economic Analysis

Three expansion plan strategies are compared in an economic analysis using SCE&G's baseline assumptions. These strategies are: the nuclear strategy, the gas strategy and the coal strategy. Both the nuclear and the coal strategies include gas capacity in the form of combustion turbine peaking units (CTs). The following table summarizes each planning strategy.

Strategy	Description
Nuclear Strategy	Add two nuclear units at 614MWs each in 2016 and 2019. Add 24 CTs at 93MWs each along with purchases throughout planning horizon as needed to maintain a 12% minimum reserve margin.
Gas Strategy	Add three combined cycle natural gas units at 520MWs each in 2016, 2024 and 2031. Add 20 CTs at 93MWs each along with purchases throughout planning horizon as needed to maintain a 12% minimum reserve margin.
Coal Strategy	Add two coal units at 600MWs each in 2016 and 2019. Add 24 CTs at 93MWs each along with purchases throughout planning horizon as needed to maintain a 12% minimum reserve margin.

The following table shows the results of an economic analysis using SCE&G's baseline assumptions.

Levelized Present Value of Comparative Revenue Requirements ($Million Per Year) – Shown as Change from the Nuclear Strategy	CO_2 at $15	CO_2 at $30	High Natural Gas Prices
1) Nuclear Strategy	-	-	-
2) Gas Strategy	15.1	125.2	68.5
3) Coal Strategy	94.9	267.5	99.0
Note: Revenue includes production costs for all plants and the capital costs of all new plants.			

The nuclear strategy is seen to be the lowest cost option for SCE&G's customers over the long run. Cost here is measured in terms of the impact on SCE&G's customers' bills and is quantified in the table as the levelized present value of comparative revenue requirements. Comparative revenue requirements refer to all fixed and variable production costs from all of the power plants plus the capital costs from all of the incremental power plants. Each of the three strategies includes enough capacity to meet a minimum reserve margin of 12%. For example, the "nuclear" strategy includes adding two nuclear units in 2016 and 2019 as well as sufficient purchases and peaking turbines to maintain the minimum reserve margin throughout the planning horizon of 40 years. Referring to this table, it can be seen that the gas strategy would cost SCE&G's customers $15.1 million per year more than the nuclear strategy if CO_2 costs $15 per ton in 2012 and escalates at 7% per year. With CO_2 at $30 per ton, the cost advantage of nuclear would be $125.2 million per year. A higher natural gas price with CO_2 at $15 per ton shows a nuclear cost advantage of $68.5 million per year.

The following table shows the results from scenarios in which assumptions unfavorable to the nuclear strategy were made. For example, if uranium fuel prices follow a high track, the nuclear strategy still has a positive advantage over the gas strategy by $13.2 million per year but if natural gas prices follow a low track, then the gas strategy has the advantage over nuclear by $44.9 million per year. Additionally, if there is no legislation imposing additional costs on CO_2 emissions, the gas strategy has an $86.5 million advantage over nuclear. However while higher uranium prices are possible, they are not expected. In addition, it does not seem reasonable at this point to expect low gas prices or no CO_2 legislation.

Levelized Present Value of Comparative Revenue Requirements ($Million) – Shown as Change from the Nuclear Strategy	High Uranium Prices	Low Gas Prices	CO_2 at $0
1) Nuclear Strategy	-	-	-
2) Gas Strategy	13.2	-44.9	-86.5
3) Coal Strategy	87.5	90.1	-82.7
Note: Revenue includes production costs for all plants and the capital costs of all new plants.			

As discussed earlier some of our existing coal plants are likely to be retired during the 40-year planning horizon. By adding the nuclear facilities the Company will be in a much better position to protect our customers from high fuel prices. The table below compares the impact of three possible coal retirement scenarios. The "High Forced Outage Rate" scenario assumes that SCE&G continues to operate all its coal plants no matter the age but they become more unreliable with time. The "Retire Small Coal Plants" scenario envisions the need for more environmental investment at each plant, such as, the need to add carbon capture. This type investment is not likely to be economical at smaller coal plants. Finally, the "Retire All Coal When 60 Years Old" scenario is self-explanatory. All three scenarios represent future possibilities. As shown in the table, SCE&G is better able to protect its customers under these scenarios if it pursues the Nuclear Strategy.

Levelized Present Value of Comparative Revenue Requirements ($Million) – Shown as Change from the Nuclear Strategy	High Forced Outage Rate	Retire Small Coal Plants	Retire All Coal When 60 Years Old
1) Nuclear Strategy	-	-	-
2) Gas Strategy	44.9	75.7	68.7
Note: Revenue includes production costs for all plants and the capital costs of all new plants.			

While no one knows with certainty what a CO_2 credit may cost, the following table presents some points of reference.

$ per Ton of CO_2	Description
$47	Price of carbon futures contract for December 2012 on the Inter-Continental Exchange: 27.75 Euros per metric ton @1.5607 exchange rate (4/25/2008) converted to $ per short ton.
$55	Cost to capture and sequester CO_2. Estimate from a U.S. Department of Energy website http://fossil.energy.gov/sequestration/capture/index.html
$94	Price needed for gas generation at $73 per MWH to displace coal generation at $26 per MWH using variable production costs.

The table below shows the sensitivity of the economic results to the price of a CO_2 credit. For each combination of escalation rate and CO_2 price in 2012, the table shows the approximate difference in levelized revenue requirements between the nuclear strategy and the gas strategy. For example, if the CO_2 price in 2012 is \$20 and escalates at 5% per year, then the nuclear strategy would save SCE&G's customers about \$19 million per year on a levelized basis. On the other hand if the CO_2 price were only \$5 escalating at 2%, then the nuclear strategy would cost about \$71 million more per year than the gas strategy. The shaded area highlights the combinations of CO_2 price and escalation which result in the gas strategy being more economical than the nuclear strategy.

Change in Levelized Rev. Req.: Gas Strategy Minus Nuclear Strategy
Positive Entries Represent Nuclear Advantage in Millions of Dollars

CO_2 Price / Escalation	$0	$5	$10	$15	$20	$25	$30	$35	$40	$45	$50
0%	-87	-75	-63	-51	-40	-28	-16	-5	7	19	31
2%	-87	-71	-55	-39	-23	-7	9	25	41	57	73
4%	-87	-64	-42	-20	2	24	47	69	91	113	135
5%	-87	-60	-34	-7	19	45	72	98	124	151	177
6%	-87	-55	-24	8	39	71	102	134	165	197	228
8%	-87	-41	5	50	96	141	187	233	278	324	369
10%	-87	-19	48	116	183	250	318	385	453	520	587

In Summary
Schedule H has shown that:

- These nuclear facilities are the most economical form of generation to add under reasonable assumptions about the future.
- These nuclear facilities meet the Company's need for more base load capacity.
- These nuclear facilities are non-emitting resources and therefore serve to protect the environment while at the same time mitigating exposure to the cost of complying with future environmental regulations.
- These nuclear facilities support the need for fuel diversity in SCE&G's capacity mix.
- Renewable power, increased demand side management (DSM) and potential energy efficiency gains are not capable of replacing the need for more base load generation; however, they could fit nicely into the expansion plan by displacing some of the purchased power currently shown in the plan.

Based on consideration of these factors, SCE&G has determined that constructing the nuclear facilities is the most reasonable and prudent response to its need for future base-load capacity to serve its customers and the people of South Carolina.