

2000

Integrated

Resource

Plan



Introduction

This document presents South Carolina Electric And Gas Company's (SCE&G) Integrated Resource Plan (IRP) for meeting the energy needs of its customers over the next fifteen years, 2000 through 2014. The Company's objective is to provide reliable and economically priced energy to its customers.

The Load Forecast

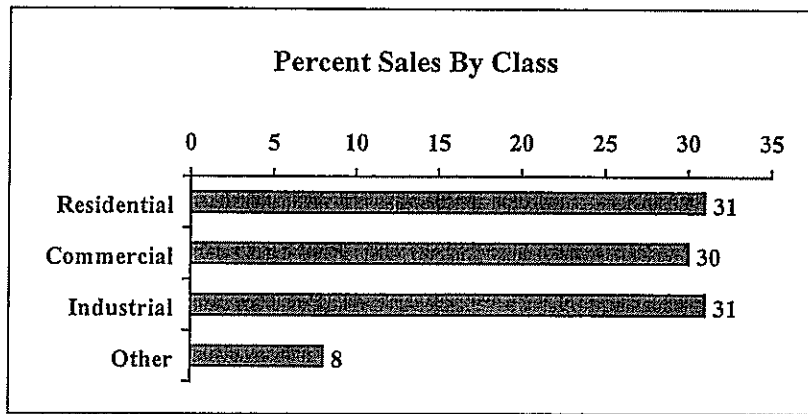
Total energy sales on the SCE&G system are expected to grow at 2.1% per year over the next 15 years. The summer peak demand and winter peak demand will increase at 2.1% and 2.4% per year respectively over this forecast horizon. The table below contains the projected loads.

	Winter Peak (MW)	Summer Peak (MW)	Energy Sales (GWH)
2000	3,600	4,107	21,742
2001	3,747	4,220	22,393
2002	3,869	4,314	22,920
2003	3,967	4,421	23,455
2004	4,068	4,506	23,891
2005	4,149	4,615	24,431
2006	4,251	4,708	24,909
2007	4,341	4,794	25,347
2008	4,423	4,896	25,877
2009	4,523	5,003	26,432
2010	4,627	5,104	26,946
2011	4,723	5,179	27,419
2012	4,796	5,294	28,012
2013	4,907	5,391	28,522
2014	5,002	5,507	29,132

The energy sales forecast for SCE&G is made for over 30 individual categories. The categories are subgroups of our seven classes of customers. The three primary customer classes: residential, commercial and industrial, comprise over 90% of our sales. The bar

chart shows the relative contribution to sales of each class. The other classes are street lighting, other public authorities, municipalities and cooperatives. Sales projections to each group are based on statistical and econometric models derived from historical relationships.

The forecast of summer peak demand is developed using a load factor methodology. Load factors for each class of customer are associated with the corresponding forecasted energy to project a contribution to summer peak. The winter peak demand is projected through its correlation with annual energy sales with appropriate adjustments for winter temperature departures from normal.



Demand-Side Management

There are two primary demand-side management programs at SCE&G: the standby generator program and the interruptible service program. The Company relies on these programs to help maintain the reliability of its electrical system. There are 248 megawatts of capacity made available to the system through these programs. The table below shows the peak demand on the system with and without these programs. The firm peak demand is the load level that results when the DSM is used to lower the system peak demand.

	System Peak (MW)	DSM Impact (MW)	Firm Peak (MW)
2000	4,355	248	4,107
2001	4,468	248	4,220
2002	4,562	248	4,314
2003	4,669	248	4,421
2004	4,754	248	4,506
2005	4,863	248	4,615
2006	4,956	248	4,708
2007	5,042	248	4,794
2008	5,144	248	4,896
2009	5,251	248	5,003
2010	5,352	248	5,104
2011	5,427	248	5,179
2012	5,542	248	5,294
2013	5,639	248	5,391
2014	5,755	248	5,507

The programs mentioned above are directed toward load management. The Company is also committed to energy conservation and the wise use of electricity. We offer conservation rates and time of use rates to allow customers the opportunity to save on their electric bill. Additionally all our rates are designed to provide correct price signals and thereby encourage our customers to use energy wisely especially during the peak season. The Company has other programs for customers that provide education and services to foster the wise use of energy. The programs are designed to eliminate uncompetitive rate impacts.

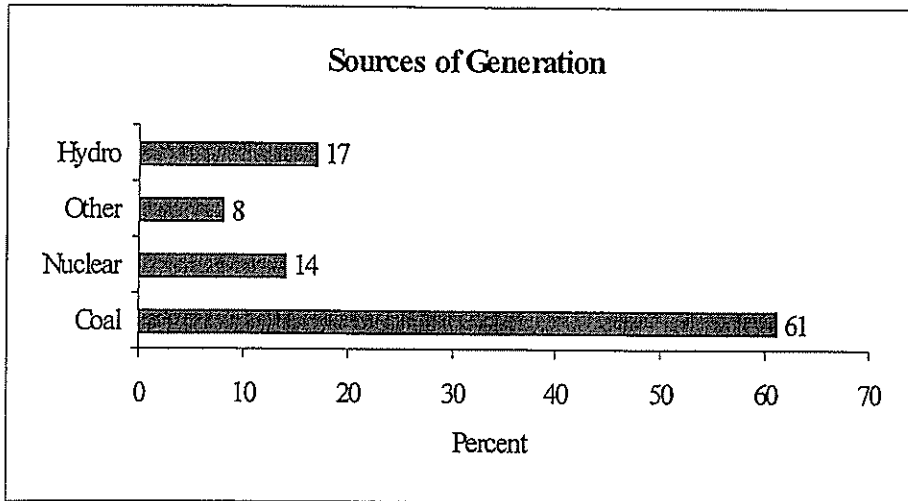
Existing Supply Capacity

The following table shows the generating capacity that will be available to SCE&G in 2000.



2000 Planning Capacity		
	In-Service Date	Summer (MW)
Coal-fired Steam:		
Urquhart - Beech Island, SC	1953	250
McMeekin - near Irmo, SC	1958	252
Canadys - Canadys, SC	1962	435
Wateree - Eastover, SC	1970	700
Williams - Goose Creek, SC	1973	600
D-Area - USDOE Savannah River Site	1995	38
Cope - Cope, SC	1996	410
Cogen South - Charleston, SC	1999	55
Total Coal-fired Steam Capacity		2,740
Nuclear:		
V. C. Summer - Parr, SC	1984	635
I. C. Turbines:		
Burton, SC	1961	29
Faber Place - Charleston, SC	1961	10
Hardeeville, SC	1968	14
Urquhart - Beech Island, SC	1969	38
Coit - Columbia, SC	1969	30
Parr, SC	1970	60
Williams - Goose Creek, SC	1972	49
Hagood - Charleston, SC	1991	95
Urquhart No. 4 - Beech Island, SC	1999	48
Total I. C. Turbines Capacity		372
Hydro:		
Neal Shoals - Carlisle, SC	1905	5
Parr Shoals - Parr, SC	1914	14
Stevens Creek - Near Martinez, GA	1914	9
Columbia Canal - Columbia, SC	1927	10
Saluda - Near Irmo, SC	1930	206
Fairfield Pumped Storage - Parr, SC	1978	527
Total Hydro Capacity		771
Other: Purchases		25
Grand Total:		4,543

The bar chart shows the 2000 generation by fuel source. SCE&G generates the overwhelming amount of its energy from coal and nuclear fuel. This will not change during the forecast horizon.



Supply Reserve Margin

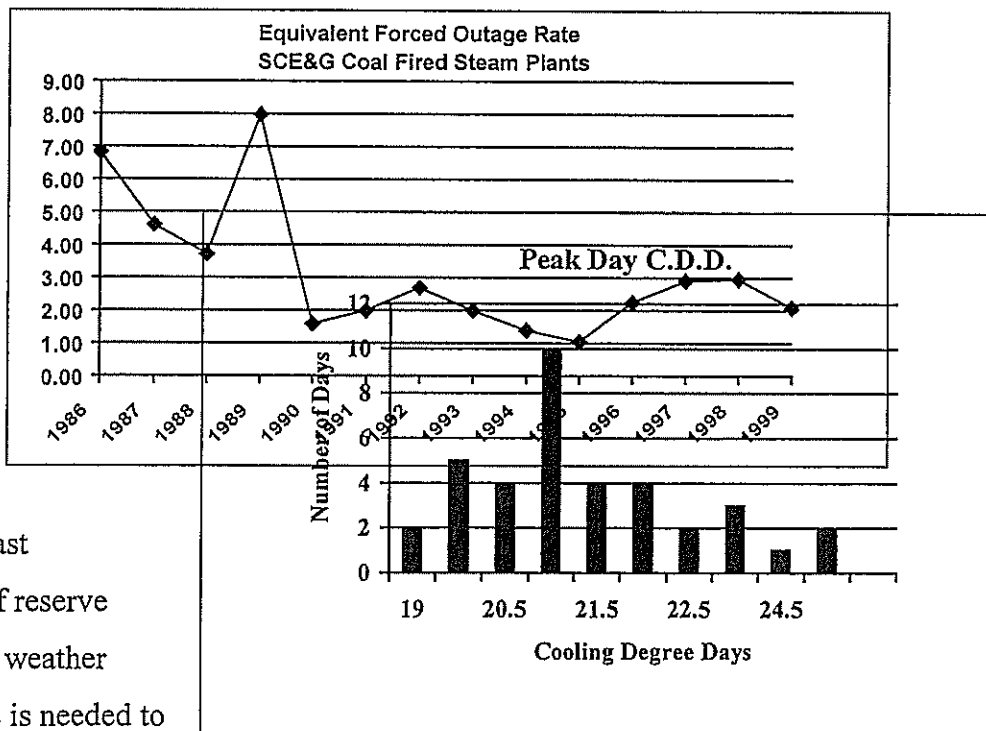
The Company provides for the reliability of its electric service by maintaining an adequate reserve margin of supply capacity. The appropriate level of reserve capacity for SCE&G is 497 megawatts. The table to the right shows the three components that comprise this margin: operating reserves, contingency reserves and weather reserves.

Component	Megawatts
Operating Reserves	197
Contingency Reserves	200
Weather Reserves	<u>100</u>
Total Reserve Margin	497

The level of operating reserves required by the SCE&G system is dictated by operating agreements with other VACAR companies. VACAR has set the region's reserve needs at 150% of the largest unit in the region. SCE&G's prorata share of this capacity is 197 megawatts.

Contingency reserves are needed to balance the risk that some capacity may be forced out on any particular day because of mechanical failures, wet coal problems or other environmental limitations. The amount of capacity forced out or down-rated will vary from day to day. SCE&G has set the contingency component of its reserve margin at 200 megawatts to address this loss of capacity.

Over the past several years the Company has been able to improve the reliability of its coal plants. Below is a chart showing the Company's declining forced outage experienced at its coal plants. Improvements in maintenance techniques have helped to improve the reliability.



The last component of reserve margin is the weather reserve. This is needed to cover the increase in load resulting from a hotter than normal summer. Through statistical analysis SCE&G has estimated that its peak load will increase about 25 to 30 megawatts per cooling degree day. A cooling degree day (CDD) is the positive difference between the average daily temperature and 65 degrees. The bar chart shows the distribution of CDD on the peak days from the past 36 years. The average or normal CDD is 21 which is equivalent to an

average daily temperature of 86 degrees. Based on this chart a very hot summer, one that may occur every 10 years or so, will have 3 to 3.5 CDDs above normal which will result in a 75 to 105 megawatt increase in summer peak load. SCE&G has added a 100 megawatts to the reserve margin to cover this contingency.

By maintaining a capacity reserve margin of 497 megawatts, the Company has addressed the uncertainties related to load and to available generating capability on its system as well as provided its share of support for the VACAR transmission grid. Clearly this level of reserves should change over time. In particular as the SCE&G system grows, the weather sensitivity of load should increase as well. Thus the weather component of reserves should be increasing over time. However, the Company feels the reserve margin is adequate for the next several years, and it will change the margin as dictated by its annual planning process.

Projected Supply Needs

The table below shows the firm peak demand forecast, the existing and required capacity and the resulting capacity that must be acquired to maintain adequate reserve levels.

	Firm Peak (MW)	Target Reserve Margin (MW)	Supply Required (MW)	Existing Supply (MW)	Supply Shortfall (MW)
2000	4,107	497	4,604	4,543	-61
2001	4,220	497	4,717	4,543	-174
2002	4,314	497	4,811	4,543	-268
2003	4,421	497	4,918	4,543	-375
2004	4,506	497	5,003	4,543	-460
2005	4,615	497	5,112	4,543	-569
2006	4,708	497	5,205	4,543	-662
2007	4,794	497	5,291	4,543	-748
2008	4,896	497	5,393	4,543	-850
2009	5,003	497	5,500	4,543	-957

The Supply Shortfall shown in the table represents the cumulative amount of supply capacity that is needed to maintain our target reserve level. The Company will acquire the supply additions to capacity from the most economical and competitive sources available. Some of this capacity may be provided through plant construction either as a sole venture or through joint venture. Both simple cycle and combined cycle turbines will be considered. A baseload fossil alternative will also be considered but is not expected to be competitive except perhaps in the very long term. Some of the need may be met with a mix of short and long term purchase contracts and some capacity may come from an expanded demand side management program. The Company will choose a portfolio of supply options that best meets its goal of providing reliable and competitively priced electric power to its customers. In the near future the Company has committed to adding some generating capacity. These projects will be discussed in the next section.

Planned Resource Additions

The table below shows the Company's plans for adding capacity over the next several years.

Year	Megawatts	Description
2001	13	VC Summer Uprate
2001	15	Fairfield P.S. Uprate
2002	15	Fairfield P.S. Uprate
2002	341	Urquhart Re-powering
2003	15	Fairfield P.S. Uprate

The capacity uprate at VS Summer Station represents an efficiency goal that should be met by undertaking several initiatives at the plant. The additional capacity at Fairfield Pumped Storage in 2001, 2002 and 2003 results from installing new runners at each of the eight hydroelectric generators. The Urquhart Re-powering Project will increase SCE&G's generating capacity by 341 megawatts. As part of the project two new turbine generators of 150 megawatts each will be installed at the Urquhart Station along with two new heat recovery steam generators. The steam generators will replace the existing coal fired boilers of Units 1 & 2 and provide steam to drive the two existing steam turbine generators rated at 75 megawatts each. An inlet chiller for the combustion turbines will be installed to provide an additional 41 megawatts of capacity during the summer. The total expected capacity of the project will be 491 megawatts which represents a net increase of 341 megawatts over the 150 megawatts existing at Units 1 & 2.