BCW

1998 Integrated Resource Plan

SCE&G
A SCANA COMPANY

Introduction

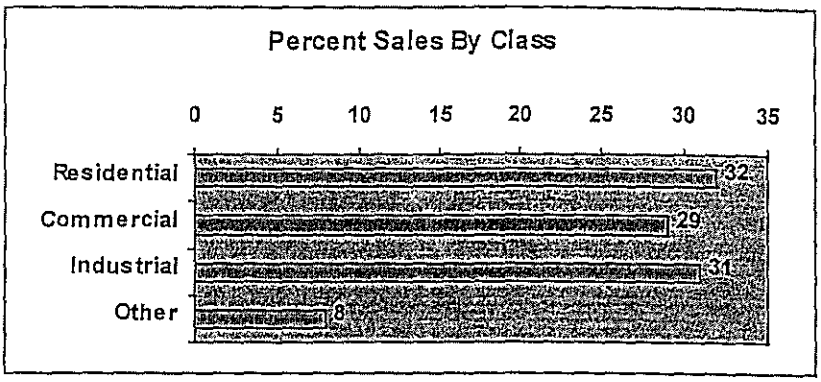
This document presents South Carolina Electric And Gas Company's (SCE&G) Integrated Resource Plan (IRP) for meeting the energy needs of its customers over the next fifteen years, 1999 through 2013. The Company's objective is to provide reliable and competitively priced energy to its customers. Because of the increasing uncertainty caused by the changing regulatory climate and because SCE&G has sufficient capacity to provide reliable service over the next three years, this IRP does not contain a specific set of action steps to meet this objective but rather discusses options currently considered by the Company.

The Forecast

Total energy sales on the SCE&G system are expected to grow at 1.9% per year over the next 15 years. The summer peak demand and winter peak demand will increase at 1.9% and 2.2% per year respectively over this forecast horizon. The table below contains the projected loads.

	Winter Peak (MW)	Summer Peak (MW)	Energy Sales (GWH)
1999	3,511	3,914	20,038
2000	3,710	3,996	20,506
2001	3,799	4,085	20,971
2002	3,890	4,176	21,414
2003	3,977	4,262	21,844
2004	4,061	4,346	22,271
2005	4,143	4,430	22,692
2006	4,226	4,510	23,088
2007	4,303	4,583	23,471
2008	4,376	4,663	23,864
2009	4,454	4,741	24,263
2010	4,531	4,821	24,676
2011	4,610	4,904	25,087
2012	4,692	4,986	25,499
2013	4,772	5,068	25,924

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 239 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)
1999	4,153	239	3,914
2000	4,235	239	3,996
2001	4,324	239	4,085
2002	4,415	239	4,176
2003	4,501	239	4,262
2004	4,585	239	4,346
2005	4,669	239	4,430
2006	4,749	239	4,510
2007	4,822	239	4,583
2008	4,902	239	4,663
2009	4,980	239	4,741
2010	5,060	239	4,821
2011	5,143	239	4,904
2012	5,225	239	4,986
2013	5,307	239	5,068

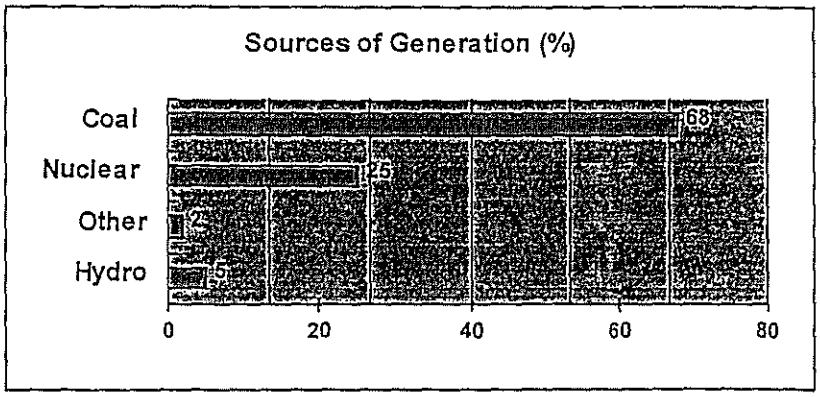
The programs mentioned above are directed toward load management. The Company is also committed to energy conservation and the wise use of electricity. We offer conservation rates and time of use rates to allow those customers, who can take the necessary steps, the opportunity to save on their electric 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.

Supply-Side Plan

The following table shows the generating capacity that will be available to SCE&G in 1999.

1999 Planning Capacity	In-Service Date	Summer (MW)
Coal-fired Steam:		
Canadys - Canadys, SC	1962	450
Cope - Cope, SC	1996	420
D-Area - USDOE Savannah River Site	1995	30
McMeekin - near Irmo, SC	1958	256
Urquhart - Beech Island, SC	1953	250
Wateree - Eastover, SC	1970	720
Williams - Goose Creek, SC	1973	597
Total Coal-fired Steam Capacity		2,723
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
Total I. C. Turbines Capacity		324
Hydro:		
Columbia Canal - Columbia, SC	1927	10
Neal Shoals - Carlisle, SC	1905	5
Parr Shoals - Parr, SC	1914	14
Saluda - Near Irmo, SC	1930	206
Stevens Creek - Near Martinez, GA	1914	9
Fairfield Pumped Storage - Parr, SC	1978	512
Total Hydro Capacity		756
Other: Purchases & Cogeneration		80
Grand Total:		4,518

The bar chart shows the 1997 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.

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 Additions (MW)	Reserve Margin %
1999	3,914	496	4,410	4,518	-	15.4%
2000	3,996	496	4,492	4,530	-	13.4%
2001	4,085	496	4,581	4,543	38	12.1%
2002	4,176	496	4,672	4,543	129	11.9%
2003	4,262	496	4,758	4,543	215	11.6%
2004	4,346	496	4,842	4,543	299	11.4%
2005	4,430	496	4,926	4,543	383	11.2%
2006	4,510	496	5,006	4,543	463	11.0%
2007	4,583	496	5,079	4,543	536	10.8%
2008	4,663	496	5,159	4,543	616	10.6%
2009	4,741	496	5,237	4,543	694	10.5%
2010	4,821	496	5,317	4,543	774	10.3%
2011	4,904	496	5,400	4,543	857	10.1%
2012	4,986	496	5,482	4,543	939	9.9%
2013	5,068	496	5,564	4,543	1,021	9.8%

The existing supply capacity shown in 1999 includes 80 megawatts of purchased and cogeneration capacity and the increases in the years 2000 and 2001 result from capital improvements planned for several existing generating units. The Supply Additions shown in the table represent 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. In the near future the Company will issue a Request For Proposals (RFP). The RFP will solicit offers from the market to provide capacity in the short and long term. If the resulting bids are attractive, the Company will at least meet its short and mid-term capacity needs through purchased power contracts. This solicitation will help establish the market price for purchased capacity and provide a valuable benchmark for developing a long term strategy. 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.

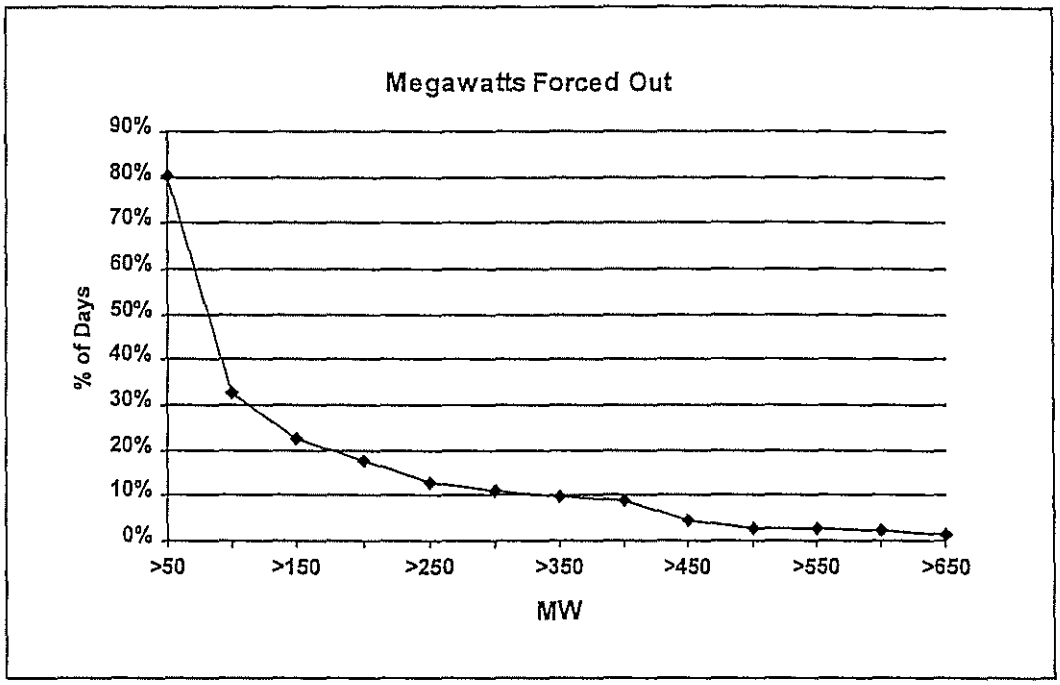
Reliability

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 496 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	196
Contingency Reserves	200
Weather Reserves	100
Total Reserve Margin	496

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 196 megawatts.

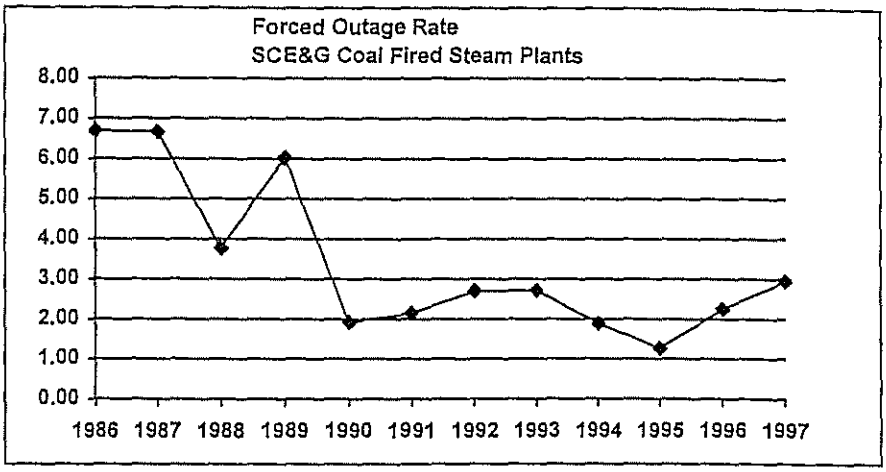
Contingency reserves are needed to balance the risk that some capacity may be forced out on any particular day because of mechanical failures, wet coal problems or



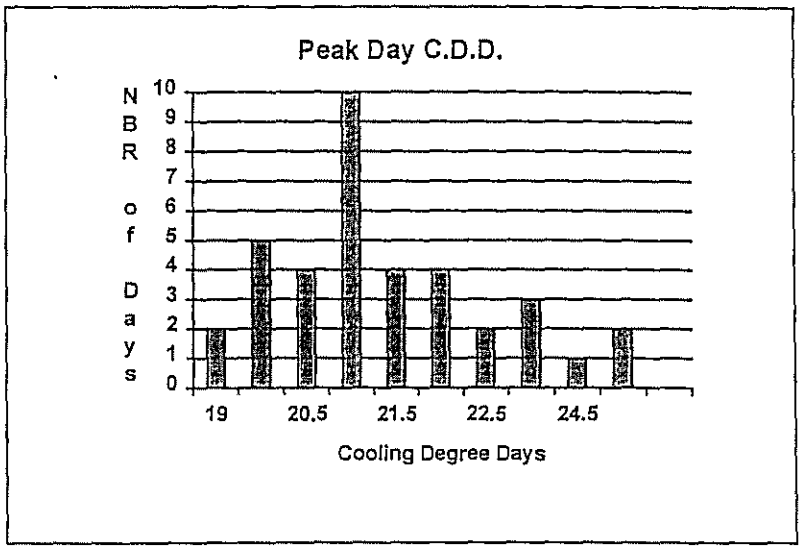
other environmental limitations. The chart below shows that on 80% of the days in 1996 there were at least 50 megawatts of capacity forced out and on 18% of the days, at least 200 megawatts were forced out. The average daily amount forced out was 130 megawatts. SCE&G has set the contingency component of its reserve margin at 200 megawatts because it is consistent with past operating practices and because it provides a little more reliability than the average.

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 weather reserve 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 496 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.