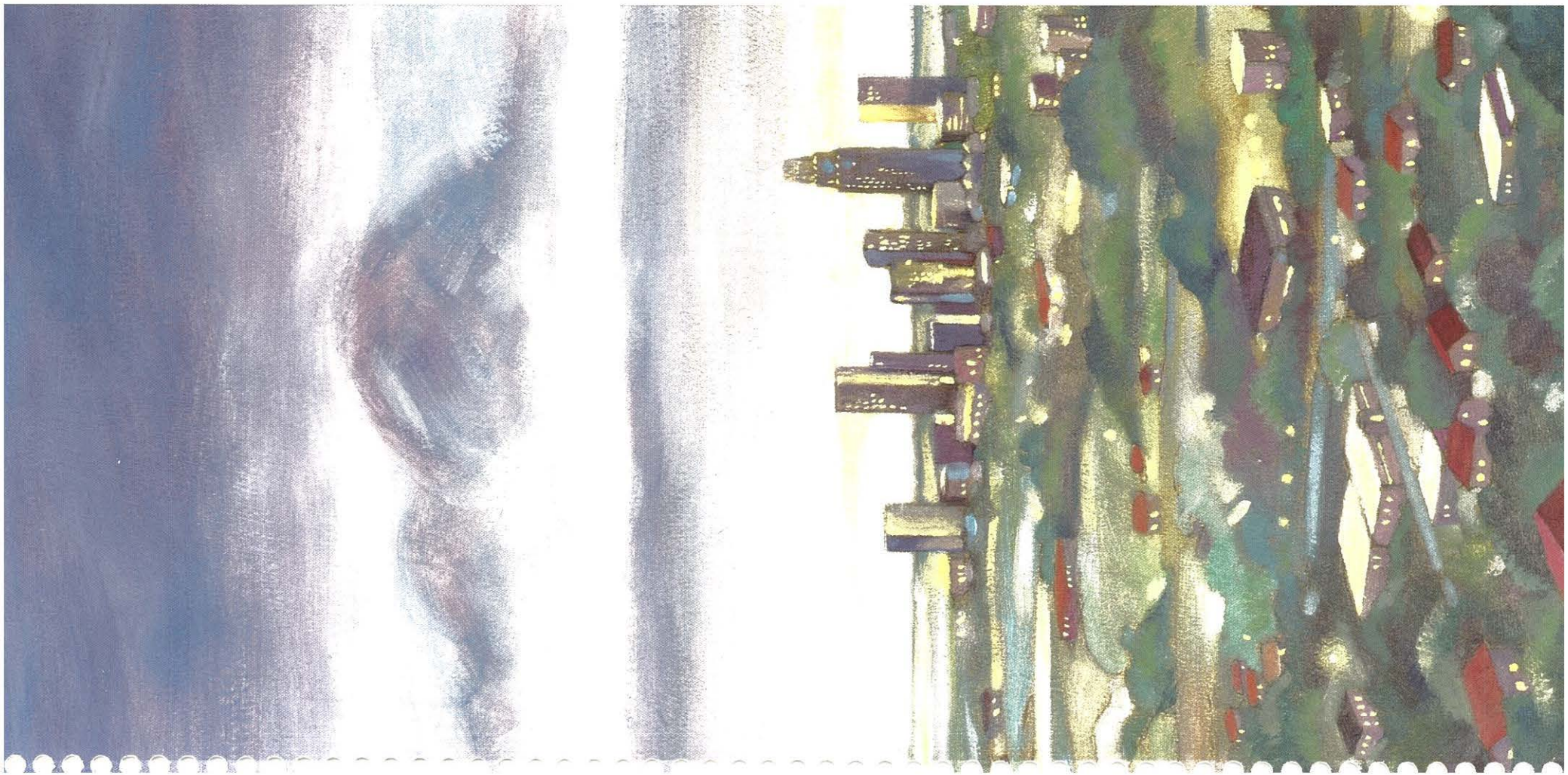
1997 Short-Term Action Plan

Integrated Resource Planning

DUKE POWER



About Duke Power

Headquartered in Charlotte, N.C., Duke Power was founded in 1904 and today is one of the nation's largest investor-owned electric utilities. The company serves approximately 1.8 million residential, general service and industrial customers in a 20,000 square-mile service area in North Carolina and South Carolina.

This 1997 Short-Term Action Plan is an update to the 1995 Integrated Resource Plan and contains a three-year view of the strategies and actions needed to implement the updated resource plan. This updated plan identifies the resources Duke will use to meet customers' electric power needs from 1997 through 2011. It reflects decisions made during the most recent planning cycle which occurred during the 1996 calendar year.

For further information or to request additional copies of this report, write to:

IRP Regulation - EC12S
Duke Power Company
Post Office Box 1006
Charlotte, North Carolina 28201-1006

CONTENTS

LIST OF FIGURES

SUMMARY

Donald H. Denton, Jr.
Sr. VP and Chief Planning Officer

"Duke Power stands at the threshold of a new era for electric utilities. Our industry has seen a dramatic upsurge in mergers, corporate restructuring, and fierce competition in the energy marketplace. As the industry moves to a more competitive business model, we expect the pace of change to quicken. This unprecedented rate of change is creating a high level of risk and uncertainty for utility planners.

One thing is clear. We must carefully manage the transition to this new environment to maintain the integrity of the electric system. The physical makeup of this complex energy delivery system will not permit an undisciplined approach to industry restructuring.

Traditionally, utilities have built most of the generation needed to serve the loads of their regulated service territories. In a competitive environment, utilities cannot assume that the customers within their geographic boundaries will remain exclusively theirs. At Duke, we support the move to a more competitive environment given a fair and appropriate resolution of the existing issues, and we continually adapt our planning practices to prepare for the new energy marketplace. We have refined our planning processes to specifically deal with the types of risks and uncertainties likely to be encountered. We built our 1995 Integrated Resource Plan upon the tenets of this new framework. The 1997 Short-Term Action Plan advances this planning approach and represents the best plan to take us into the future.

Recognizing the risks and uncertainties of the future, we have developed a resource acquisition strategy that allows us to meet near-term obligations in a manner that does not expose us to long-term financial burdens. To be effective, however, we must regularly review and adjust our resource plans. As the future unfolds, our resource plan will evolve to match the requirements of the changing energy marketplace."

A Changing Business for Electric Utilities

A year has passed since we presented our 1996 resource plan, and the structure of the electric utility industry continues to evolve. While the scope and degree of change remain uncertain, our commitment to meeting our customers' expectations and our competitors' challenges remains the same. The strategy for meeting this commitment, outlined in the 1996 plan, continues to provide the flexibility we need to meet our customers' energy needs reliably and at the lowest reasonable cost.

We must consider today's dynamic business environment as we develop our resource plan. Several key resource trends are emerging from this new environment:

- An expanding purchase power market is adding new products and opportunities for resource planning flexibility.
- Costs for new supply side resources continue to decline, making them more economically attractive.
- Emissions from new supply side resources continue to decrease, making them more environmentally attractive.
- Large customer incentives for energy efficiency options, offered in the past, are no longer cost-effective in today's competitive marketplace.

These trends along with other changes in the business environment mean that:

- Resource planning will continue to evolve with changes driven by the modified rules and regulations of a restructured industry.
- The marketplace is anticipated to drive the cost and price of new resources, relieving the need for regulation to predetermine the appropriate mix of supply side and demand side resources.

Risk and Opportunities

Although the risks inherent in the structure of our evolving electric utility industry continue to increase, the range of resource options available is also increasing. An electric utility's choice of resource options must reflect the market mandate to meet customer requirements at competitive prices and satisfy shareholder expectations. While competition presents many challenges, it also presents opportunities for growth and increased customer satisfaction. Customers expect high reliability and competitive prices, and a large number of them indicate they would switch suppliers for a small reduction in price—a risk and an opportunity for Duke Power.

We have responded to the increased demands from customers that competition brings by developing a plan that keeps our rates competitive and offers our customers innovative and economical ways to use electricity. Our resource plan represents an appropriate strategy for balancing the perspectives of our stakeholders—customers, shareholders, and the public—while remaining flexible enough to withstand a wide range of future uncertainties. This uncertainty compels utilities to place a significant premium on flexibility in planning and resource acquisition.

Resource Planning and Acquisition Issues

On May 16, 1995, Duke released its Purchased Power Request for Proposals and, on August 1, 1996, a contract was signed for the purchase of options for capacity to meet a part of future resource needs. With the expanding role of purchased power opportunities, Duke will continue to assess the purchased power market for capacity. Currently, the availability of flexible purchased power options at reasonable prices offers Duke the best opportunity to satisfy near-term resource needs.

Demand side resources must enhance the satisfaction of customers that face an increasing array of energy choices and compete with the costs of supply side resources. In addition, the standard for assessing the cost-effectiveness of demand side resources must meet the economic imperatives of this changing environment. Demand side resources should not increase the cost of electricity over competitive alternatives. Collectively, demand side resources should pass the rate impact measure test, which means they will not raise rates. Our demand side portfolio accomplishes this objective with a mix of energy efficiency, interruptible, load shift, and strategic sales options.

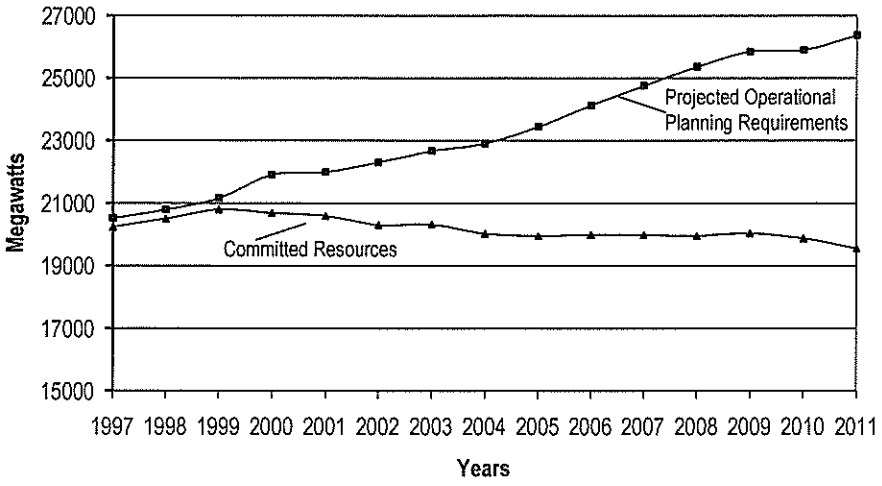
Resource Needs and Options

The load forecast establishes the underlying need for capacity and energy and is based on the premise that Duke's customers remain on the system for the long term. Marketing initiatives add to this forecast, establishing the total resources needed. The inherent uncertainty associated with load forecasting requires us to place a premium on flexibility for planning and resource acquisition to ensure that we will be able to serve all of our future customers.

As in past plans, Duke uses a 20 percent planning reserve margin as a baseline for reserves to meet such contingencies as forecast uncertainty, unit outages, and weather extremes in combination with firm commitments to long lead times required to site and build new generating units. With the emergence of a growing market for purchased power offering short lead time options and innovative products, we can manage commitments to reserves more effectively, allowing reductions to committed operational planning reserve margin levels. Therefore, over the foreseeable future, Duke will utilize a more flexible operational planning reserve margin of 17 percent, which will allow us to react more quickly to the changing needs and requirements of our customers in today's dynamic business environment. We will continue to examine both planning and operational planning reserve margins as the availability and reliability of short lead time resources and new technology evolve over time. We may adjust operational reserves up or down as warranted.

Figure 1 shows our existing and committed resources versus our operational planning requirements. Duke believes that its current strategy of providing this level of reserves through its mix of generating equipment, purchased power contracts, and interruptible programs is appropriate. The gap between the two lines represents the additional resources needed to meet projected customer needs and maintain the integrity of our electric system.

FIGURE 1. **Committed Resources vs. Projected Operational Planning Requirements**



We have several flexible alternatives for meeting this potential resource need:

- Purchase short- and/or long-term capacity from the active wholesale market.
- Acquire options to purchase short- and/or long-term capacity.
- Build, contract to build, or purchase the output of new peaking, intermediate, or base load generating capacity.
- Manage system growth in demand for electricity with energy efficiency, load shift, and/or interruptible demand side resource options.

Resource Acquisition Strategy

The resource plan required in today's environment is not a set of discretely scheduled actions, but rather a strategy that takes advantage of the economy and flexibility afforded by the ability to choose, from year to year, the most attractive combination of alternatives.

Our strategy for near-term additional resource needs will be to rely on the purchased power market to acquire the necessary capacity resources to meet load growth. The present operational planning reserve margin of 17 percent calls for the addition of approximately 300 megawatts of peaking or intermediate resources for the summer of 1997. The exact mix of peaking, intermediate, or even base load purchases will be dictated by the prevailing market prices for each resource type. Additional resource needs after 1997 include purchases of another 975 megawatts by the summer of the year 2000. After the year 2000, resource needs will be met by the most economical combination of:

- Purchased power contracts
- New generating facilities
- Additional demand side resource options

We make our resource decisions based on the evolving market conditions, especially with respect to the load forecast, the market for short-term capacity, and the changing regulatory environment. We recognize that these variables will be affected by the evolution to a more competitive business environment. In these increasingly competitive and uncertain times, Duke's resource plan represents a flexible strategy, which allows us to minimize capital requirements and resource commitments.

Changes Since the 1996 STAP

Our latest planning cycle shows little change from the 1996 Short-Term Action Plan (STAP). The following is a summary of the changes:

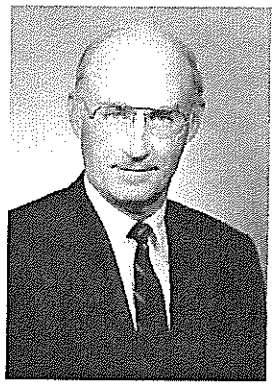
- Increases in load growth over the near term in the latest load forecast have resulted in additional resource needs beginning in the summer of 1997 compared to the summer of 1998 in last year's plan.
- Our reduced emphasis on higher cost incentive-based energy efficiency programs has decreased the resource potential from demand side programs.
- This year's plan uses a 17 percent operational planning reserve margin for additional resource requirements, whereas previous plans called for a 20 percent planning reserve margin.
- Through the year 2004, the total amount of additional peaking or intermediate resources for the 1997 STAP is very similar to the additional resources required in the 1996 STAP. After 2004, last year's plan called for additional base load capacity beginning in 2005, whereas only peaking or intermediate resources are identified throughout the balance of this year's plan.
- Natural gas prices are expected to continue their decline, making gas-fired generation resources increasingly more attractive for meeting future resource needs.

The Right Plan for Today

Our updated resource plan continues the resource strategy reported in the 1996 Short-Term Action Plan and represents the best strategy to carry us forward because it:

- Keeps electricity rates low
- Includes strategic sales efforts to increase revenues in markets where electricity has a significant economic and/or customer-competitive advantage
- Offers customers a variety of options for managing and reducing their energy costs
- Manages short-term financial risks by taking advantage of prevailing market prices for near-term capacity
- Allows us to remain flexible in meeting future resource needs

THE BUSINESS ENVIRONMENT



William R. Stimart, Vice President
Rates and Regulatory Affairs

"Duke Power's integrated resource planning process was designed in concert with the historical regulatory environment. In this environment, we have the obligation to provide service to all new and existing customers in our assigned service territory. In return, regulators authorize rates that ensure a fair return on our electric utility investments.

Duke recognizes that the regulatory environment is undergoing unprecedented change. There are several active initiatives around the country aimed at restructuring the electric utility industry. We support this move to a more competitive environment provided that all stakeholder issues are considered and fairly resolved. All customers must have access to the benefits of competition, and we must ensure that all suppliers are treated fairly so that no one supplier has a regulatory advantage over another. Some of the issues that must be addressed include: recovery of stranded investments, federal versus state jurisdiction over certain transactions, retail competition or customer choice, pricing, and obligation to serve.

Our resource plan and the short-term actions described in this report provide the flexibility we need to meet our customers' energy needs at competitive prices as the structure of the electric utility industry continues to evolve."

Purpose of This Document

This 1997 Short-Term Action Plan is an update to the 1996 Short-Term Action Plan and contains a three-year view of the strategies and actions that are needed to implement our resource plan in a changing electric utility industry.

The Electric Utility Industry

Competition at the wholesale level has been intense for the past several years. There is also competition in other markets, including the residential segment. In addition, energy efficient technologies and techniques that can significantly reduce energy consumption, improve consumer comfort, or boost process efficiency and control are increasingly available.

The emergence of this competitive environment is a result of the convergence of several economic, regulatory, and technological trends. With these prevailing trends, we must be prepared for the possibility of substantive change in the industry.

- Customers accustomed to choice in nonenergy markets are demanding more choices from their energy suppliers.
- In the U.S., state and federal regulators are examining and implementing a variety of active proposals on industry restructuring.
- Competition at the wholesale level is a reality as a result of legislative and regulatory actions.
- Technological improvements in gas turbine generators, declining natural gas prices, and other changes have reduced emissions and costs, providing new opportunities for competing generators.
- New electric end-use technologies are making electricity more competitive with other energy sources.

For several years now, we have been refining our planning process to adapt to a wide range of possible industry futures. Our focus continues to be maximum flexibility and minimum risk in our resource planning as we stand firm in our commitment to maintain competitive rates while offering our customers innovative and valuable ways to use electricity.

The Role of Resource Planning

In a restructured electric utility industry, the resource planning process must change. If generation were fully deregulated, the forces of the competitive marketplace would determine the type, amount, and timing of new generation development, removing it from the traditional planning process. We are currently developing and adapting the resource planning process to help prepare us for a changing electric utility industry.

We constantly refine our resource planning process to accommodate a wide range of roles and functions. One example of a refinement is the evaluation of purchased power proposals. Our 1995 requests for proposals for purchased power required us to develop a process for evaluating a variety of proposals for purchased power resources, each with different options, availability, and delivery schedules.

Near-Term Issues and Considerations

Supply Side Issues

On the supply side, the key issue in the near term is the evaluation and negotiation of purchased power contracts and options. Current projections about the price and availability of purchase options are favorable, but actual prices, terms, and conditions are subject to changing market conditions. Equally important is the ability to secure transmission rights to bring the capacity and energy into the Duke system. Without appropriate transmission reservations, the reliability of power purchased via these contracts is less certain.

Demand Side Issues

On the demand side, there are two key issues:

- Cost effectiveness of the demand side portfolio while offering products and services that meet the needs of the competitive marketplace.
- The predictability and stability of customer loads for the long term. In a wholesale and/or retail competition environment, load forecasting becomes less certain if customers can choose their energy providers.

RESOURCE NEEDS

Emmy Lou Burchette, Vice President Marketing

"In a competitive world, only those companies that supply customers with competitively priced products and services will survive. Duke Power will prosper in the increasingly competitive energy marketplace by continuing to offer a wide variety of energy products and services that meet a broad range of customer needs and expectations.

Today's competitive pressures demand that we streamline operations, focus on customer needs, and build the brand recognition that will position us to thrive in the competitive marketplace. As electricity markets become more competitive and price-sensitive, we cannot establish objectives that disregard price impacts. Research shows that customers expect high reliability and competitive prices, with a large number of customers indicating they would switch suppliers for a small reduction in price.

Growth ultimately determines a company's viability and shareholder value. In today's increasingly competitive marketplace, growth can only be achieved through customer satisfaction and strategic sales. We are committed to developing programs that innovatively address these issues and to focusing our efforts in areas where we have the most potential for growth."

Anticipating Energy Needs

The Load Forecast

To determine customer energy needs, we prepare a load forecast of energy sales and peak demand using econometric and end-use analytical methodologies. The current forecast assumes that Duke will meet the energy needs of all new and existing customers within our service territory. This requirement is changing as a restructured industry evolves. Currently, certain wholesale customers have the option of obtaining all or a portion of their future energy needs from suppliers other than Duke Power.

As part of the joint ownership arrangement for the Catawba Nuclear Station, two owners, North Carolina Electric Membership Cooperative (NCEMC) and Saluda River Electric Cooperative (SR), Incorporated, have given notice that they will be solely responsible for their total load requirements beginning January 1, 2001, and January 1, 2002, respectively. As a result, their supplemental load requirements above their ownership portions of the Catawba Nuclear Station are not reflected in the forecast (Figure 2) commencing at the specified years. Recent notifications to contract for services outside of Duke received by the wholesale customers Seneca and Greenwood have not been incorporated into this year's plan.

Without the removal of NCEMC's and SR's supplemental loads beginning in 2001 and 2002 respectively, the forecast predicts an annual growth in summer peak demand of 2.3 percent—up 0.1 percent from the previous forecast for the same period. Winter peaks are forecasted to grow 1.8 percent annually, up 0.1 percent from the previous forecast. Average annual territorial energy is forecasted to grow 2.1 percent annually, up 0.2 percent from the previous forecast.

The current forecast (shown in Figure 2 with the removal of NCEMC's and SR's supplemental loads beginning in 2001 and 2002 respectively) predicts an annual growth in summer peak demand of 2.0 percent. Winter peaks are forecasted to grow 1.4 percent annually, and average annual territorial energy is forecasted to grow 2.0 percent annually.

FIGURE 2: Duke Service Area Peak Demand and Energy Forecasts

Year	Summer (MW)[a]	Winter (MW)[b]	Territorial Energy (GWH)[c]
1996	16,592	14,904	87,482
1997	17,368	15,259	89,880
1998	17,597	15,656	91,560
1999	17,911	16,099	94,029
2000	18,544	16,340	96,025
2001	18,619	16,377	97,792
2002	18,883	16,391	98,678
2003	19,188	16,751	100,507
2004	19,389	17,216	102,376
2005	19,846	17,430	104,422
2006	20,428	17,740	106,269
2007	20,963	18,134	108,085
2008	21,474	18,323	110,031
2009	21,884	18,937	111,897
2010	21,920	19,217	113,772
2011	22,318	19,519	115,793

a. Summer peak demand is for the calendar years indicated and includes the demand of the other joint owners of the Catawba Nuclear Station (CNS). Beginning on January 1, 2001, and January 1, 2002, total demand above NCEMC and SR retained ownership, respectively, is not included.

b. Winter peak demand is for the specified years beginning in January and includes the demand of the other joint owners of the CNS. Beginning on January 1, 2001, and January 1, 2002, total demand above NCEMC and SR retained ownership, respectively, is not included.

c. Territorial energy is the total projected energy needs of the Duke service area, including losses and unbilled sales, and the energy requirements of the other joint owners of the CNS. Beginning on January 1, 2001, and January 1, 2002, total energy above NCEMC and SR retained ownership, respectively, is not included.

Intense Competition Drives Marketing Initiatives

In the coming years, competition will intensify. In the past, our most obvious competition has come from natural gas suppliers, but we have also faced competition for customers from municipalities and rural electric co-operatives that supply electricity. Additional competition is now coming from other electric suppliers across the United States. Already, certain wholesale customers can choose suppliers, retail competition legislation is being scrutinized, and large industrial accounts are relocating their facilities based on the cost of electricity. Customers in all market segments have become more sophisticated about their energy options, more vocal about their expectations of service, and more adamant about the prices they are willing to pay. While deregulation brings many challenges, it also opens doors to opportunities for growth and increased customer satisfaction. Our goal is to retain a competitive edge through our solid reputation, cost-effective operations, power quality that protects sophisticated computers and equipment, and service that is second to none. One way to meet this goal is by offering customer options that promote efficient electric technologies and provide solutions to customers' energy, manufacturing, and quality service needs.

Electricity offers some unique opportunities to reduce environmental impacts, augment process control, improve quality, increase comfort, and lower customer energy costs. Today's demand side options must enhance the satisfaction of customers who face an increasing array of energy choices, and their costs must agree with the economic imperatives of a changing electric utility industry. Demand side resources should not increase the cost of electricity over alternative resources. Collectively, demand side resources should pass the rate impact measure (RIM) test, which means they will not raise rates. We will aggressively pursue markets for electricity where we can meet customer needs and more effectively utilize our existing generation system. By encouraging energy use throughout the year, we can spread fixed costs over more kWh, which benefits all customers.

Continue Refining Our Demand Side Portfolio

In keeping with the philosophy initiated in the 1995 and 1996 plans, we are continuing to modify our demand side portfolio to eliminate or scale back those programs that raise prices for customers as a whole even though a few individual programs may not pass the RIM test. It is our objective for the demand side portfolio to pass the RIM test. In response to the changing needs of customers and the increasingly competitive utility industry, we will concentrate on educating customers about the advantages of managing their energy use and promoting new efficient electric technologies to give customers more energy choices.

We can best serve our customers by offering them a demand side portfolio that uses efficient electric technologies and provides solutions to customer energy, manufacturing, or quality service needs. Some customer needs are best met by the addition of energy efficiency improvements; other customer needs are best met by the addition of efficient electric technologies. To provide the best solutions for our customers, we work to design a balanced portfolio that encompasses strategic sales, energy efficiency, interruptible, and load shift options.

Strategic Sales. These options encourage the installation of efficient electric equipment by targeting customers who would have selected nonelectric equipment if the option were not offered. Strategic sales options improve the utilization of our generating system and provide additional sales. These options increase the need for resources since they add to system demand and/or energy requirements, but they are cost-effective when the revenues gained are greater than the cost of the options plus the cost of acquiring additional capacity and generating additional energy.

While they may raise participating customers' *electric* bills through increased kilowatt-hour sales, these options can lower their total *energy* bills. Additionally, strategic sales options can enhance customer satisfaction by improving efficiency and comfort, reducing operating costs, and increasing productivity. They contribute to a downward pressure on rates for all customers. The following strategic sales options are included in our current plan:

- Electrotechnology strategy
- High-efficiency food service appliances
- Nonresidential space heating
- Outdoor lighting[1]

Energy Efficiency. These options encourage the installation of efficient electric equipment by targeting customers who would have selected less efficient electric equipment if the option were not offered. Energy efficiency options lower participating customers' electric bills by reducing the energy needed to power their homes and businesses. These options defer our need for new supply side resources and eliminate energy production costs that would have been incurred to supply power to less efficient equipment. Because these options promote efficient equipment that uses less energy than standard equipment, they reduce our kilowatt-hour sales.

While these options give participating customers an opportunity to lower their electric bills, energy efficiency options, traditionally promoted through the use of large customer incentives, could result in higher rates for all customers. To meet customer needs and remain a competitive energy supplier, we have modified some of our previously proposed energy efficiency options to decrease their costs and rate impacts. These modifications shift the emphasis from paying large customer incentives to educating customers. The following energy efficiency options are included in our current plan:

- High-efficiency compressed air systems
- High-efficiency motor systems and replacement

Energy Efficiency and Strategic Sales. While both energy efficiency and strategic sales options encourage the installation of efficient electric equipment, the markets they target are different. We combined some energy efficiency and strategic sales programs since they will influence customers in both markets. Because the additional revenues gained from strategic sales help offset the revenues lost to energy efficiency programs,

1. This program is under review. All capacity and energy impacts are already included in the forecast.

using a combination of these programs helps keep rates low. A balanced portfolio includes both strategic sales and energy efficiency to meet customer needs and help keep rates competitive. The following combined energy efficiency and strategic sales programs are included in our current plan:

- New residential housing program
- Existing residential housing program and nonresidential heat pump program

Interruptible. These options reduce our system peak demand by temporarily interrupting all or part of a participating customer's electrical service. Participating customers receive bill credits that lower their electric bills. The following interruptible options are included in our current plan:

- Interruptible power service rider
- Residential load control rider—air conditioning
- Residential load control rider—water heating
- Standby generator control rider

Load Shift. These options reduce our system peak demand by shifting customer energy use to off-peak times. Customers benefit from lower electric bills and lower generating costs. The following load shift option is the only one included in our current plan:

- Residential water heating—controlled/submetered

Off-System Power Sales

One of our newest marketing initiatives is to market power outside of our existing system. This marketing activity takes advantage of recently approved market-based rates for off-system sales. Because we will only sell power when we do not need it to meet our daily and hourly system load requirements, these efforts will not impact system resource needs.

Determining Additional Resources

Existing Resources

In 1997 Duke Power's existing resources, including Nantahala Power & Light, consist of 19,319 megawatts of system net capability. Municipal and rural electric cooperative organizations in North and South Carolina own 87.5 percent of Catawba Nuclear Station. These organizations are located in our service area and are partial-requirement customers. For planning purposes, their portion of Catawba is included in our generating capacity since their load requirements are also included in our plan.

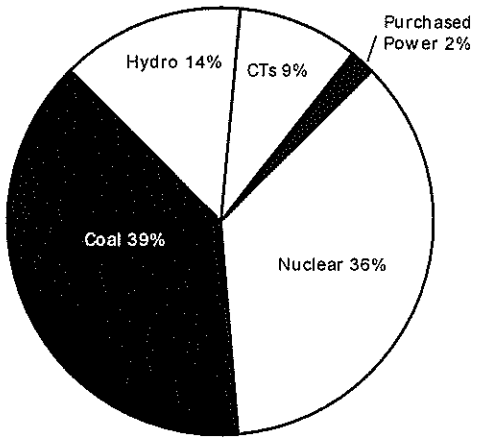
We recently sold several small hydro facilities, totaling approximately 15 megawatts of capacity or less than 0.1 percent of total generating capacity. The sale of these facilities does not have a material effect on our resource plan.

As noted in Figure 10, "Load, Capacity, and Reserves Projections," on page 30, the sale of 400 megawatts of capacity to Carolina Power and Light will end on June 30, 1999, freeing up this capacity for use on our system. Because we only consider capacity available on June 1 to meet peak requirements, these megawatts are not reflected in our existing capacity for 1999. However, the capacity will likely be

available to meet summer peak demand since the summer peak normally occurs after June.

As shown in Figure 3, our system net capability consists predominantly of coal and nuclear base load units; combustion turbines (CTs) and hydro peaking units supply the remaining bulk of our capacity.

FIGURE 3. **1997 System Net Capability**



Net Resource Needs

As in past plans, Duke uses a 20 percent planning reserve margin as a baseline for reserves to meet such contingencies as forecast uncertainty, unit outages, and weather extremes in combination with firm commitments to long lead times required to site and build new generating units. With the emergence of a growing market for purchased power offering short lead time options and innovative products, we can manage commitments to reserves more effectively allowing reductions to committed operational planning reserve margin levels. In this year's plan, Duke will utilize a more flexible operational planning reserve margin of 17 percent, which will allow us to react more quickly to the changing needs and requirements of our customers in today's dynamic business environment. We will continue to examine both planning and operational planning reserve margins as availability and reliability of short lead time resources and new technology evolve over time. We may adjust operational reserves up or down as warranted.

Figure 4 shows our existing and committed resources versus our operational planning requirements. Duke believes that its current strategy of providing this level of reserves through its mix of generating equipment, purchased power contracts, and interruptible programs is appropriate. The gap between the two lines represents the additional resources needed to meet projected customer needs and maintain the integrity of our electric system. The reduction in committed resources reflected in Figure 4 represents projected retirements of units. The actual dates of these retirements will be determined in future analyses.

FIGURE 4. **Committed Resources vs. Projected Operational Planning Requirements**

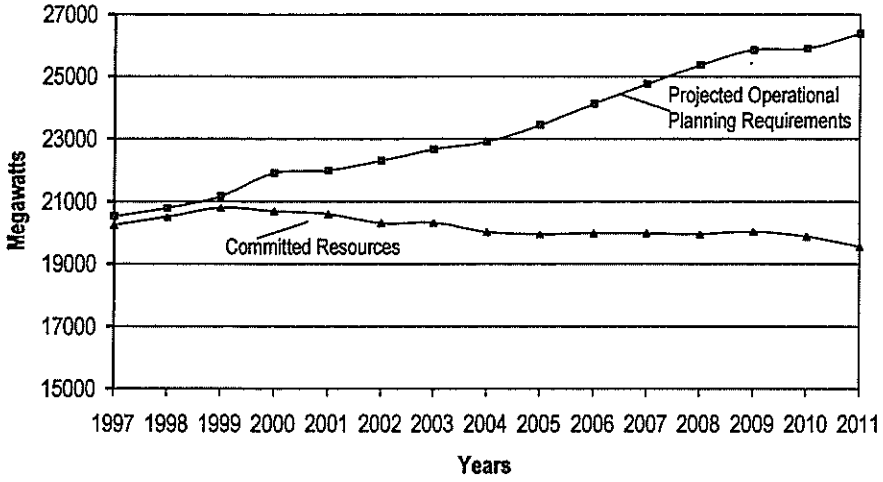


Figure 5 defines the type and magnitude of the future supply side resources needed to meet forecasted requirements. In contrast to our existing system, our projected new requirements will be for peaking and intermediate resources.

FIGURE 5: Projected New Supply Side Resource Requirements (1997-2011)

Peaking/Intermediate (MW)	Base Load (MW)	Total (MW)
6,935	0	6,935

RESOURCE ACQUISITION STRATEGY

William F. Reinke, Vice President
System Marketing, Planning, and Operating

"In a traditional electric utility world, Duke Power would forecast system capacity and energy requirements then design and build generation and implement demand side programs to meet those needs. Today's business environment will not support this traditional approach, especially in the generation arena. We do not plan to commit today to build significant amounts of generation in a business environment where the rules for marketing and pricing this power will change.

In this uncertain and higher risk environment, successful companies will maintain a very flexible resource acquisition strategy. To meet near-term system load requirements, we will purchase short-term capacity or acquire options to purchase capacity. We may also negotiate long-term purchases based on this capacity's availability, pricing, and terms in the evolving generation market. We will carefully analyze all resource options before we decide to acquire capacity for long-term system loads.

We began implementing this strategy in 1995 when we issued Requests for Proposals for short- and long-term purchases. As anticipated, we were able to negotiate contracts with favorable terms and conditions from the submitted proposals. This strategy enables us to meet our obligations until the turn of the century. Beyond that, we will make capacity decisions based on how the generation market develops over the next few years and the future needs we anticipate."

Resource Options

Construct New Generating Units

We will maintain the option to construct new generating facilities. Our long-standing history of building low-cost, highly efficient generating facilities positions us to confidently pursue this option if needed. When a decision is required, we will determine whether to build or purchase after analyzing each resource option's availability and costs.

Purchase Short-Term Capacity

With the emergence of a robust wholesale market, short-term capacity purchases have become a major factor in resource planning. Significant amounts of short-term capacity should be available over the next few years at relatively attractive prices. These temporary purchases allow us to maintain a flexible position over the next few years.

Purchase Long-Term Capacity

To cope with the uncertainty associated with the wholesale energy market, we will consider purchasing long-term capacity from other utilities, power marketers and brokers, or other non-utility generators. The timing, amount, and duration of any purchases are a function of the proposals we receive at the time a decision is required.

Offer Demand Side Customer Options

Demand side resources have been included in past resource plans; however, significant changes both in planning requirements and in the cost-effectiveness of some of these programs have diminished their appeal. Because the realities of the competitive marketplace require that our demand side resources not raise electric rates, our demand side portfolio should pass the rate impact measure (RIM) test.

Figure 6 shows the benefit/cost test results for all options in the demand side portfolio. Because our objective is for the demand side portfolio to pass the rate impact measure (RIM) test, we show RIM results for all options and for the total portfolio. We use the utility cost and total resource cost tests to evaluate the cost effectiveness of non-strategic sales options; these results are only shown for those individual non-strategic sales options in the portfolio

FIGURE 6. Benefit/Cost Test Results for Demand Side Portfolio

Demand Side Options	Rate Impact Measure	Utility Cost	Total Resource Cost
Energy Efficiency			
High-efficiency compressed air systems[a]	0.67	27.77	4.20
High-efficiency motor systems and replacement[a]	0.67	32.30	4.97
Interruptible			
Interruptible power service rider[b]	n/a[c]	n/a	n/a
Residential load control rider—air conditioning	1.53	1.53	4.59
Residential load control rider—water heating[d]	n/a	n/a	n/a
Standby generator control rider	1.11	1.22	3.88
Load Shift			
Residential water heating—controlled/submetered[e]	n/a	n/a	n/a
Strategic Sales[f]			
Electrotechnology strategy	1.47	n/a	n/a
High-efficiency food service appliances	1.21	n/a	n/a
Nonresidential space heating	1.21	n/a	n/a
Energy Efficiency and Strategic Sales			
New residential housing program	1.34	n/a	n/a
Existing residential housing program and nonresidential heat pump program	1.40	n/a	n/a
Totals by Option Type			
Strategic sales	1.42	n/a	n/a
Energy efficiency, interruptible, and load shift	0.99	n/a	n/a
Demand Side Portfolio Total	**1.25**	**n/a**	**n/a**

a. Education on energy saving methods serves the strategic purpose of helping our large energy customers manage their energy costs.

b. No customer additions were analyzed for cost-effectiveness.

c. n/a = not applicable

d. This existing program is closed to new installations.

e. This existing program is not currently marketed, and program attrition is anticipated.

f. RIM is the only test performed for strategic sales options. Strategic sales options that do not pass RIM are not implemented.

We continually evaluate demand side alternatives. In the near term, we have included all the options listed in Figure 6 in our resource portfolio. The market penetration, costs, and other values for this set of options may differ from the previous analysis. For each option's current demand and energy impacts and costs, see Figures 11-16 on pages 32-37.

Resource Strategy

Maintaining Flexibility and Minimizing Risk

After considering the cost and availability of the options previously discussed in light of our expected load requirements, the most appropriate strategy is one that maintains as much flexibility as possible. We have studied the marketplace and have determined that there is an adequate amount of capacity at reasonable prices to satisfy our near-term needs through the purchased power market. We will meet near-term forecasted load by relying on a combination of short- and/or long-term capacity purchases and options to purchase capacity—a strategy that benefits Duke and its customers.

Duke's Updated Resource Plan

Figure 7 shows the supply side additions and demand side resources represented in the updated resource plan.

FIGURE 7: Updated Resource Plan

Year	Supply Side[a]		Demand Side[b] (MW)
	Peaking/Intermediate (MW)	Base Load (MW)	
1997	300	0	985
1998	250[c]	0	927
1999	75	0	842
2000	900	0	733
2001	150	0	637
2002	600[d]	0	603
2003	375	0	617
2004	532	0	631
2005	600	0	641
2006	682	0	677
2007	600	0	669
2008	600	0	731
2009	457	0	814
2010	150	0	930
2011	914	0	1,037

a. This capacity may be purchased, contracted, or built by Duke.

b. Demand side capacity is shown in cumulative form and is the net of strategic sales and other demand side components. Strategic sales and energy efficiency programs are in maximum net dependable capacity (MNDC), and interruptible programs are represented on their summer peak impact. MNDC represents the equivalent capacity for a demand side resource.

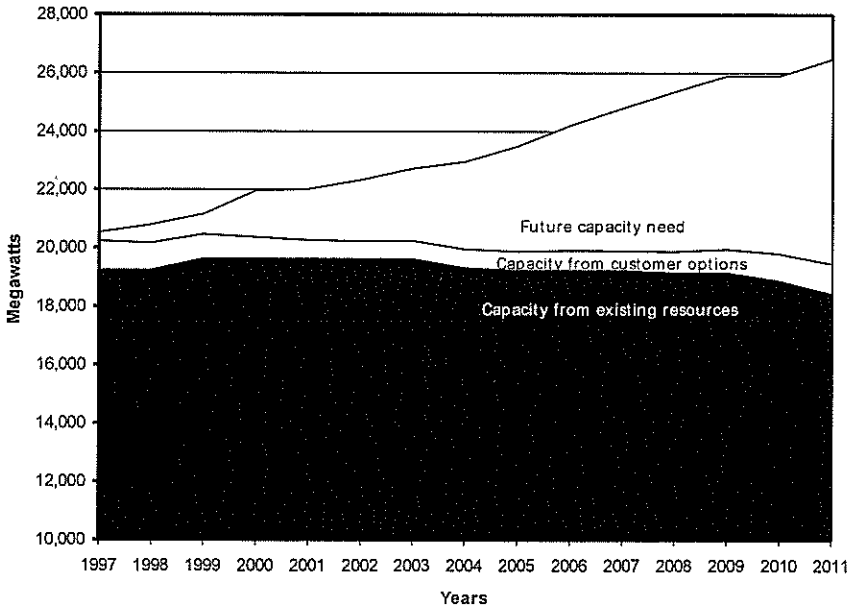
c. Four-year PECO summer purchase option (1998-2001).

d. PECO purchase option terminates in 2001. Part of the capacity shown will replace this option.

Figure 8 shows how we plan to meet these capacity needs. Customer options, which consist of existing and new demand side resources, are projected to provide resources totalling 1,037 megawatts. Over the planning period, we project a need for 6,935 megawatts of peaking or intermediate capacity, which may be met by one or more of the following resource alternatives:

- Purchase short- and/or long-term capacity from the active wholesale market.
- Acquire options to purchase short- and/or long-term capacity.
- Build, contract to build, or purchase the output of new peaking, intermediate, or base load generating capacity.
- Manage system growth in demand for electricity with energy efficiency, load shift, and/or interruptible demand side resource options.

FIGURE 8. **Breakdown of Resource Options to Meet Projected Capacity Needs**



SHORT-TERM ACTIONS

Competition is reshaping our business. The uncertainty brought about by the changing utility industry requires us to focus on short-term resources that satisfy immediate customer energy needs while assessing all potential options for long-term resources to meet future needs.

This section describes the actions to be taken over the next three years to implement our updated resource plan.

Alternatives to Meet Capacity Needs

By 1997, we have projected a 300-megawatt resource need. We intend to acquire this next increment of resources through purchased power contracts. The additional resources required to meet our needs beyond 1997 will be met by some combination of:

- Purchased power contracts and/or options
- Construction of a generating facility
- Additional demand side resource options

Supply Side Actions

Comply With Clean Air Act Amendments

The 1990 Clean Air Act Amendments require electric utilities to incorporate a two-phase reduction in the aggregate annual emissions of sulfur dioxide and nitrogen oxide by the year 2000. Duke currently meets all Phase I requirements through historical initiatives, such as:

- Burning low-sulfur coal in our fossil plants
- Operating efficiently
- Using nuclear generation

A detailed compliance plan for Phase II requirements has been developed. The strategy incorporates developments in the emissions allowance market, future regulatory and legislative actions, and advances in clean air technology. All options within the preliminary strategy provide for full compliance with Phase II requirements by the year 2000.

Preserve, Maintain, and Improve Existing Facilities

We are working on the following in an effort to preserve, maintain, and improve our existing generation facilities:

- Replace nuclear steam generators at three units affected by stress corrosion cracking. The Catawba Unit 1 steam generator replacement was completed in 1996.
- Renew licenses of hydroelectric stations.
- Continue lead role in nuclear industry relicensing studies.
- Carry out a preservation and maintenance program for some existing hydroelectric stations.

Purchased Power Actions

The requests for proposals issued in 1995 yielded numerous short- and long-term proposals. As a result, we purchased options for 250 megawatts of capacity for the summers of 1998 through 2001 from PECO Energy. Decisions on whether to exercise these options will be made in February of each year.

Demand Side Actions

Several general demand side actions are planned as a result of the most recent planning cycle. The most significant ones are highlighted below:

Focus on Education

To help maintain competitive electricity rates, we are shifting our energy efficiency focus. We've shifted from an emphasis on large, high-cost incentive-based energy efficiency options to less costly education-based options.

Implement Demand Side Competitive Bidding

Duke assessed the potential benefits of paying a third-party or customer to design and/or market demand side resource options. A request for proposals was issued, and 16 bidders responded. We entered into contracts with four of the bidders for a total projected resource of 4.7 megawatts and a projected 10-year (1994-2003) total cost of $7,008,000.

To date, the four demand side bidding contracts have resulted in the installation of slightly more than 700 kilowatts of summer peak reduction. Additional installations are projected to achieve a total summer kilowatt reduction of approximately 2,700 kilowatts by the end of the first quarter of 1997. Total incentive payments over the life of the contracts will total $3 million. In addition, this project has provided important insights into the practicality and effectiveness of third-party demand side measure installations. Among these insights are:

- Bringing projects to successful completion is difficult when balancing the on-going requirements of measurement and verification against customer need for operational flexibility. Even significant monetary incentive and substantial improvement in project payback periods are often not sufficient to overcome this hurdle.
- Acquiring demand side resources via competitive bidding is expensive when compared to the current cost of capacity additions.
- The demand side bidding process and the solicitation of participants by independent contractors tends to confuse the utility-customer relationship. Customers frequently question the business relationship between the contractor and the host utility.

Implement Demand Side Resources

Figure 9 contains a three-year program implementation schedule for our demand side portfolio. The programs are separated by the type of program and include a summary of demand, energy, and cost impacts.

FIGURE 9: Demand Side Resource Projections [a]

Demand Side Options	Demand [MW] [b]			Energy [MWh] [c]			Direct Costs [$000s] [d]		
	1997	1998	1999	1997	1998	1999	1997	1998	1999
Energy Efficiency									
HE compressed air systems	(0.96)	(2.88)	(4.81)	(5,559)	(16,677)	(27,794)	150	156	162
HE motor systems and replacement	(1.76)	(4.80)	(7.36)	(11,112)	(30,305)	(46,468)	177	183	190
Energy Efficiency Total	**(2.72)**	**(7.68)**	**(12.17)**	**(16,671)**	**(46,982)**	**(74,262)**	**327**	**339**	**352**
Interruptible									
Residential load control rider–A/C	(431.15)	(432.65)	(431.78)	0	0	0	9,310	9,340	9,347
Residential load control rider–water heating	(14.80)	(13.32)	(11.98)	0	0	0	1,500	1,418	1,288
Interruptible power service rider	(607.62)	(607.62)	(607.62)	0	0	0	25,351	25,355	25,360
Standby generator control rider	(51.66)	(56.74)	(61.82)	0	0	0	1,810	1,980	2,150
Interruptible Total	**(1,105.22)**	**(1,110.32)**	**(1,113.20)**	**0**	**0**	**0**	**37,971**	**38,093**	**38,144**
Load Shift									
Residential water heating–controlled/ submetered	0.47	0.47	0.47	0	0	0	0	0	0
Load Shift Total	**0.47**	**0.47**	**0.47**	**0**	**0**	**0**	**0**	**0**	**0**
Strategic Sales									
Electrotechnology strategy	24.72	90.99	182.40	130,912	488,278	983,498	3,754	3,885	4,033
HE food service appliances	0.96	3.06	5.46	10,909	34,737	62,010	2,719	2,813	2,911
Nonresidential space heating	0	0	0	1,206	4,633	10,279	2,417	2,502	2,597
Strategic Sales Total	**25.68**	**94.04**	**187.86**	**143,028**	**527,648**	**1,055,787**	**8,890**	**9,200**	**9,541**
Energy Efficiency and Strategic Sales									
New residential housing program	(1.04)	(3.17)	(5.41)	6,644	20,497	35,429	8,402	7,407	7,075
Existing residential housing program and nonresidential heat pump program	(1.48)	(4.49)	(7.56)	11,621	35,080	58,795	10,850	11,217	10,326
Energy Efficiency and Strategic Sales Total	**(2.52)**	**(7.66)**	**(12.97)**	**18,266**	**55,577**	**94,224**	**19,251**	**18,624**	**17,400**
Demand Side Resource Total	**(1,084.31)**	**(1,031.15)**	**(950.01)**	**144,623**	**536,243**	**1,075,749**	**66,439**	**66,256**	**65,437**

a. All values in parentheses are reductions. Annual energy impacts for interruptible options depend on actual number of times programs are used.

b. These megawatts represent diversified customer load at Duke's system peak including transmission and distribution line losses. Megawatt values for each year are based on total program accomplishments to date.

c. These megawatt-hours represent annual values based on total program accomplishments to date, including transmission and distribution line losses.

d. Direct costs will be incurred in each of the subject years shown.

APPENDIX

This section includes the following information:

- Load, capacity, and reserves table
- Demand side resource projections
- Demand side evaluation results

LOAD, CAPACITY, AND RESERVES

Figure 10 shows the detail of the resource integration results for the 15-year planning horizon.

FIGURE 10: Load, Capacity, and Reserves Projections (Part 1 of 2)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Duke System Forecast Peak	17,368	17,597	17,911	18,544	18,619	18,883	19,188	19,389	19,846	20,428	20,963	21,474	21,884	21,920	22,318
NP&L System Forecast Peak [a]	171	178	184	190	196	201	207	214	222	227	232	236	244	256	265
Coincident Duke/NP&L Peak [b]	17,536	17,768	18,087	18,721	18,795	19,064	19,374	19,579	20,040	20,625	21,164	21,680	22,097	22,138	22,541
Cumulative System Generating Capacity															
Duke Capacity	19,219	19,219	19,219	19,219	19,219	19,219	19,219	19,219	18,916	18,828	18,828	18,828	18,743	18,743	18,467
NP&L Capacity [c]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Annual Capacity Adjustments															
PMP Returns	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scheduled Additions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capacity Retirements [d]	0	0	0	0	0	0	0	(303)	(88)	0	0	(85)	0	(276)	(438)
Cumulative Generating Capacity	19,319	19,319	19,319	19,319	19,319	19,319	19,319	19,016	18,928	18,928	18,928	18,843	18,843	18,567	18,129
Cumulative Purchases [e]	329	652	634	634	634	384	384	384	384	384	384	384	384	384	384
Cumulative Sales [f]	(400)	(400)	(400)	0	0	0	0	0	0	0	0	0	0	0	0
Future Resource Additions [g]															
Peaking/Intermediate	300	0	75	900	150	600	375	532	600	682	600	600	457	150	914
Base Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Production Capacity	19,548	19,871	19,928	21,228	21,378	21,728	22,103	22,332	22,844	23,526	24,126	24,641	25,098	24,972	25,448
Generating Reserves (MW)	2,012	2,103	1,841	2,507	2,583	2,664	2,729	2,753	2,804	2,901	2,962	2,961	3,001	2,834	2,907
% Reserve Margin [h]	11.5	11.8	10.2	13.4	13.7	14.0	14.1	14.1	14.0	14.1	14.0	13.7	13.6	12.8	12.9
% Capacity Margin [i]	10.3	10.6	9.2	11.8	12.1	12.3	12.3	12.3	12.3	12.3	12.3	12.0	12.0	11.3	11.4

FIGURE 10: Load, Capacity, and Reserves Projections (Part 2 of 2)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cumulative Demand Side Capacity[j]	985	927	842	733	637	603	617	631	641	677	669	731	814	930	1,037
Cumulative Equivalent Capacity	20,533	20,798	20,770	21,961	22,015	22,331	22,720	22,963	23,485	24,203	24,795	25,372	25,912	25,902	26,485
Equivalent Reserves (MW)	2,997	3,030	2,683	3,240	3,220	3,267	3,346	3,384	3,445	3,578	3,631	3,692	3,815	3,764	3,944
% Reserve Margin	17.1	17.1	14.8[k]	17.3	17.1	17.1	17.3	17.3	17.2	17.3	17.2	17.0	17.3	17.0	17.5
% Capacity Margin	14.6	14.6	12.9	14.8	14.6	14.6	14.7	14.7	14.7	14.8	14.6	14.6	14.7	14.5	14.9

a. The Duke Power Company and Nantahala Power & Light (NP&L) systems are interconnected. For annual tables, this line shows the NP&L summer peak, not the annual system forecast peak.

b. Planning is for coincident peak demand for the Duke and NP&L systems. The forecast peaks for the individual systems are shown for reference only.

c. NP&L hydro capacity

d. The 303 MW capacity retirement in 2004 represents a decision date for the retirement of CTs at Buck, Lee, and Riverbend. The 88 MW capacity retirement in 2005 represents the retirement decision date for CTs at Buzzard Roost. The 85 MW capacity retirement in 2008 represents the retirement decision date for CTs at Dan River. The 276 MW capacity retirement in 2010 represents the retirement decision date for Dan River 1, 2, and 3. The 438 MW capacity retirement in 2011 represents the retirement decision date for Allen 1 and 2 and remaining CTs at Buzzard Roost.

e. Purchases have several components. All years include the following: purchases of 238 MW from Southeastern Power Administration (SEPA) and, 73 MW from Cogeneration (COGEN) and small power producers (SPP). Purchase of 250 MW from PECO is shown beginning in June 1998 through September 2001. Purchase of 18 MW from Santee Cooper is shown beginning in December 1995 through October 1998. Purchase of 73 MW from Cherokee Cogen is shown beginning in November 1997 through November 2012.

f. Represents 400 MW sale to Carolina Power & Light (CP&L) through June 30, 1999.

g. Future Resource Additions represent new capacity resources or capability increases that are being considered. Neither the operation date, the resource type, or the size is firm. All Future Resource Additions are uncommitted and represent capacity required to maintain a minimum planning reserve margin, as determined in the IRP process.

h. Generating reserve margin is shown for reference.

i. Capacity margin is the industry standard term. A 14.53 percent capacity margin is equivalent to a 17 percent reserve margin.

j. Cumulative demand side capacity represents the demand side resource contribution used to meet the load. The demand side resources reflected in these numbers include energy efficiency and strategic sales programs and direct load control programs designed to be activated when we experience capacity problems.

k. The 14.8 percent reserve margin in 1999 is based on the assumption that any off-system sales that have not concluded by June 1 are included in the peak for that year. The actual projected peak for 1999 falls in July, not June. Because the CP&L sale concludes at the end of June 1999, the peak projected reserve margin for July is 17.0 percent.

Demand Side Resource Projections

FIGURE 11: Demand (MW) Projection Summary—1997 Through 2004[a]

Demand Side Options	1997	1998	1999	2000	2001	2002	2003	2004
Energy Efficiency								
HE compressed air systems	(0.96)	(2.88)	(4.81)	(6.73)	(8.65)	(9.61)	(9.61)	(9.61)
HE motor systems and replacement	(1.76)	(4.80)	(7.36)	(9.92)	(12.48)	(15.04)	(17.60)	(20.16)
Energy Efficiency Totals	**(2.72)**	**(7.68)**	**(12.17)**	**(16.65)**	**(21.13)**	**(24.65)**	**(27.21)**	**(29.77)**
Interruptible								
Residential load control rider–A/C	(431.15)	(432.65)	(431.78)	(427.46)	(423.19)	(418.96)	(414.77)	(410.62)
Residential load control rider–water heating	(14.80)	(13.32)	(11.98)	(5.68)	0	0	0	0
Interruptible power service rider	(607.62)	(607.62)	(607.62)	(607.62)	(607.62)	(607.62)	(607.62)	(607.62)
Standby generator control rider	(51.66)	(56.74)	(61.82)	(66.90)	(71.98)	(77.07)	(82.15)	(87.23)
Interruptible Totals	**(1,105.22)**	**(1,110.32)**	**(1,113.20)**	**(1,107.66)**	**(1,102.79)**	**(1,103.64)**	**(1,104.53)**	**(1,105.46)**
Load Shift								
Residential water heating–controlled/submetered	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Load Shift Totals	**0.47**	**0.47**	**0.47**	**0.47**	**0.47**	**0.47**	**0.47**	**0.47**
Strategic Sales								
Electrotechnology strategy	24.72	90.99	182.40	282.15	366.48	400.94	400.94	400.94
HE food service appliances	0.96	3.06	5.46	8.12	11.05	12.59	12.59	12.59
Nonresidential space heating	0	0	0	0	0	0	0	0
Strategic Sales Totals	**25.68**	**94.04**	**187.86**	**290.26**	**377.53**	**413.53**	**413.53**	**413.53**
Energy Efficiency and Strategic Sales								
New residential housing program	(1.04)	(3.17)	(5.41)	(7.74)	(10.76)	(12.58)	(12.58)	(12.58)
Existing residential housing program and nonresidential heat pump program	(1.48)	(4.49)	(7.56)	(10,64)	(13.74)	(15.28)	(15.28)	(15.28)
Energy Efficiency and Strategic Sales Totals	**(2.52)**	**(7.66)**	**(12.97)**	**(18.38)**	**(24.49)**	**(27.86)**	**(27.86)**	**(27.86)**
Demand Side Option Totals	**(1,084.31)**	**(1,031.15)**	**(950.01)**	**(851.96)**	**(770.41)**	**(742.15)**	**(745.60)**	**(749.09)**

a. MW represent diversified customer load at Duke's system peak including transmission and distribution line losses. Values for each year are cumulative beginning in 1996. Values in parentheses are reductions.

FIGURE 12: Demand (MW) Projection Summary—2005 Through 2011 [a]

Demand Side Options	2005	2006	2007	2008	2009	2010	2011
Energy Efficiency							
HE compressed air systems	(9.61)	(9.61)	(9.61)	(9.61)	(9.61)	(9.61)	(9.61)
HE motor systems and replacement	(22.72)	(25.28)	(26.56)	(26.56)	(26.56)	(26.56)	(26.56)
Energy Efficiency Totals	**(32.33)**	**(34.89)**	**(36.17)**	**(36.17)**	**(36.17)**	**(36.17)**	**(36.17)**
Interruptible							
Residential load control rider–A/C	(406.51)	(402.45)	(398.42)	(394.44)	(390.50)	(386.59)	(382.73)
Residential load control rider–water heating	0	0	0	0	0	0	0
Interruptible power service rider	(607.62)	(607.62)	(607.62)	(607.62)	(607.62)	(607.62)	(607.62)
Standby generator control rider	(92.31)	(97.39)	(102.47)	(105.01)	(105.01)	(105.01)	(105.01)
Interruptible Totals	**(1,106.44)**	**(1,107.45)**	**(1,108.51)**	**(1,107.07)**	**(1,103.12)**	**(1,099.22)**	**(1,095.35)**
Load Shift							
Residential water heating–controlled/ submetered	0.47	0	0	0	0	0	0
Load Shift Totals	**0.47**	**0**	**0**	**0**	**0**	**0**	**0**
Strategic Sales							
Electrotechnology strategy	400.94	400.94	400.94	351.50	268.42	168.67	68.92
HE food service appliances	12.59	12.59	12.59	12.59	12.59	12.59	12.59
Nonresidential space heating	0	0	0	0	0	0	0
Strategic Sales Totals	**413.53**	**413.53**	**413.53**	**364.09**	**281.01**	**181.26**	**81.51**
Energy Efficiency and Strategic Sales							
New residential housing program	(12.58)	(12.58)	(12.58)	(12.58)	(12.58)	(12.58)	(12.58)
Existing residential housing program and nonresidential heat pump program	(15.28)	(15.28)	(15.28)	(15.28)	(15.28)	(15.28)	(15.28)
Energy Efficiency and Strategic Sales Totals	**(27.86)**	**(27.86)**	**(27.86)**	**(27.86)**	**(27.86)**	**(27.86)**	**(27.86)**
Demand Side Option Totals	**(752.63)**	**(756.67)**	**(759.01)**	**(807.01)**	**(886.14)**	**(981.99)**	**1,077.87)**

a. MW represent diversified customer load at Duke's system peak including transmission and distribution line losses. Values for each year are cumulative beginning in 1996. Values in parentheses are reductions.

FIGURE 13: Energy (MWh) Projection Summary—1997 Through 2004 [a]

Demand Side Options	1997	1998	1999	2000	2001	2002	2003	2004
Energy Efficiency								
HE compressed air systems	(5,559)	(16,677)	(27,794)	(38,912)	(50,030)	(55,589)	(55,589)	(55,589)
HE motor systems and replacement	(11,112)	(30,305)	(46,468)	(62,631)	(78,794)	(94,957)	(111,119)	(127,282)
Energy Efficiency Totals	**(16,671)**	**(46,982)**	**(74,262)**	**(101,543)**	**(128,824)**	**(150,545)**	**(166,708)**	**(182,871)**
Interruptible [b]								
Residential load control rider–A/C	0	0	0	0	0	0	0	0
Residential load control rider–water heating	0	0	0	0	0	0	0	0
Interruptible power service rider	0	0	0	0	0	0	0	0
Standby generator control rider	0	0	0	0	0	0	0	0
Interruptible Totals	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Load Shift								
Residential water heating–controlled/ submetered	0	0	0	0	0	0	0	0
Load Shift Totals	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Strategic Sales								
Electrotechnology strategy	130,912	488,278	983,498	1,521,030	1,969,053	2,148,309	2,148,309	2,148,309
HE food service appliances	10,909	34,737	62,010	92,153	125,455	142,967	142,967	142,967
Nonresidential space heating	1,206	4,633	10,279	17,807	25,721	29,533	29,533	29,533
Strategic Sales Totals	**143,028**	**527,648**	**1,055,787**	**1,630,990**	**2,120,229**	**2,320,810**	**2,320,810**	**2,320,810**
Energy Efficiency and Strategic Sales								
New residential housing program	6,644	20,497	35,429	51,437	61,356	62,990	62,990	62,990
Existing residential housing program and nonresidential heat pump program	11,621	35,080	58,795	82,610	106,485	118,423	118,423	118,423
Energy Efficiency and Strategic Sales Totals	**18,266**	**55,577**	**94,224**	**134,047**	**167,842**	**181,413**	**181,413**	**181,413**
Demand Side Option Totals	**144,623**	**536,243**	**1,075,749**	**1,663,494**	**2,159,247**	**2,351,678**	**2,335,515**	**2,319,352**

a. MWh represent annual values based on total program accomplishments and include transmission and distribution line losses. Values in parentheses are reductions.

b. Annual energy impacts depend on the actual number of times these programs are used.

FIGURE 14: Energy (MWh) Projection Summary—2005 Through 2011 [a]

Demand Side Options	2005	2006	2007	2008	2009	2010	2011
Energy Efficiency							
HE compressed air systems	(55,598)	(55,598)	(55,598)	(55,598)	(55,598)	(55,598)	(55,598)
HE motor systems and replacement	(143,445)	(159,608)	(167,689)	(167,689)	(167,689)	(167,689)	(167,689)
Energy Efficiency Totals	**(199,034)**	**(215,197)**	**(223,278)**	**(223,278)**	**(223,278)**	**(223,278)**	**(223,278)**
Interruptible [b]							
Residential load control rider–A/C	0	0	0	0	0	0	0
Residential load control rider–water heating	0	0	0	0	0	0	0
Interruptible power service rider	0	0	0	0	0	0	0
Standby generator control rider	0	0	0	0	0	0	0
Interruptible Totals	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Load Shift							
Residential water heating–controlled/ submetered	0	0	0	0	0	0	0
Load Shift Totals	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Strategic Sales							
Electrotechnology strategy	2,148,309	2,148,309	2,148,309	1,886,485	1,433,577	896,045	358,514
HE food service appliances	142,967	142,967	142,967	142,967	142,967	142,967	142,967
Nonresidential space heating	29,533	29,533	29,533	29,533	29,533	29,533	29,533
Strategic Sales Totals	**2,320,810**	**2,320,810**	**2,320,810**	**2,058,985**	**1,606,077**	**1,068,545**	**531,014**
Energy Efficiency and Strategic Sales							
New residential housing program	62,990	62,990	62,990	62,990	62,990	62,990	62,990
Existing residential housing program and nonresidential heat pump program	118,423	118,423	118,423	118,423	118,423	118,423	118,423
Energy Efficiency and Strategic Sales Totals	**181,413**	**181,413**	**181,413**	**181,413**	**181,413**	**181,413**	**181,413**
Demand Side Option Totals	**2,303,189**	**2,287,026**	**2,278,945**	**2,017,120**	**1,564,212**	**1,026,680**	**489,149**

a. MWh represent annual values based on total program accomplishments and include transmission and distribution line losses. Values in parentheses are reductions.

b. Annual energy impacts depend on the actual number of times these programs are used.

FIGURE 15: Direct Cost ($000s) Projection Summary—1997 Through 2004[a]

Demand Side Options	1997	1998	1999	2000	2001	2002	2003	2004
Energy Efficiency								
HE compressed air systems	150	156	162	168	175	0	0	0
HE motor systems and replacement	177	183	190	198	205	213	222	230
Energy Efficiency Totals	**327**	**339**	**352**	**366**	**380**	**213**	**222**	**230**
Interruptible								
Residential load control rider–A/C	9,310	9,340	9,347	9,361	9,376	9,394	9,415	9,439
Residential load control rider–water heating	1,500	1,418	1,288	455	0	0	0	0
Interruptible power service rider	25,351	25,355	25,360	25,365	25,370	25,376	25,382	25,388
Standby generator control rider	1,810	1,980	2,150	2,320	2,491	2,662	2,833	3,004
Interruptible Totals	**37,971**	**38,093**	**38,144**	**37,502**	**37,238**	**37,432**	**37,630**	**37,831**
Load Shift								
Residential water heating–controlled/ submetered	0	0	0	0	0	0	0	0
Load Shift Totals	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Strategic Sales								
Electrotechnology strategy	3,754	3,885	4,033	4,194	4,358	0	0	0
HE food service appliances	2,719	2,813	2,911	3,013	3,123	0	0	0
Nonresidential space heating	2,417	2,502	2,597	2,701	2,806	0	0	0
Strategic Sales Totals	**8,890**	**9,200**	**9,541**	**9,908**	**10,287**	**0**	**0**	**0**
Energy Efficiency and Strategic Sales								
New residential housing program	8,402	7,407	7,075	7,287	7,505	0	0	0
Existing residential housing program and nonresidential heat pump program	10,850	11,217	10,326	10,629	10,941	0	0	0
Energy Efficiency and Strategic Sales Totals	**19,251**	**18,624**	**17,400**	**17,916**	**18,446**	**0**	**0**	**0**
Demand Side Option Totals	**66,439**	**66,256**	**65,437**	**65,692**	**66,351**	**37,645**	**37,852**	**38,061**

a. Direct costs are annual values.

FIGURE 16: Direct Cost ($000s) Projection Summary—2005 Through 2011 [a]

Demand Side Options	2005	2006	2007	2008	2009	2010	2011
Energy Efficiency							
HE compressed air systems	0	0	0	0	0	0	0
HE motor systems and replacement	239	248	0	0	0	0	0
Energy Efficiency Totals	**239**	**248**	**0**	**0**	**0**	**0**	**0**
Interruptible							
Residential load control rider–A/C	9,463	9,490	9,521	9,550	9,583	9,619	9,659
Residential load control rider–water heating	0	0	0	0	0	0	0
Interruptible power service rider	25,393	25,400	25,406	25,413	25,419	25,426	25,434
Standby generator control rider	3,176	3,348	3,520	3,507	3,511	3,515	3,519
Interruptible Totals	**38,033**	**38,238**	**38,446**	**38,470**	**38,514**	**38,561**	**38,611**
Load Shift							
Residential water heating–controlled/submetered	0	0	0	0	0	0	0
Load Shift Totals	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Strategic Sales							
Electrotechnology strategy	0	0	0	0	0	0	0
HE food service appliances	0	0	0	0	0	0	0
Nonresidential space heating	0	0	0	0	0	0	0
Outdoor lighting	0	0	0	0	0	0	0
Strategic Sales Totals	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Energy Efficiency and Strategic Sales							
New residential housing program	0	0	0	0	0	0	0
Existing residential housing program and nonresidential heat pump program	0	0	0	0	0	0	0
Energy Efficiency and Strategic Sales Totals	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Demand Side Option Totals	**38,272**	**38,486**	**38,446**	**38,470**	**38,514**	**38,561**	**38,611**

a. Direct costs are annual values.

Demand Side Evaluation Results

Figure 17 shows demand side accomplishments for options in the marketplace during the 1995 calendar year. These accomplishments are based on 1995 evaluation results.

FIGURE 17: 1995 Demand Side Evaluation Results

	Programs	Number of Customers	Total Impacts		Cost ($000)
			Demand (MW)[a]	Energy (MWh)	
Residential	High-efficiency heat pump and central air conditioning payment program	25,879	(9.86)	(12,271)	$9,958
	Duct sealing payment program for new residential structures	5,199	(2.39)	(3,083)	1,678
	Residential load control rider–air conditioning [b]	212,212	(524.16)	0	10,083
	Manufactured housing payment program for new residential structures[c]	3,823	0	(9,538)	1,312
	Residential HVAC tune-up program	2,812	(0.93)	(1,181)	2,040
	Total Residential		**(537.34)**	**(26,073)**	**25,071**
Commercial/Industrial	High-efficiency chillers payment program	124	(1.69)	(9,275)	4,613
	Interruptible power service rider [b]	235	(689.58)	0	25,347
	Standby generator control rider [b]	134	(45.30)	(772)	1,664
	Total Commercial/Industrial		**(736.57)**	**(10,047)**	**31,624**
	Pilots and Other				**6,313**
	Grand Total		**(1,273.91)**	**(36,120)**	**$63,008**

a. Demand reductions at the time of the summer peak.

b. Annual energy impacts depend on the actual number of times these options are used, the length of the interruptions, and the time of day the interruption takes place.

c. Winter demand reduction for this program was 3.36 MW.