



## Appendix H

# Summary of The Entergy Electric System Strategic Supply Resource Plan Update for the Planning Period 2008 – 2017

(An Integrated Resource Plan for the Entergy Electric System)

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## Glossary of Acronyms

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- **CAGR** – Compound Annual Growth Rate
- **CCGT** – Combined Cycle Gas Turbine
- **CCS** – Carbon Capture and Sequestration
- **CFB** – Circulating Fluidized Bed
- **COLA** – Combined Construction and Operating License Application
- **CT** – Combustion Turbine
- **DSG** – Down Stream of Gypsy
- **DSM** – Demand Side Management
- **EAI** – Entergy Arkansas, Inc.
- **EGSL** – Entergy Gulf States Louisiana, L.L.C
- **ELL** – Entergy Louisiana, LLC
- **EMI** – Entergy Mississippi, Inc.
- **ENO** – Entergy New Orleans, Inc.
- **ETI** – Entergy Texas, Inc.
- **IGCC** – Integrated Gasification Combined Cycle
- **IRP** – Integrated Resource Plan
- **NYMEX** – New York Mercantile Exchange
- **PC** – Pulverized Coal
- **QF** – Qualified Facility
- **RFP** – Request for Proposal
- **RPS** – Renewable Portfolio Standard
- **RRS** – Renewable Resource Strategy
- **SPO** – System Planning and Operations
- **SSRP** – Strategic Supply Resource Plan
- **WOTAB** – West of the Atchafalaya Basin

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*Executive Summary*

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## Executive Summary

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- This document summarizes the Entergy System’s current Strategic Supply Resource Plan (“SSRP”) assumptions and the resulting Reference Planning Scenario for the planning horizon beginning in 2008.
- In designing a portfolio of resources to meet customer needs, the Entergy System seeks to balance a set of supply objectives including reliability, cost, and risk mitigation. The overall objective is to meet customer needs reliably at the lowest reasonable cost. However, determining what is reasonable necessitates consideration of risk.
- The current environment for resource planning is a dynamic one in which a number of uncertainties may alter supply needs and the long-term economics of resource alternatives. Key uncertainties include, but are not limited to:
  - Price and Availability of Natural Gas – In recent years the price of natural gas has risen and become more volatile. Long-term forecasts for natural gas prices continue to indicate prices above historical levels. Other fuels also have experienced price increases. However, the implication of price increases for natural gas are more significant because of the System’s reliance on natural gas and because fuel represents a relatively greater portion of total supply cost for gas-fired technologies.
  - Power Plant Construction Cost – In recent years the cost of constructing new power plants has risen rapidly. Although effects differ by technology and location, in general, the costs associated with constructing a power plant more than doubled since 2000. The increases in power plant construction cost have affected all technologies. However, capital intensive technologies such as coal and nuclear are most affected.

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## Executive Summary

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- Market Conditions – Since 1999 the Entergy region has experienced a build out of merchant generating capacity. More recently, market conditions have begun to tighten and this trend is expected to continue. As a consequence, market prices generally are expected to rise and become more volatile. Further, the availability of merchant capacity to meet customer needs is expected to decline.
- Environmental Concerns – The issue of potential climate change associated with atmospheric greenhouse gases has received growing attention in the media and with governmental policy makers. Emissions from power plants are a major source of CO<sub>2</sub>, which is a greenhouse gas. It is not possible to predict with any degree of certainty whether CO<sub>2</sub> legislation will eventually be enacted, and if so, when it would become effective, or what form it would take. However, any form of CO<sub>2</sub> legislation would likely result in higher cost for electric generation. Because alternative technologies emit different levels of CO<sub>2</sub> per MWh of generation, CO<sub>2</sub> legislation would likely change the relative economics of supply alternatives.
- Such uncertainties represent risks that affect how resource alternatives can support the achievement of planning objectives. Resource alternatives that are economic under one set of assumptions, may be less economic under different assumptions.
- The SSRP incorporates strategies to mitigate these risks, including but not limited to:
  - The Entergy Operating Companies continue to pursue a long-term strategy of a diversified resource portfolio that includes a mix of technologies and fuel sources. Supply diversity mitigates risk by protecting customers from changes in the cost and availability of production cost inputs such as fuel.

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## Executive Summary

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- The Entergy Operating Companies seek to identify economical demand-side management and energy efficiency measures that can reduce long-term supply needs, lower long-term customer costs, and mitigate risks associated with uncertainties such as load, environmental regulation, and fuel cost and availability.
- The SSRP calls for the development of self-supply options that would enable the System to construct new generating capacity when it is needed and economically justified.
- The SSRP assumes that reliability requirements are met largely from long-term resources, whether owned assets or long-term power purchase agreements. The emphasis on long-term resources mitigates exposure to price volatility and ensures the availability of resources sufficient to meet long-term reliability needs.

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## Executive Summary

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### Reference Planning Scenario

- Key assumptions in the Reference Planning Scenario include:
  - Completion of the Little Gypsy Repowering Project to add a source of stable-priced base load energy and reduce reliance on natural gas-fired resources.
  - Increased reliance on demand-side management and energy efficiency initiatives.
  - Continued evaluation of new nuclear as an alternative for economically meeting long-term base load needs. New nuclear offers the potential for an economic source of stable-priced power with zero carbon emissions.
  - Continued evaluation of other stable-priced base load technologies, including advanced coal technologies.
  - The addition in the near-term, of modern efficient gas-fired combined cycle gas turbines (“CCGT”) and combustion turbines (“CT”) to provide capacity to meet reliability needs over the next several years as the System continues to evaluate new nuclear and other long-term base load alternatives. Despite reliance on gas as a fuel, CCGT and CT resources represent a relatively low risk alternative to meet System load-following needs because they are suited operationally and economically to provide flexible capability.
- The SSRP is a dynamic process for long-range planning that provides for a flexible approach to resource selection. The planning scenarios resulting from the SSRP planning process provide guidance regarding long-term resource additions, but are not intended as static plans or pre-determined schedules for resources additions. Actual portfolio decisions are made at the time of execution.

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## Executive Summary

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### On-going Planning Efforts

- The System’s SSRP is a dynamic and on-going planning process. This update incorporates the best available information at the time of its development. The System anticipates continuing to update the SSRP planning assumptions and scenarios periodically.
- The System Planning and Operations Department (“SPO”) acts on behalf of the Entergy Operating Companies and, at the direction of the Entergy Operating Committee plans for and procures supply-side resources to meet customers’ needs. At any time the System has a number of planning initiatives underway that when completed would be expected to inform future plan updates. Planning efforts over the coming year are expected to include the following
  - New Nuclear Development – In the coming year the System expects to file a combined construction and operating license application (“COLA”) for the River Bend site, make appropriate regulatory filings related to new nuclear development spending, apply for Department of Energy loan guarantees for potential projects at the Grand Gulf and River Bend sites, and receive feedback on whether either project receives the loan guarantee. As a result, a better understanding of the appropriate path forward for new nuclear development is expected.
  - Other Base Load Opportunities – The System does not foresee new development activities for solid fuel resources in the near term. However, the System continues to monitor market conditions and will evaluate potential opportunities to participate in solid fuel projects if and when presented. In addition, the System will monitor development of advanced coal technologies such as Integrated Gasification Combined Cycle (“IGCC,”) and Carbon Capture and Sequestration (“CCS”) and other advanced solid fuel technologies for economic and commercial viability.

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- Jurisdictional IRP Initiatives – The System continues to monitor evolving jurisdictional Integrated Resource Plan (“IRP”) requirements and will adapt its planning processes and methods, as appropriate, to respond to jurisdictional IRP requirements.
- Renewable Resource Strategy – SPO is developing a Renewable Generation Strategy for inclusion in future plans. The strategy will take into consideration the implication of potential federal and state Renewable Portfolio Standards (“RPS”), the availability of renewable resources within the Entergy region, the commercial status of renewable technologies, the economic impact of renewable resources on customers, and operational considerations in the context of the strategic resource portfolio.
- Opportunities for Existing Resources – The current generating portfolio will continue to age and require increased budget to maintain. However, these resources also represent potential alternatives for economically meeting customers needs through repowering, refurbishment and/or upgrades. Over the coming year the System plans to evaluate such opportunities.
- New Self-build Options – The System is in the process of developing executable self-supply CCGT projects at two sites, one in the Western WOTAB region and one in the Amite South planning region. The System anticipates market testing these projects within the next year. The System also expects to determine next steps and timing in the potential development of a CCGT self-supply option in Arkansas. Also during the next year, the System will consider development of a WOTAB CCGT option depending on the outcome of the Summer 2008 RFP.

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## Executive Summary

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- The exhibit on the following page provides a general overview of the planning process. The remainder of this this Update is organized around the major portfolio design activities shown on that diagram:
  - Part 1, Defining Planning Objective, describes the SSRP Planning Framework including Planning Objectives.
  - Part 2, Identifying Drivers, discusses factors that influence resources needs including the existing portfolio and load growth.
  - Part 3, Identifying Alternatives, discusses alternatives for meeting System needs including opportunities in the Wholesale Market and other long-term resources additions.
  - Part 4, Developing Target Portfolio Plan, discusses the System’s resource strategy and describes the Reference Planning Scenario.

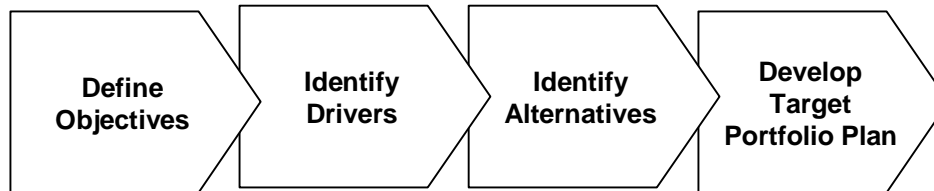
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## Planning Framework

### GENERALIZED VIEW OF RESOURCE PLANNING PROCESS

#### Portfolio Design



What does the plan seek to achieve?

- Reliability
- Cost minimization
- Cost stabilization

What factors influence resource needs and outcomes?

- Existing Resources
- Flexible Capability Needs
- Load
- Fuel Prices

What alternatives are available to address needs / achieve objectives?

- Wholesale Power Market
- Traditional generating technologies
- Renewable Generation and Energy Efficiency

Determine a set of resources (mix and timing of resource additions) that meet objectives. This requires a strategic choice about balancing objectives.

Requires a long-term view.

#### Portfolio Execution



Initial Project Development

Identify specific projects including self-build projects and / or define targeted procurements. Conduct preliminary engineering, and develop detailed cost estimates.

Market Test / Solicitation

Solicitation or other approach for testing proposed alternative against other alternatives.

Construct or Purchase

Execute the project.

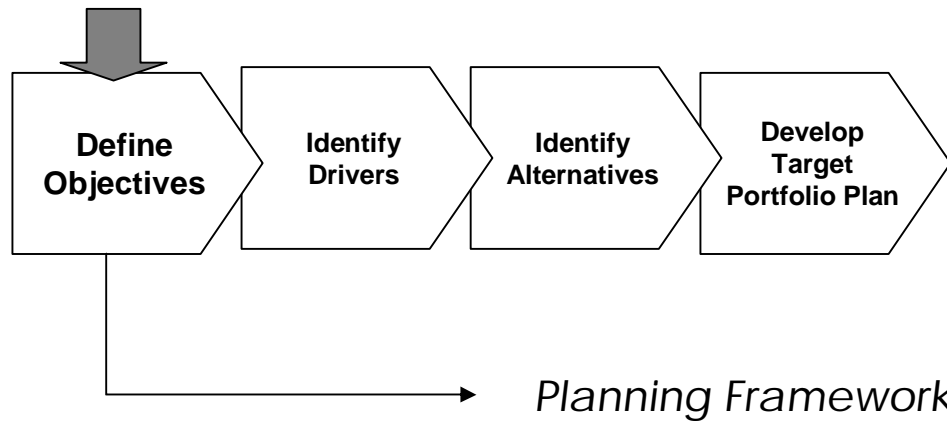
The process is an iterative one in which project development efforts may provide feedback about supply alternatives that result in refinements to the portfolio design.

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## PART 1 – Defining Objectives

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**This section describes the SSRP planning framework including the SSRP planning objectives.**

## Planning Framework

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### Background

- In 2003 the Entergy Operating Companies adopted the Strategic Supply Resource Plan (“SSRP”). The SSRP is a framework for long-term generation supply planning, including a set of principles and objectives that result in a targeted portfolio mix for the System. The SSRP planning process results in planning scenarios regarding potential future portfolio resource decisions including resource timing, location and technology.
- The SSRP is a dynamic process for long-range planning that provides for a flexible approach to resource selection. The planning scenarios resulting from the SSRP planning process provide guidance regarding long-term resource additions, but are not intended as static plans or pre-determined schedules for resources additions. Actual portfolio decisions are made at the time of execution.
- The SSRP planning process periodically updates planning assumptions and scenarios in light of the best information available. This document summarizes the SSRP update for the planning period 2008 – 2017. Although the SSRP Summary Document is a key output of the SSRP planning process, it does not represent “The SSRP” in that the later term refers to the planning process.
- Consistent with the SSRP, the System is pursuing a long-term supply strategy, sometimes referred to as the “Portfolio Transformation Strategy,” that seeks to upgrade the generation supply and power supply resources of the Entergy Operating Companies to develop a more diverse, modern, and efficient portfolio of generation supply resources to meet customer needs. The resulting portfolio will achieve the planning objectives in a balanced manner by providing reliable, cost effective, and more stable-priced power, while providing flexible capability needed to respond to operating constraints, supply contingencies, and uncertainties caused by such factors as load changes including intra-hour load changes), OATT Generator Imbalance Provisions, merchant generator outages, and QF puts.

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## Planning Framework

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### Overview of System Planning Process

- The Entergy Operating Companies are planned and operated as a single, integrated electric system, pursuant to the Entergy System Agreement. The six Entergy Operating Companies are Entergy Arkansas, Inc. (“EAI”), Entergy Gulf States Louisiana, L.L.C. (“EGSL”), Entergy Louisiana, LLC (“ELL”), Entergy Mississippi, Inc. (“EMI”), Entergy New Orleans, Inc. (“ENO”), and Entergy Texas, Inc (“ETI”). The electric generation and bulk transmission facilities of these Operating Companies are planned and operated on an integrated, coordinated basis as a single electric system pursuant to the terms and conditions of the Entergy System Agreement and are referred to collectively as the “Entergy System” or the “System”.
- The SSRP envisions that the System will maintain sufficient generating capacity to meet its reliability requirement, expressed as peak load plus an adequate provision for planning reserves. Presently, the System plans for a 16.8% reserve margin. Over time, each operating company is expected to move toward a portfolio of generating resources matched to its customers’ load shape requirements.
- The SSRP presumes that reliability requirements are met largely from long-term resources, whether owned assets or long-term power purchase agreements. The emphasis on long-term resources mitigates exposure to price volatility and ensures the availability of resources sufficient to meet long-term reliability needs. Over reliance on limited-term purchased power exposes customers to risk associated with market price volatility and power availability. The SSRP attempts to manage this risk by seeking to limit the amounts of limited term purchased power used to meet reliability requirements. The Reference Planning Scenario assumes that limited-term purchased power will range from about 1,000 to 3,000 MW over the planning horizon.

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## Planning Framework

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### Objectives

- The overarching objective of the planning process is to provide a portfolio of generation supply resources that will enable the System to meet the needs of the Operating Companies' customers at the lowest reasonable cost. Toward that end, the SSRP comprehends a set of planning objectives and principles for long-term generation supply resource planning. Over time, implementation of the SSRP will result in a portfolio of generation resources that are better matched to customer load shape requirements at the System and individual Operating Company levels.
- The supply needs of the Operating Companies are described by the following six basic resource supply objectives:
  - Reliability – The SSRP should provide adequate resources to meet customer peak demands with adequate reliability.
  - Base Load Production Costs – The SSRP should provide low-cost base load resources to serve base load requirements, which are defined as the firm load level that is expected to be exceeded for at least 85% of all hours per year.
  - Flexible Capability and Load-Following Production Costs – The SSRP should provide efficient, dispatchable, load-following resources to serve the time-varying load shape levels that are above the base load supply requirement. Further the SSRP should provide sufficient flexible capability to respond to factors such as load volatility caused by changes in weather or by inherent characteristics of industrial operations, the need for meeting energy imbalances caused by independent power producers interconnected to the System, and the need to absorb energy that may be put to the System by cogenerators.

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## Planning Framework

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- Generation Portfolio Enhancement – The SSRP should provide a generation portfolio that is more efficient than the current fleet and avoids an over-reliance on aging resources.
- Price Stability Risk Mitigation – The SSRP should mitigate the exposure to price volatility associated with uncertainties in fuel and purchased power costs.
- Supply Diversity Risk Mitigation – The SSRP should mitigate the exposure to major supply disruptions that could occur from specific risks such as outages at a single generation facility.

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## Planning Framework

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### Operating Company Portfolio Planning

- The SSRP envisions that over time each Operating Company will move toward a portfolio of resources matched to its customer load-shape needs.
- SSRP planning objectives and principles are appropriate for both Operating Company and System resource planning.
- Operating Company Portfolio Planning is consistent with and supports overall System Planning objectives.
- EAI provided notice on December 19, 2005 pursuant to Section 1.01 of the System Agreement that it will withdraw from the System Agreement. EMI provided similar notice to the Operating Companies on November 8, 2007. Resource planning decisions will reflect EAI's and EMI's notice to terminate participation in the current System Agreement by 12/18/2013 and 11/7/2015, respectively

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## Planning Framework

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### Area Planning Process

- Although the Entergy System performs resource planning on a System-wide basis, with the goal of meeting the planning objectives at the overall lowest reasonable cost, physical and operational practicalities dictate that regional reliability issues must be considered when planning for the reliable operation of the Entergy System. Thus, one aspect of the planning process is the development of planning studies to identify supply needs within areas of the Entergy System, evaluate supply options to meet those needs, and establish targeted regional supply portfolios.
- Area Planning analysis influences siting decisions and priorities.
- Area Planning is consistent with and supports overall System Planning objectives.

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## Planning Framework

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### Planning Areas

- For planning purposes, the region served by the Entergy Operating Companies is divided into four major planning areas and two sub-areas which are determined based on characteristics of the Entergy System including the ability to transfer power between areas as defined by the available transfer capability, the location and amount of load, and the location and amount of generation.
- The four major planning areas and two sub-areas are described generally as follows:
  - North Arkansas – the northern portion of Arkansas generally north of Sheridan, Arkansas.
  - WOTAB – west of the Atchafalaya Basin, the area generally west of the Baton Rouge, Louisiana metropolitan area, to the westernmost portion of Entergy’s service territory in Texas. The westernmost portion of WOTAB is the Western area, which encompasses the westernmost part of ETI’s service territory, generally west of the Trinity River.
  - Amite South – the area generally from east of the Baton Rouge, Louisiana metropolitan area to the Mississippi state line and south to the Gulf of Mexico. The Southeast portion of the Amite South area is known as the Downstream of Gypsy (“DSG”) area and generally encompasses down river of the Little Gypsy plant including metropolitan New Orleans east to the Mississippi state line and south to the Gulf of Mexico.
  - Central – the area generally south of the North Arkansas area and north of the WOTAB and Amite South areas, but includes the Baton Rouge, Louisiana metropolitan area.

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## Planning Framework

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### Planning Regions



Resource planning decisions will reflect EAI's and EMI's notice to terminate participation in the current System Agreement by 12/18/2013 and 11/7/2015, respectively.

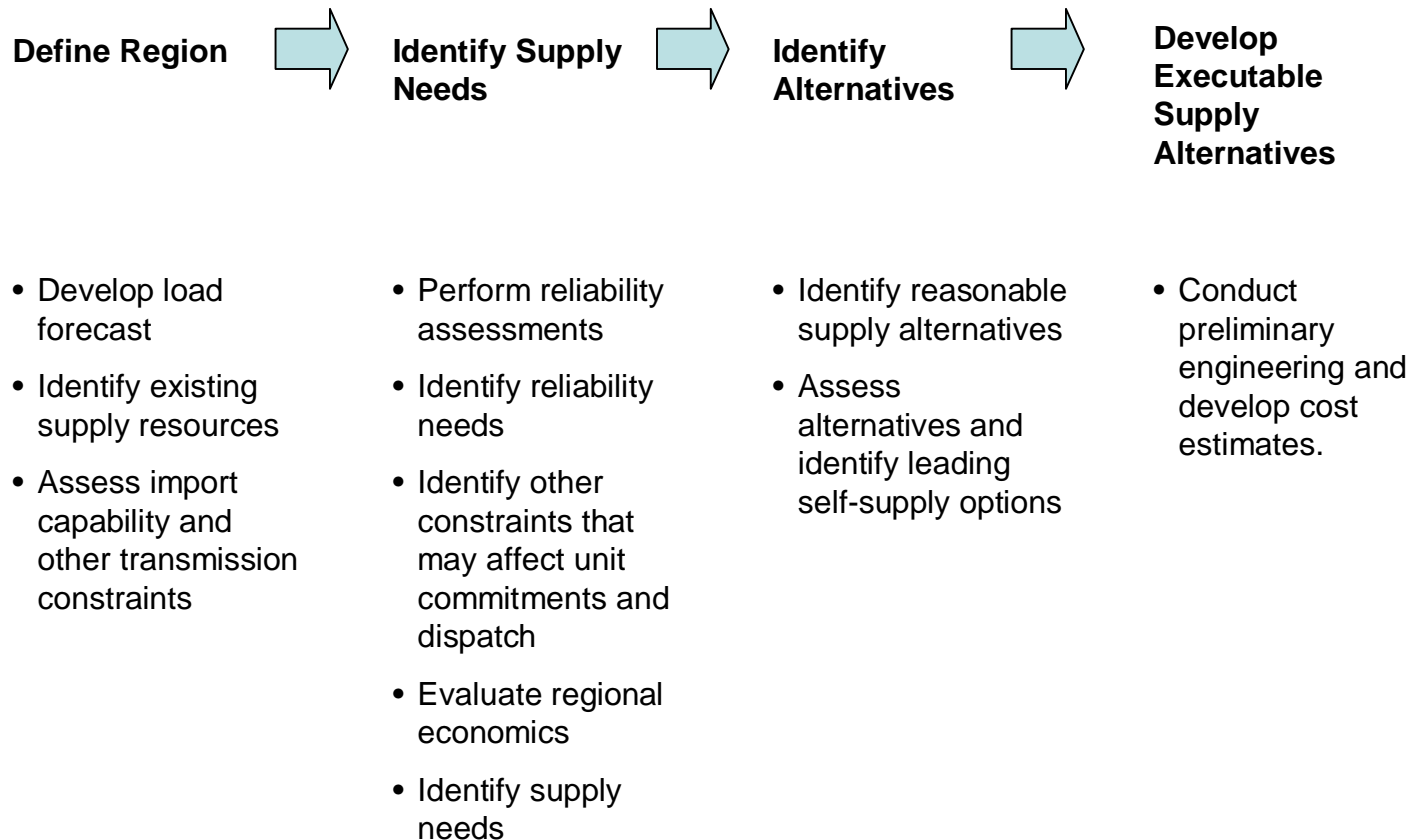
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## Planning Framework

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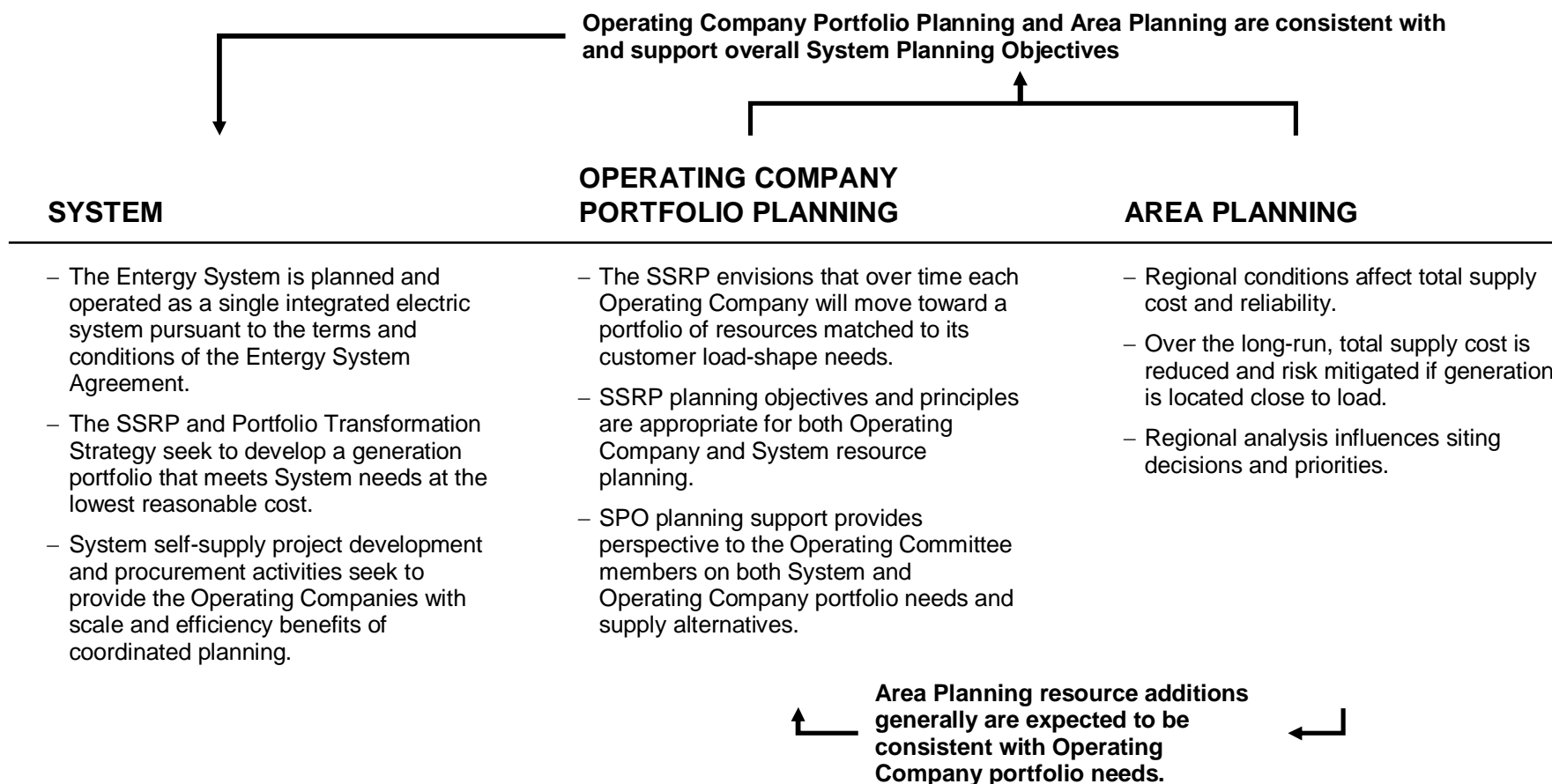
### Overview of Area Planning Process



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## Planning Framework

### Long-term Planning Involves Multiple Dimensions



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## Planning Framework

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### Portfolio Transformation Strategy

- Consistent with the SSRP, the System is pursuing a long-term supply strategy, sometimes referred to as the “Portfolio Transformation Strategy,” that seeks to upgrade the generation supply and power supply resources of the Entergy Operating Companies to develop a more diverse, modern, and efficient portfolio of generation supply resources to meet customer needs. The resulting portfolio will achieve the planning objectives in a balanced manner by providing reliable, cost effective, and more stable-priced power, while providing the operational flexibility to follow load and to respond to operating constraints and supply contingencies.
  - The desired portfolio will provide reliable and cost effective power and reduce price volatility, while providing the operational flexibility to follow load and meet operating constraints and supply contingencies.
  - The desired portfolio will provide a variety of generation resources matched to the base load and flexible capability requirements of our customers.
  - The desired portfolio should offer a variety of generation types that will provide the opportunity to minimize production costs through economic dispatch of generation and the purchase of economy power.

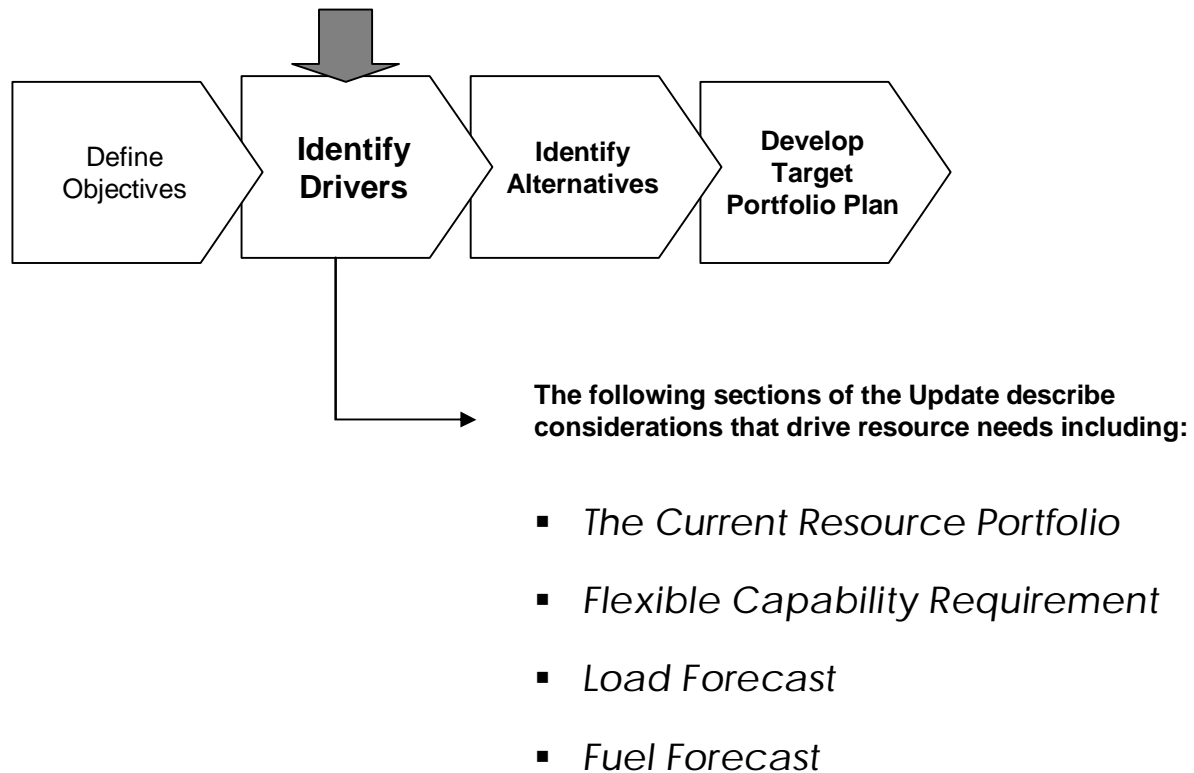
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## PART 2 – IDENTIFYING DRIVERS

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*Current Resource Portfolio*

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## Current Resource Portfolio

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### Supply Issues

The Entergy System faces a number of issues with respect to generation supply.

<b>CAPACITY SHORTAGE</b>	<b>AGING FLEET</b>	<b>PORTFOLIO MIX</b>	<b>EXPOSURE TO GAS PRICES</b>	<b>FLEXIBLE CAPABILITY</b>
<ul style="list-style-type: none"> <li>– Long-term generation portfolio is about 2.6 GW short of reliability requirement.</li> <li>– Requirements are expected to grow by almost 400 MW/year on average over the next ten years.</li> <li>– Results in increased exposure to market.</li> </ul>	<ul style="list-style-type: none"> <li>– More than 85% of the existing oil and gas-fired MW are greater than 30 years old.</li> </ul>	<ul style="list-style-type: none"> <li>– Existing generation portfolio is not functionally matched to projected load requirements.</li> <li>– Load shape analysis indicates that the optimal portfolio mix would include additional stable-priced resources for base load needs and modern efficient CCGT and CT resources for load-following and flexible capability needs.</li> </ul>	<ul style="list-style-type: none"> <li>– Existing generation fleet is highly correlated to natural gas resulting in high and volatile fuel costs in recent years.</li> <li>– The addition of solid fuel carbon-based alternatives to the System’s generation portfolio would serve to reduce the System’ exposure to natural gas price fluctuations.</li> </ul>	<ul style="list-style-type: none"> <li>– The System must, at all times, have a sufficient amount of flexible capability committed and operating to ensure reliable service.</li> <li>– Typically this amount is on the order of 4,000 to 6,000 MWs of committed available capacity, and is occasionally as much as 9,000 MWs.</li> </ul>

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Current Resource Portfolio

Summary of Capacity Position by Supply Role  
2008 MW

Surplus (Deficit)

	<b>Base Load</b>	<b>Core Dispatch</b>	<b>Seasonal Dispatch</b>	<b>Peaking Plus Reserves</b>	<b>Total</b>
<b>EAI</b>	857	(712)	204	(1,557)	(1,208)
<b>EGS-LA</b>	(1,461)	(302)	1,391	(247)	(619)
<b>ETI</b>	(1,031)	(237)	993	(464)	(740)
<b>ELL</b>	(1,051)	(581)	3,372	(1,261)	479
<b>EMI</b>	(484)	(85)	1,867	(1,248)	51
<b>ENOI</b>	63	(157)	668	(327)	247
<b>System</b>	(3,176)	(1,937)	8,487	(6,429)	(3,055)

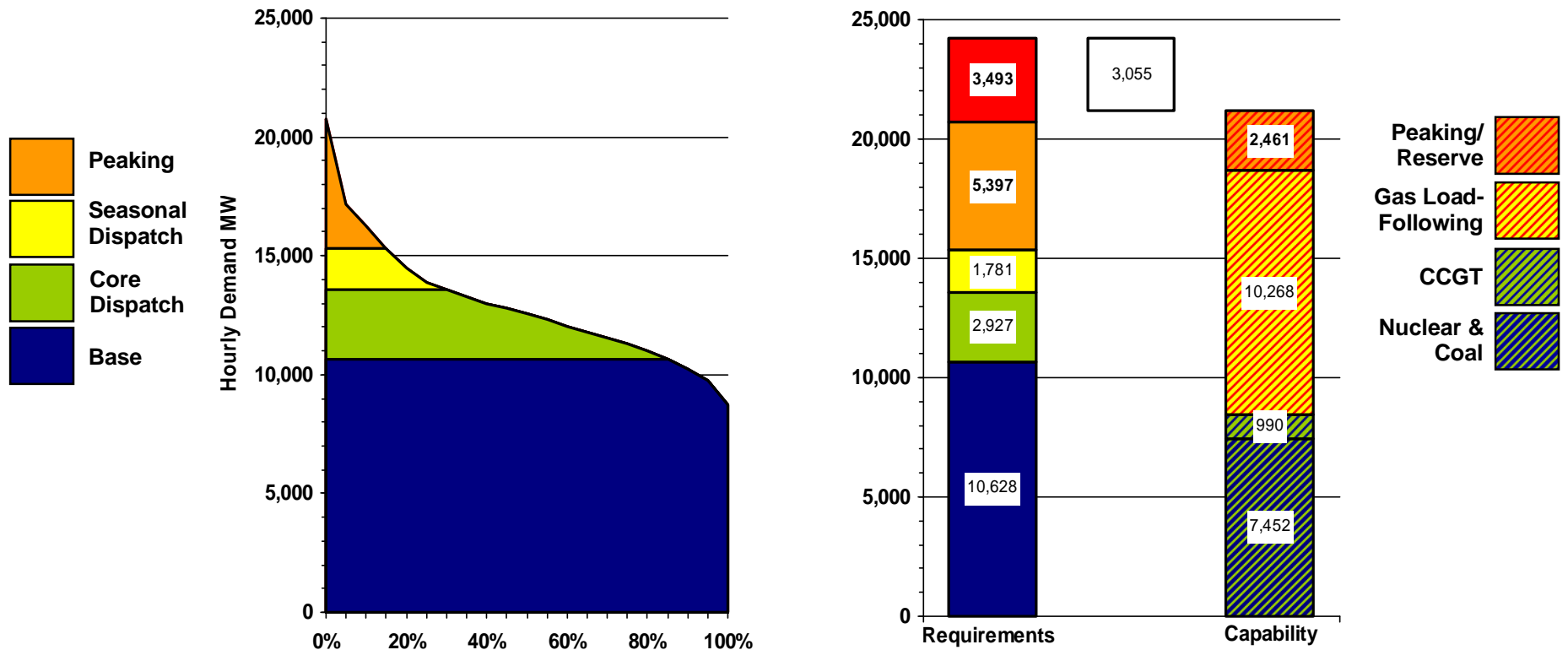
Supply role requirements are intended as general guidelines for portfolio planning purposes without consideration of practical operational requirements. In assessing the portfolio relative to these guidelines, each unit has been assigned within a specific supply role. In actuality, the distinction between supply roles is neither sharp nor static.

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Current Resource Portfolio

Entergy System Long-term Resource Requirements and Capability for 2008



	Base Load	Core Dispatch	Seasonal Dispatch	Peaking Plus Reserve	Total
Resources (MW)	7,452	990	10,268	2,461	21,171
Requirement (MW)	10,628	2,927	1,781	8,890	24,225
Excess / (Deficit) (MW)	(3,176)	(1,937)	8,487	(6,429)	(3,055)

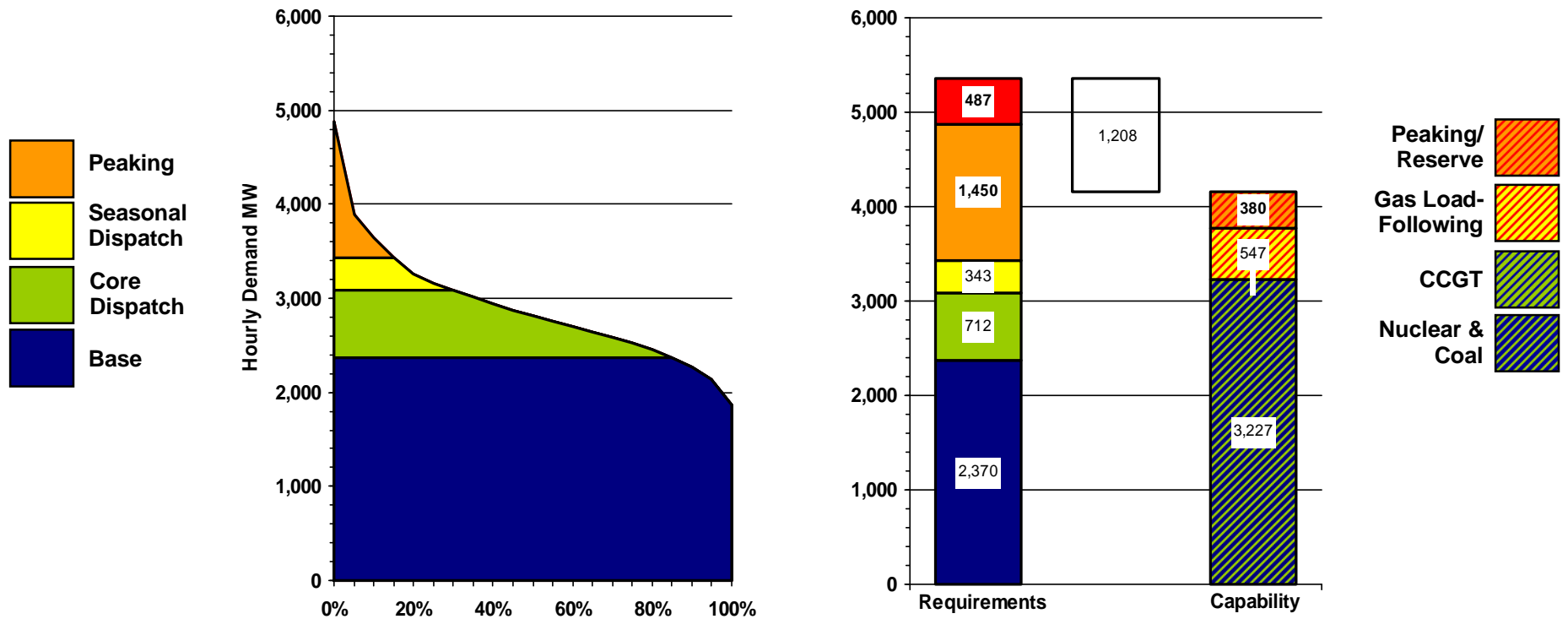
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Current Resource Portfolio

EAI Long-term Resource Requirements and Capability for 2008



	Base Load	Core Dispatch	Seasonal Dispatch	Peaking Plus Reserve	Total
Resources (MW)	3,227	0	547	380	4,154
Requirement (MW)	2,370	712	343	1,937	5,362
Excess / (Deficit) (MW)	857	(712)	204	(1,557)	(1,208)

Operating Company requirements assume a ten percent reserve margin planning guideline.

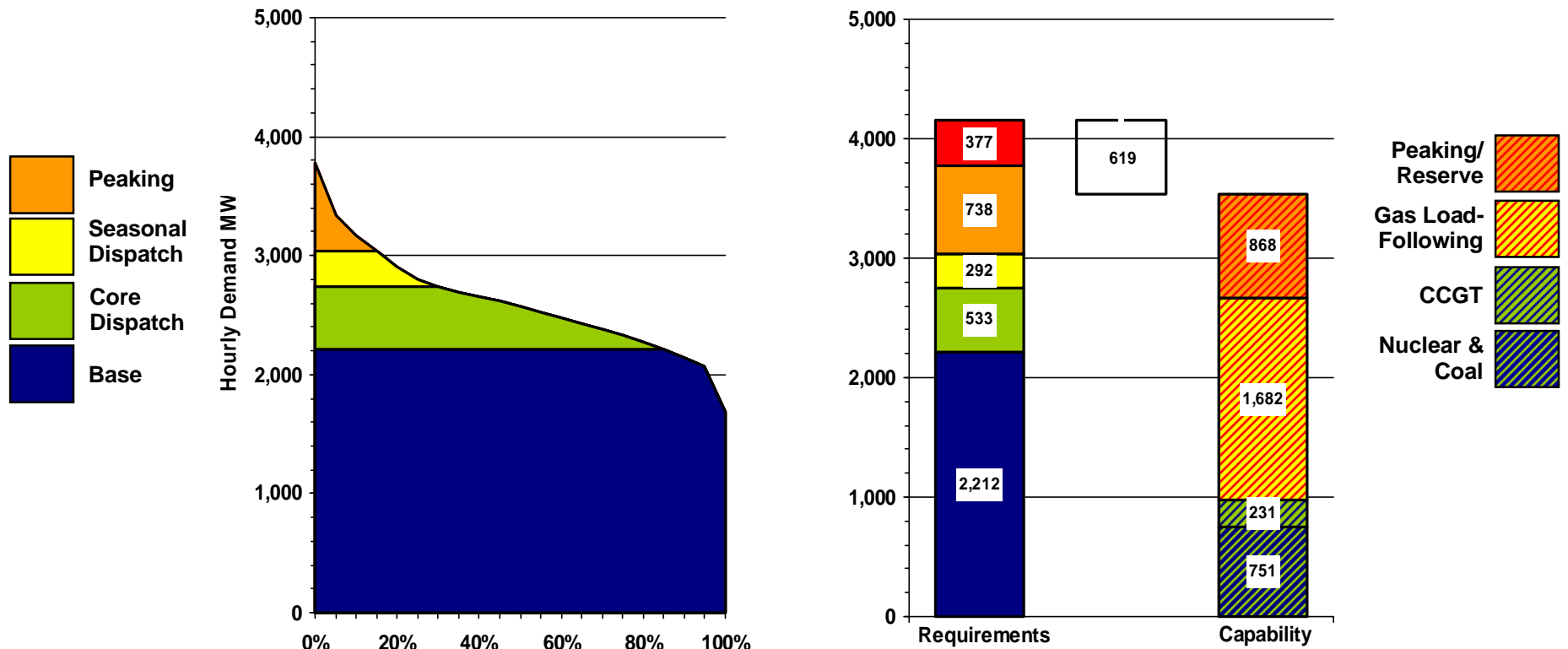
Supply role requirements are intended as general guidelines for portfolio planning purposes without consideration of practical operational requirements. In assessing the portfolio relative to these guidelines, each unit has been assigned within a specific supply role. In actuality, the distinction between supply roles is neither sharp nor static.

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SUMMER 2008 RFP – JULY 28, 2008

Current Resource Portfolio

EGS-LA Long-term Resource Requirements and Capability for 2008



	Base Load	Core Dispatch	Seasonal Dispatch	Peaking Plus Reserve	Total
Resources (MW)	751	231	1,682	868	3,532
Requirement (MW)	2,212	533	292	1,115	4,151
Excess / (Deficit) (MW)	(1,461)	(302)	1,391	(247)	(619)

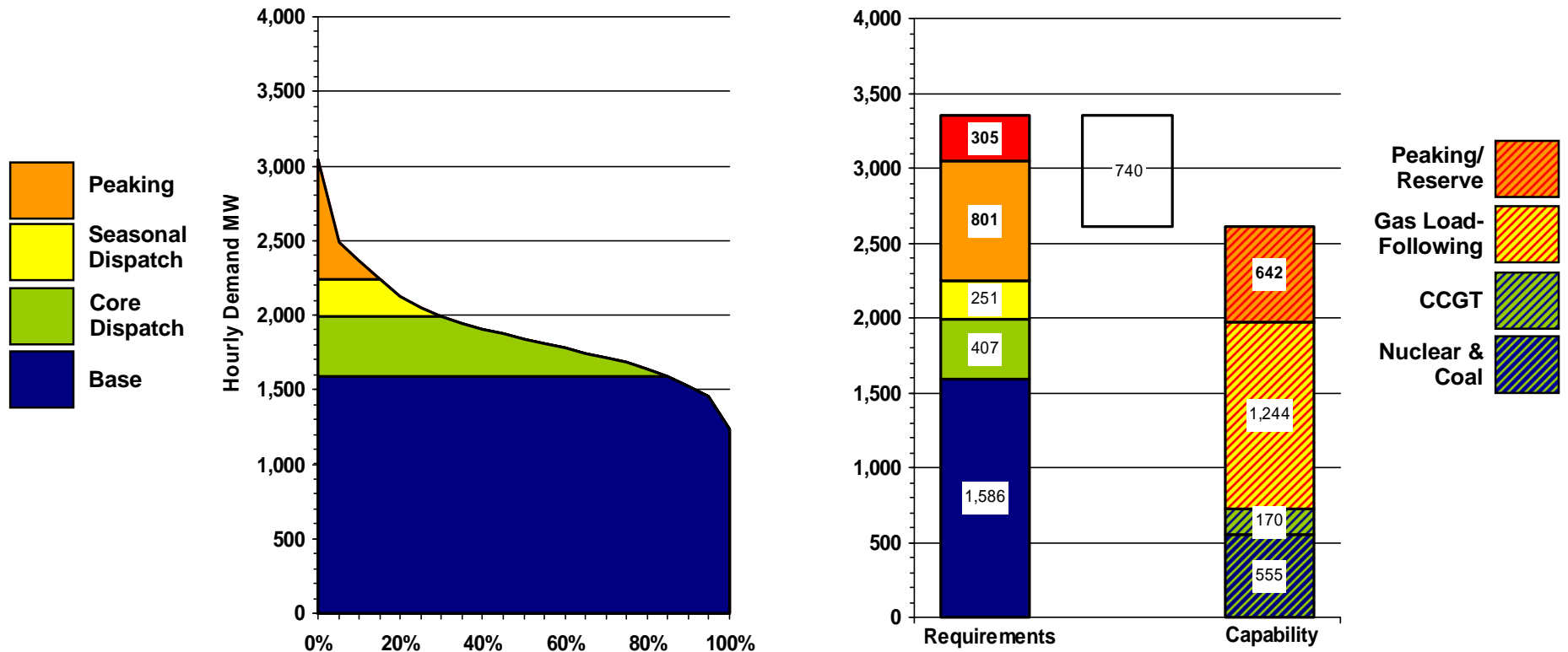
Operating Company requirements assume a ten percent reserve margin planning guideline. Supply requirements are intended as general guidelines for portfolio planning purposes without consideration of practical operational requirements. In assessing the portfolio relative to these guidelines, each unit has been assigned within a specific supply role. In actuality, the distinction between supply roles is neither sharp nor static.

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SUMMER 2008 RFP – JULY 28, 2008

## Current Resource Portfolio

ETI Long-term Resource Requirements and Capability for 2008



	Base Load	Core Dispatch	Seasonal Dispatch	Peaking Plus Reserve	Total
Resources (MW)	555	170	1,244	642	2,611
Requirement (MW)	1,586	407	251	1,106	3,350
Excess / (Deficit) (MW)	(1,031)	(237)	993	(464)	(740)

Operating Company requirements assume a ten percent reserve margin planning guideline.

Supply role requirements are intended as general guidelines for portfolio planning purposes without consideration of practical operational requirements. In assessing the portfolio relative to these guidelines, each unit has been assigned within a specific supply role. In actuality, the distinction between supply roles is neither sharp nor static.

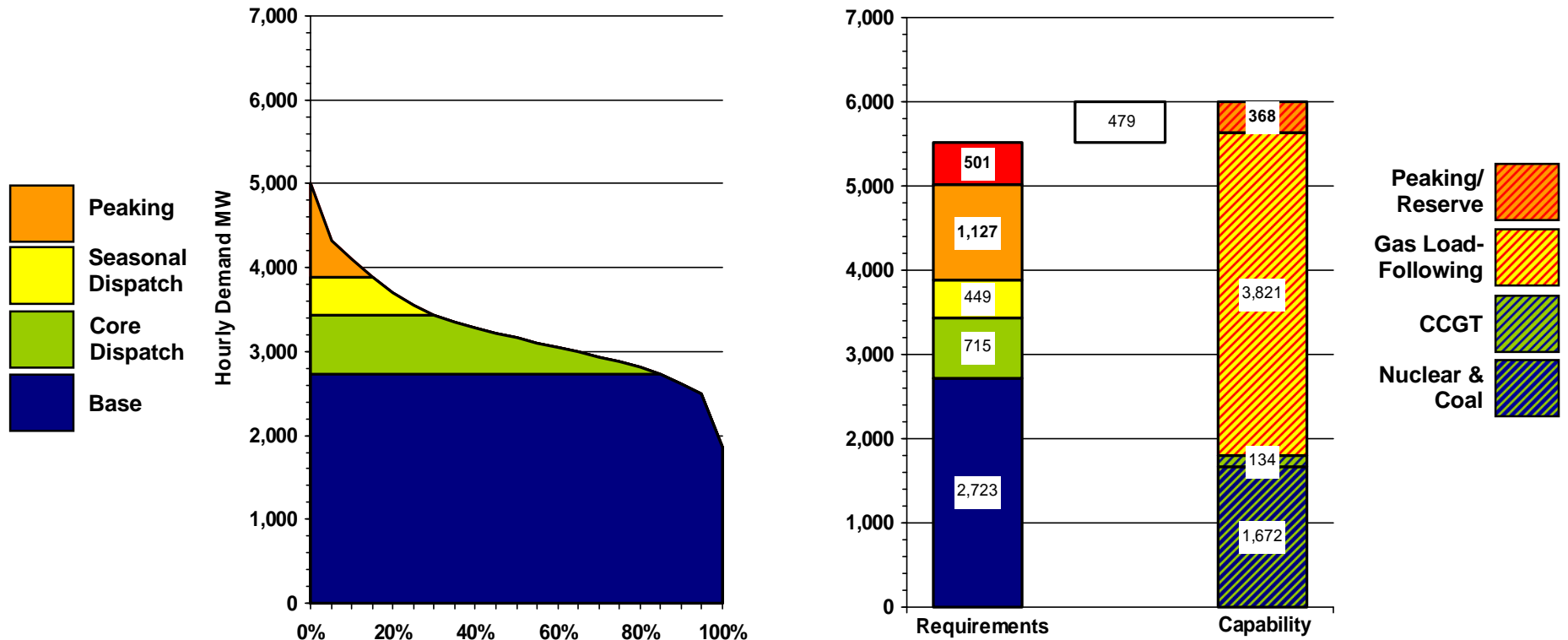
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## Current Resource Portfolio

ELL Long-term Resource Requirements and Capability for 2008



	Base Load	Core Dispatch	Seasonal Dispatch	Peaking Plus Reserve	Total
Resources (MW)	1,672	134	3,821	368	5,995
Requirement (MW)	2,723	715	449	1,629	5,516
Excess / (Deficit) (MW)	(1,051)	(581)	3,372	(1,261)	479

Operating Company requirements assume a ten percent reserve margin planning guideline.

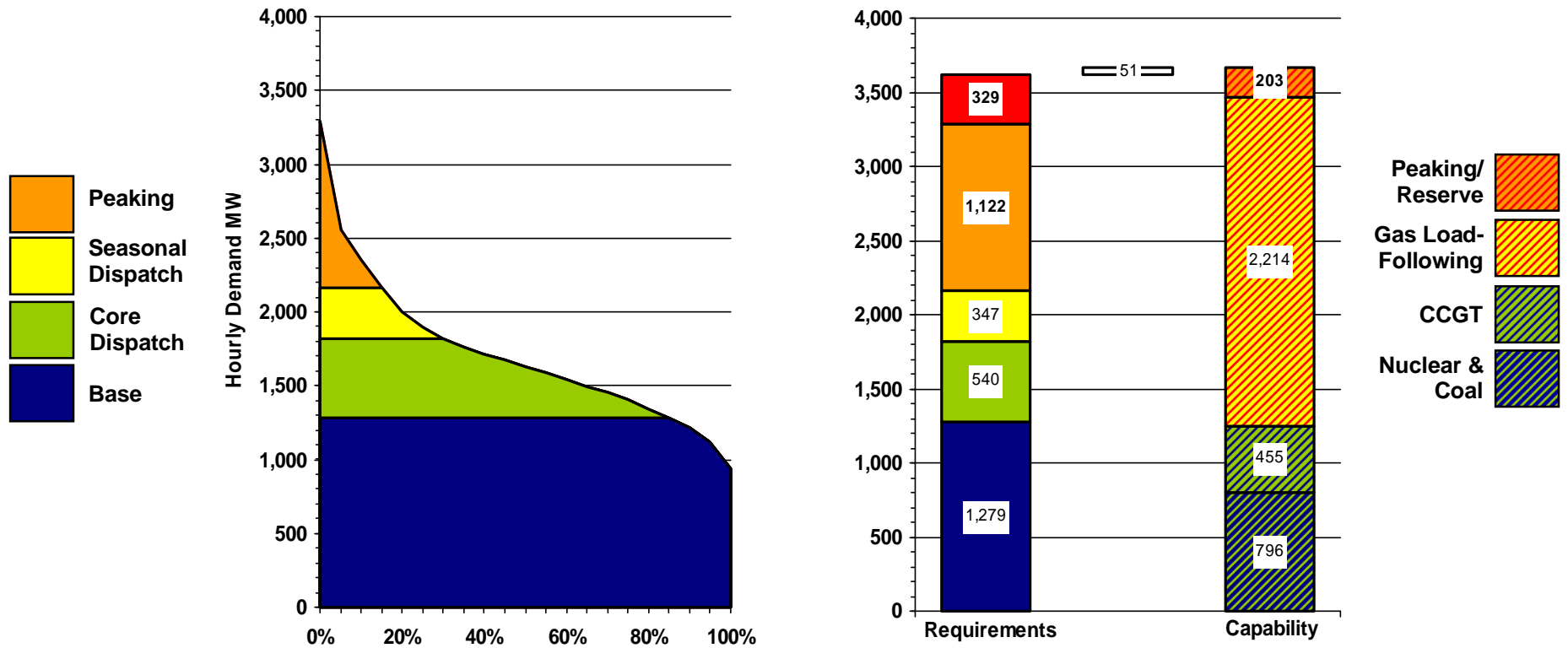
Supply role requirements are intended as general guidelines for portfolio planning purposes without consideration of practical operational requirements. In assessing the portfolio relative to these guidelines, each unit has been assigned within a specific supply role. In actuality, the distinction between supply roles is neither sharp nor static.

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## Current Resource Portfolio

EMI Long-term Resource Requirements and Capability for 2008



	Base Load	Core Dispatch	Seasonal Dispatch	Peaking Plus Reserve	Total
Resources (MW)	796	455	2,214	203	3,668
Requirement (MW)	1,279	540	347	1,451	3,617
Excess / (Deficit) (MW)	(484)	(85)	1,867	(1,248)	51

Operating Company requirements assume a ten percent reserve margin planning guideline.

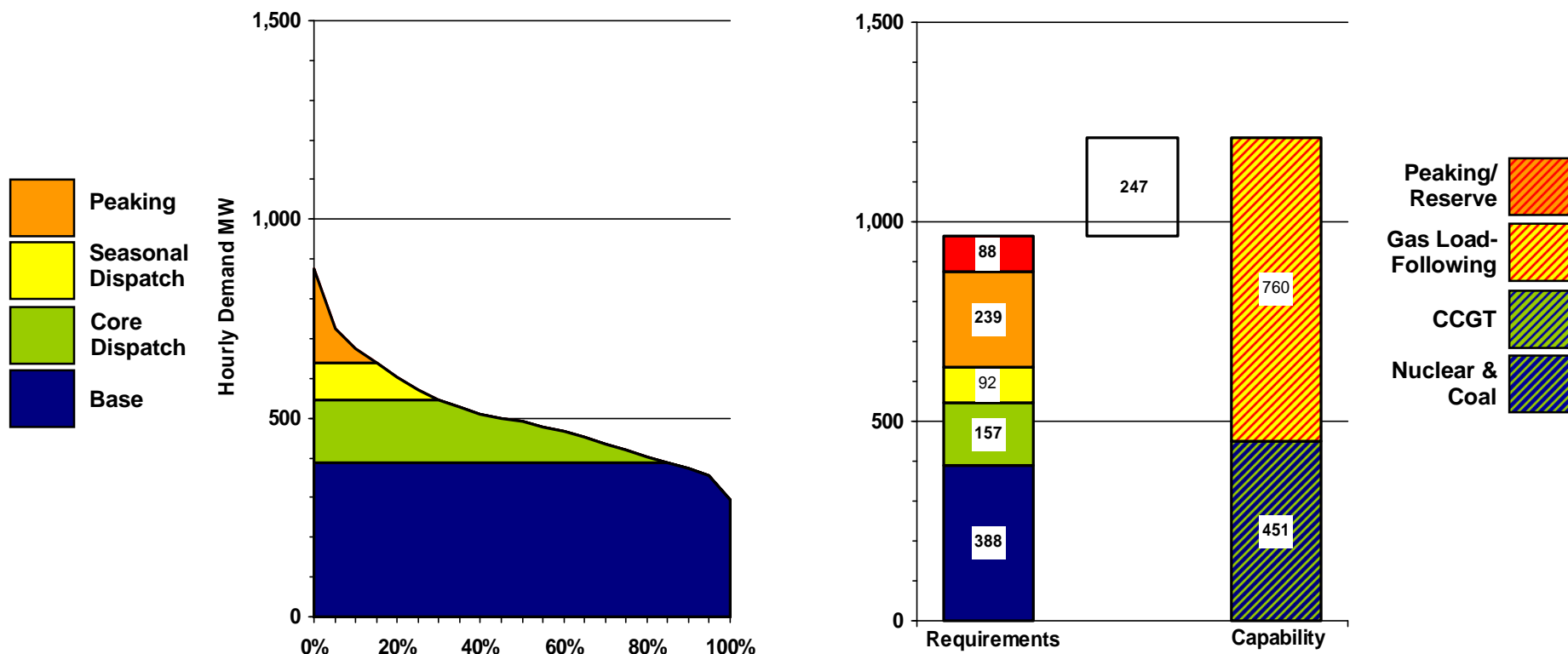
Supply role requirements are intended as general guidelines for portfolio planning purposes without consideration of practical operational requirements. In assessing the portfolio relative to these guidelines, each unit has been assigned within a specific supply role. In actuality, the distinction between supply roles is neither sharp nor static.

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## Current Resource Portfolio

ENO Long-term Resource Requirements and Capability for 2008



	Base Load	Core Dispatch	Seasonal Dispatch	Peaking Plus Reserve	Total
Resources (MW)	451	0	760	0	1,211
Requirement (MW)	388	157	92	327	964
Excess / (Deficit) (MW)	63	(157)	668	(327)	247

Operating Company requirements assume a ten percent reserve margin planning guideline.

Supply role requirements are intended as general guidelines for portfolio planning purposes without consideration of practical operational requirements. In assessing the portfolio relative to these guidelines, each unit has been assigned within a specific supply role. In actuality, the distinction between supply roles is neither sharp nor static.

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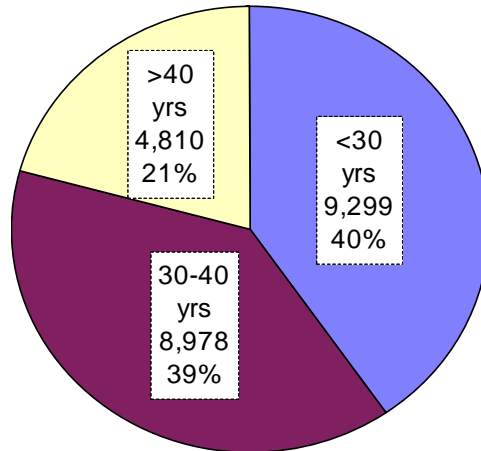
## Current Resource Portfolio

### PORTFOLIO DESCRIPTION – CAPACITY

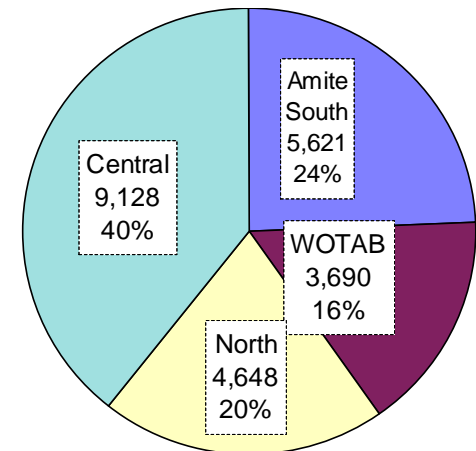
Current supply resources can be characterized by their age, fuel type, location in the System and role that they serve in the portfolio. System capacity is predominantly older gas-fired generation. Over 20% of the existing resource base (about 5,800 MW) is over 40 years old. Over two thirds of the resources (over 15,500 MW) are gas fired. Despite the predominance of gas-fired capacity in the portfolio, baseload energy is produced by newer, lower cost nuclear, coal and combined-cycle gas generators. Approximately 40% (over 9,000 MW) of the supply portfolio is comprised of these newer generators.

Existing generating capacity generally benefits from a well established and redundant infrastructure. Most of the System’s gas-fired generators have multiple fuel sources available to them and a number of these units are also capable of running on fuel oil in the event of gas supply disruptions. In addition, most units have redundant transmission outlet capacity and are qualified as Network Resources for the purpose of delivering power to network customers.

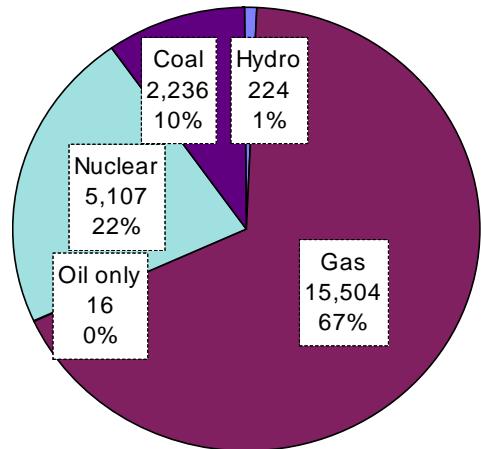
**System Portfolio by Age**



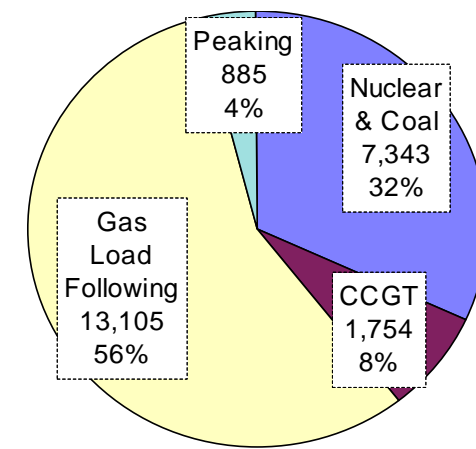
**System Portfolio by Region**



**System Portfolio by Fuel**



**System Portfolio by Role**



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## Current Resource Portfolio

### PORTFOLIO DESCRIPTION – ENERGY

Nuclear & Coal assets, while comprising only 32% of capacity, account for 70% of the generation produced by the System's owned resources.

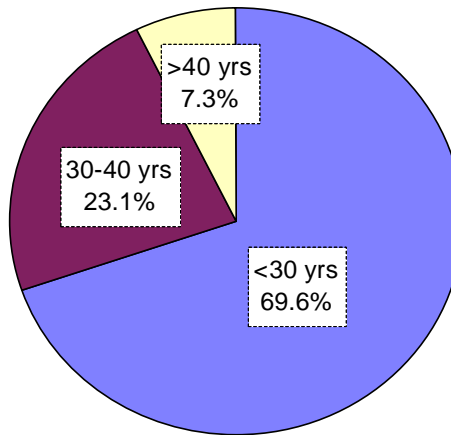
Plants over 40 years old are used primarily for peaking and seasonal load following purposes. These units account for less than 10% of the energy produced by the System's owned resources.

Generation produced by the System's owned resources account for about 70% of the System energy requirements. About 30% of energy needs have been served by purchased power in recent years.

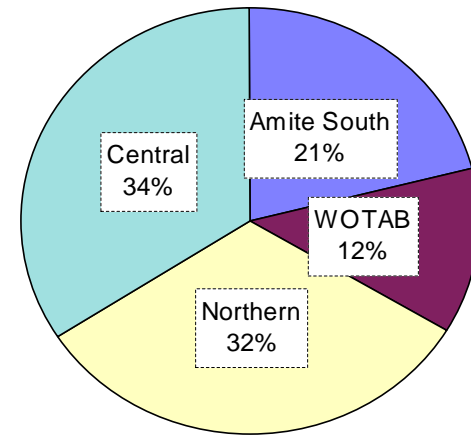
#### Notes & Assumptions:

- These charts do not include energy purchased from the wholesale market.
- Generation measured is the average at each unit between 2005-2007.
- Average yearly system generation, 2005-2007 = 79.8 million MW-hr

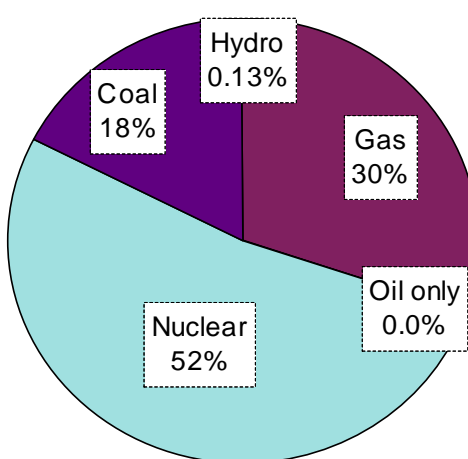
**System Portfolio by Age**



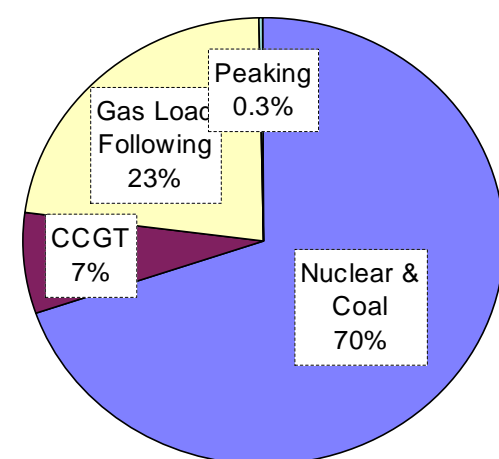
**System Portfolio by Region**



**System Portfolio by Fuel**



**System Portfolio by Role**



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*Flexible Capability Requirements*

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## Flexible Capability Requirements

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### Need for Flexible Capability

- The System must, at all times, maintain a balance between the amount of electricity produced by its resources and the amount of energy that customers interconnected to the System are using. Maintaining this balancing must take into account the dynamics of an ever changing, unpredictable load and multiple challenges presented by the physical and mechanical capabilities of the units that are used to generate electricity.
- Factors such as load volatility caused by changes in weather or by inherent characteristics of industrial operations, the need for meeting energy imbalances caused by independent power producers interconnected to the System, and the need to absorb energy that may be put to the System by cogenerators are outside of the control of the System. These are factors that must be managed, but cannot be controlled.
- To make certain that the System can address these uncertainties, the System must have a sufficient amount of flexible capability committed and operating to ensure reliable service. This amount is typically on the order of 4,000 to 6,000 MWs of committed available capacity, and is occasionally as much as 9,000 MW.

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## Flexible Capability Requirements

*Illustrative*

The System must commit sufficient dispatchable capacity with adequate fuel supply to ensure ability to respond to changing load levels and System conditions.

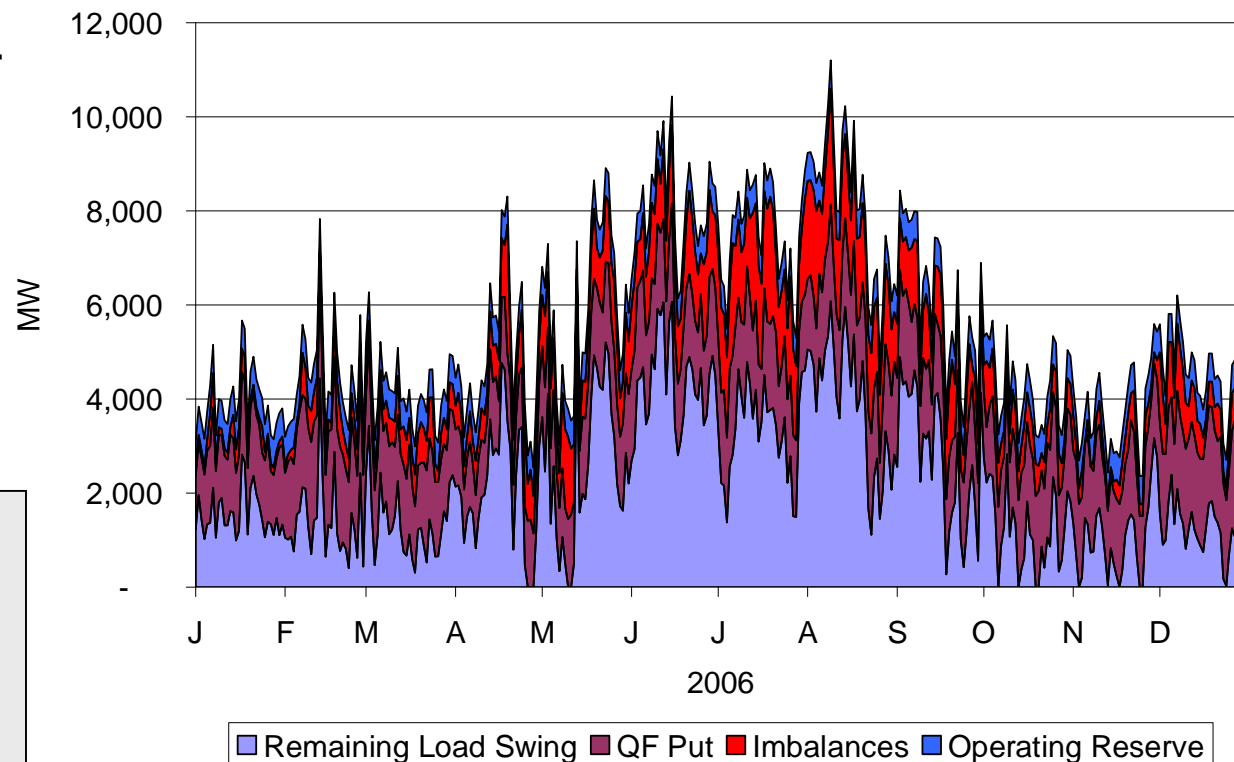
### Key Drivers of Flexible Capacity Need

1. **Load Swing**
2. **QF Put**
3. **Generator Imbalances**
4. **Operating Reserves**

**Note**

- Remaining Load Swing represents load levels after consideration of block energy purchases that were used to meet System load swing requirements.

Flexible Capacity Requirement



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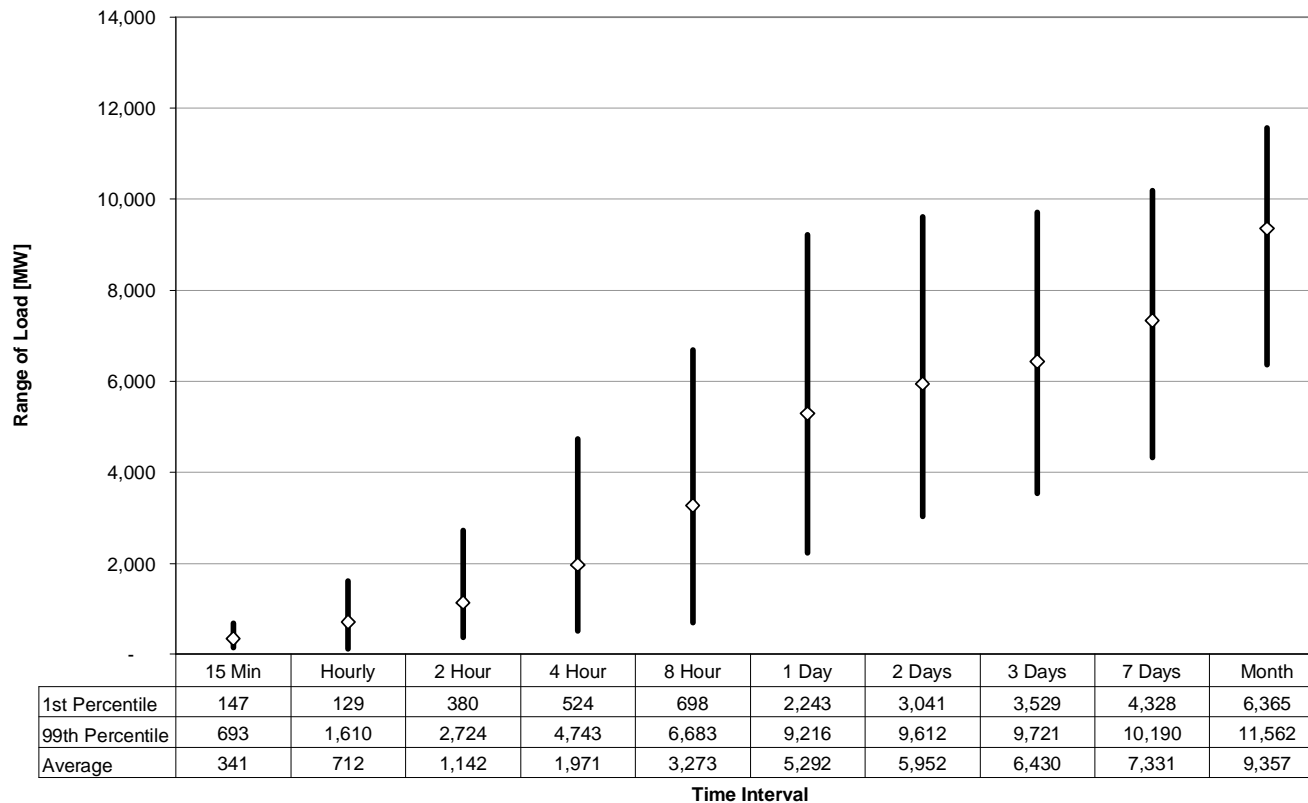
SUMMER 2008 RFP – JULY 28, 2008



## Flexible Resource Requirements – Load Related

System load varies significantly from minute-to-minute and hour-to-hour. In order to meet the changes in load, the System requires a substantial amount of flexible load following capacity ready and available to the System Dispatcher to generate electricity. In 2006, within a 15-minute period of time, load changed an average of 341 MW. One percent of the time, the load changed by 693 MW or more during a 15-minute period. During the same year, load changed an average of 5,292 MW in a 24-hour period. One percent of the time, the load changed by 9,216 MW or more during a 24-hour period.

**2006 Load Distribution, 98% Interval - 1st and 99th Percentiles**



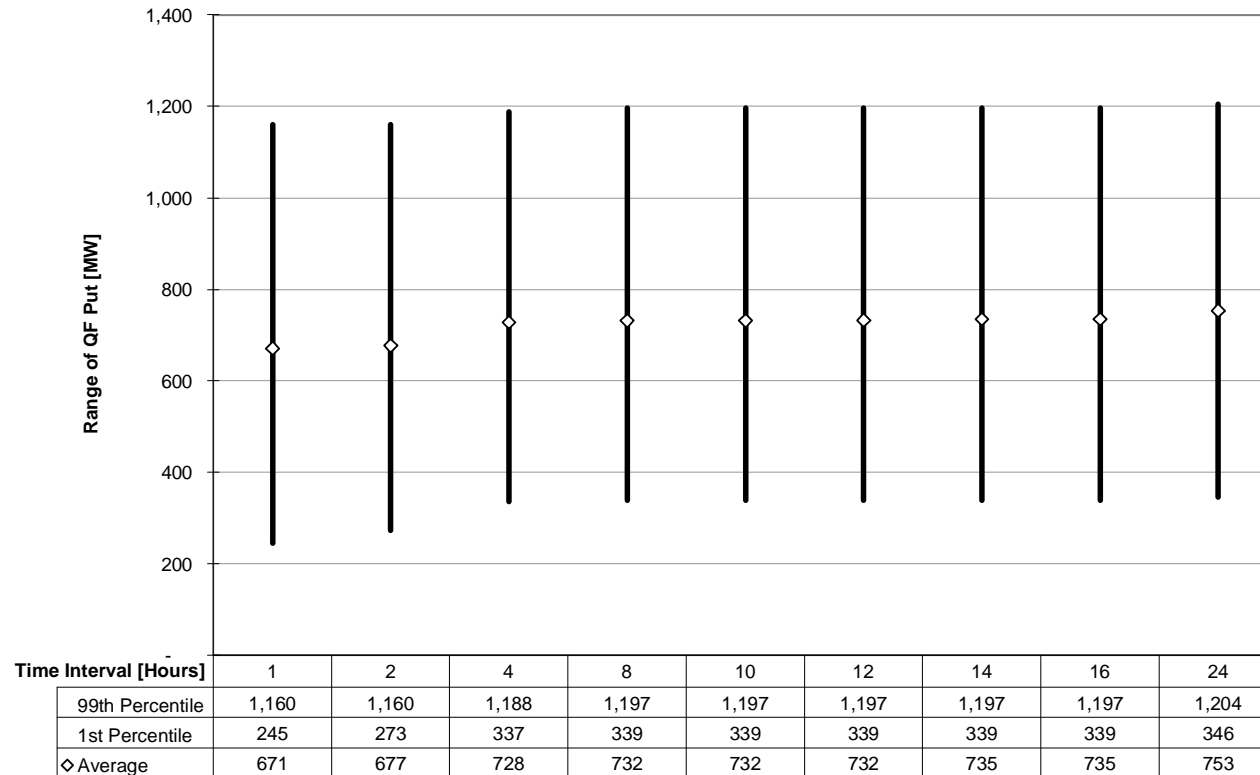
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## Flexible Resource Requirements – QF Put Related

The amount of energy put to the System by Qualifying Facilities varies significantly from minute-to-minute and hour-to-hour. Changes in the injection or retraction of QF Put energy requires the System to have a substantial amount of flexible load following capacity ready and available to the System Dispatcher to generate electricity. In 2006, within a 1-hour period of time, load changed an average of 671 MW. One percent of the time, the QF Put changed by 1,160 MW or more during a 1-hour period. During the same year, QF Put changed an average of 753 MW in a 24-hour period. One percent of the time, the QF Put changed by 1,204 MW or more during a 24-hour period.

**2006 Distribution of QF Put Range by Interval Length in Hours**



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## Flexible Capability Requirement

### Existing Portfolio

- The Entergy system currently uses its existing gas and oil generating units to provide load following capacity and operational flexibility. The almost 14,000 MW of gas and oil-fired capacity on the System can provide almost 10,000 MW of load following capability.
- The availability of flexible fuel supplies is critical to ensuring that generating units can actually operate in a flexible, load-following role. Many of the System’s gas and oil units have access to multiple pipelines which enables the System to operate the units in a more flexible manner. In addition, a subset of units also have dual-fuel capability and can burn fuel oil from storage on-site for added flexibility. In addition to fuel oil storage, the Sabine and Lewis Creek plant have access to gas storage facilities to provide flexible fuel supply and ensure fuel supply security.

<b>System Gas &amp; Oil</b>	<b>Max Cap MW</b>	<b>Min Cap MW</b>	<b>Room to Follow Load</b>	<b>Turndown Ratio</b>
EAI	1,498	248	1,250	6.0
EGSI	4,835	1,245	3,590	3.9
ELL	3,721	1,000	2,721	3.7
EMI	2,519	684	1,835	3.7
ENOI	805	210	595	3.8
	<b>13,378</b>	<b>3,387</b>	<b>9,991</b>	<b>3.9</b>

\* Max Cap Source: 2007 Summer Ratings Reported in FERC Form 1

\*\* Min Cap Source: Current Business Plan

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## Flexible Capability Requirement

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**Existing units provide wide operating range to meet flexible capability requirements.**

### Representative Units Providing Flexible Capability

Plant	Maximum Capacity MW	Minimum Capacity MW	Room to Follow Load	Turndown Ratio
Little Gypsy	1,198	255	943	4.7
Baxter Wilson	1,200	355	845	3.4
Nelson	653	215	438	3.0
Gerald Andrus	741	205	536	3.6
Michoud	760	210	550	3.6
Ninemile	1,705	490	1,215	3.5
Sabine	1,814	410	1,404	4.4
Lewis Creek	459	140	319	3.3
	<b>8,530</b>	<b>2,280</b>	<b>6,250</b>	<b>3.7</b>

**Note: A typical 2x1 CCGT configuration operates at a minimum load of approximately 300 MW with the ability to ramp to 500 to 600 MW depending on design, resulting in a maximum turn down ratio of 2.0.**

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SUMMER 2008 RFP – JULY 28, 2008

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*Load Forecast*

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## Load Forecast

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### Process

- The SSRP includes a detailed process for forecasting future loads. This process begins with the preparation of a monthly retail energy sales forecast for each revenue class for each Operating Company, the “Retail Sales Forecast.” This Retail Sales Forecast is developed using econometric forecasting techniques. Simultaneously, the Wholesale Marketing group prepares a Wholesale Energy Sales Forecast, based on detailed knowledge about the future needs of those wholesale customers. The Energy Sales Forecast is used to develop a 10-year, hourly load forecast through a process that allocates retail and wholesale energy forecasts to each hour based on historical load shapes. Each jurisdiction is modeled using a bottom-up approach, which starts with an hourly forecast for each retail class and wholesale customer.
- Peak loads are projected on both a peak and firm-peak basis. The later reflects the removal of load served under interruptible service tariffs.

### Historical Patterns

- Since 2000, the Entergy System’s peak load, as measured by weather adjusted peaks, has grown at a rate of 0.01% per year. Several factors have accounted for the relatively low growth rate:
  - Cogeneration load losses have reduced regional load by nearly 3 GWs since 2000.
  - Several ammonia manufactures shut down permanently in the face of unfavorable economic conditions including high natural gas prices.
  - Hurricanes Katrina and Rita struck the region in 2005.
  - Energy efficiency in residential and commercial HVAC equipment has improved.
- Most recently the Entergy 2007 peak grew by 0.2% from 2006. Prior to Hurricane Katrina, the Entergy peak grew by 0.4% from 2000 to 2005.

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## Load Forecast

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### Projected Load Growth

- The load forecast underlying the 2008 SSRP projects the System's firm peak load growth to average about 1.4% per year from 2007 to 2017. The System's projected 2008 firm peak is 20,732 MW and grows to 23,395 MW by 2017.

### Emerging Trends

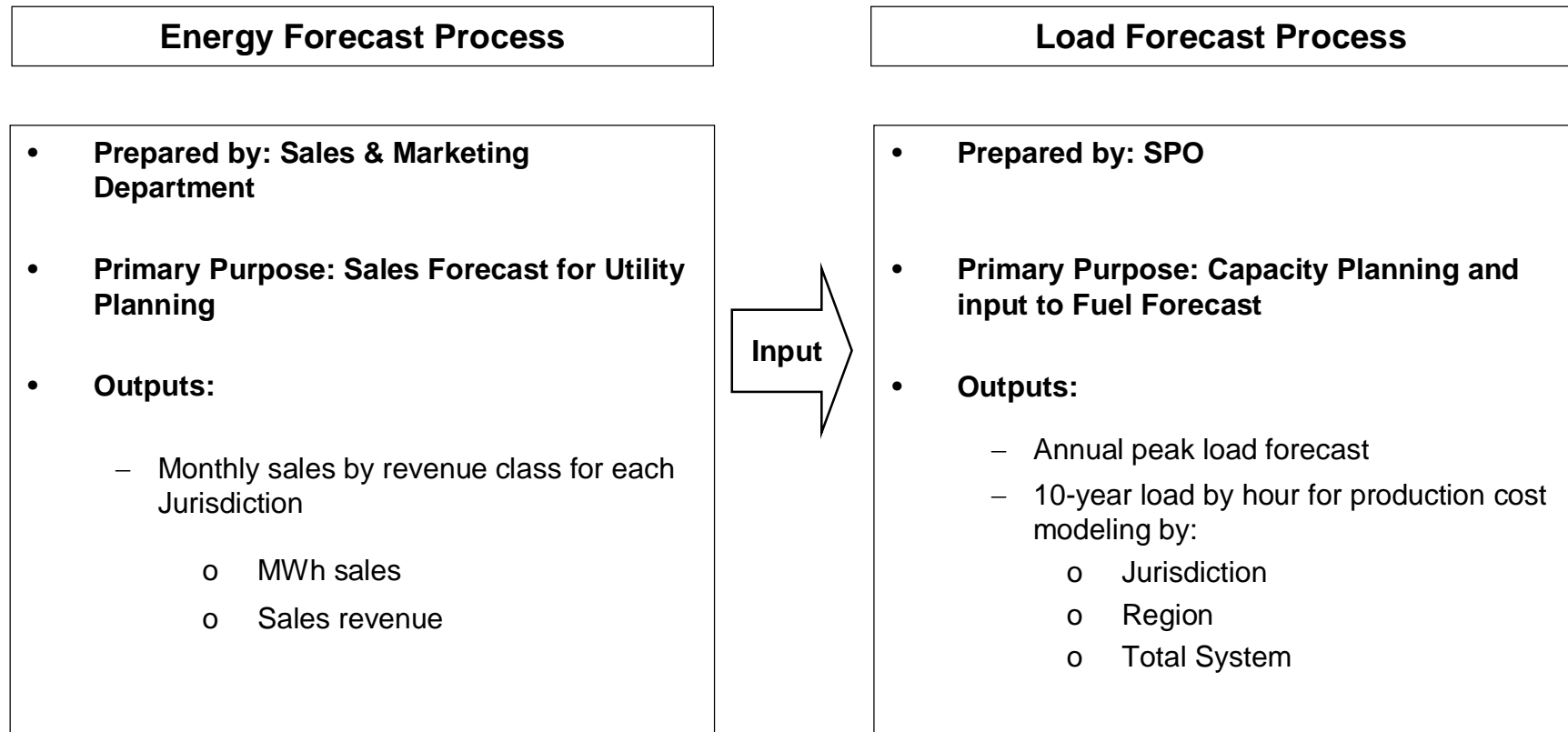
- One of the key issues influencing load trends within the region is a greater interest in energy efficiency. A number of factors including environmental concerns and energy prices are stimulating greater interest in energy efficiency measures in the U.S. At the same time customer usage is changing in ways that may increase demand for electricity.
  - Lighting, HVAC, and more efficient appliances present downside risk to energy sales and peak load projections as these efficiencies result in less use of electricity per customer.
  - New consumer electronics, such as flat panel TVs, computers and video games boost total energy use. In the case of TVs new units often use more electricity than smaller tube televisions and do not necessarily result in the retirement of the old unit.
  - In general, the real estate stock is becoming larger but more efficient. New homes tend to be more energy efficient but larger in size with which increase energy use.
- Utility sponsored DSM programs have reemerged as programs of interest, and the effect of these programs on load is potentially significant.

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## Load Forecast

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- **The Energy Forecast is a critical input to the Load Forecast.**

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## Load Forecast

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In recent years the peak load forecasting process has resulted in improved forecast accuracy.

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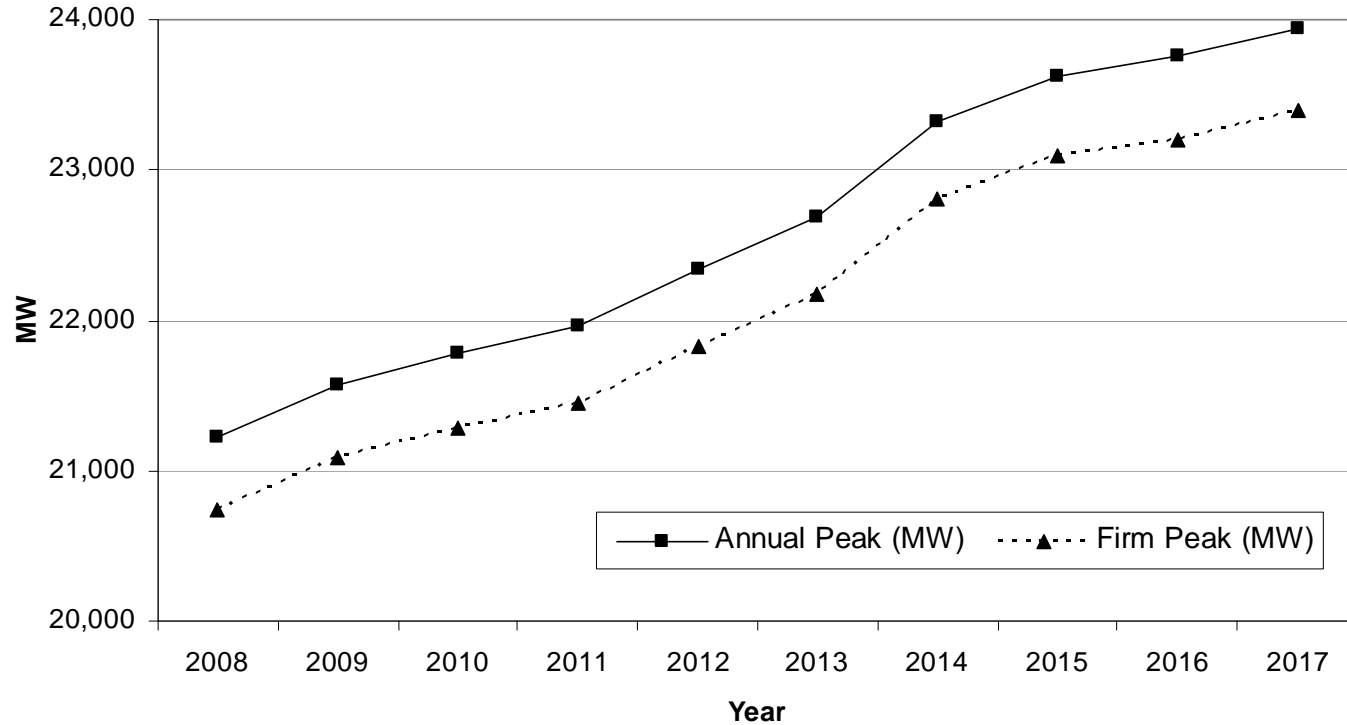
Peak Year	Forecast (Prepared)	Forecast Peak (MW)	Peak Day	Weather-Adjusted Peak (MW)	Forecast Error	
2007	2008 Business Plan (Jul 2007)	21,079	August 14, 2007	20,970	109 MW	0.5%
2006	2007 Business Plan (Aug 2006)	20,778	August 15, 2006	20,922	-144 MW	-0.7%
2005	2006 Business Plan (Aug 2005)	21,605	July 25, 2005	21,391	214 MW	1.0%
2004	2005 Business Plan (Aug 2004)	21,323	July 15, 2004	21,652	-329 MW	-1.5%

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Load Forecast

**Reference Case Peak Load Forecast**  
**Entergy Utility Annual and Firm Peaks**



Forecast Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Annual Peak (MW)	21,221	21,570	21,786	21,956	22,336	22,686	23,323	23,629	23,756	23,944
Firm Peak (MW)	20,732	21,092	21,290	21,444	21,830	22,168	22,803	23,092	23,205	23,395

- Firm Peak reflects the removal of load served under interruptible service tariffs.

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Load Forecast

System Peak Load Forecast for 2008 – 2017 SSRP Update

<b>Forecast Year</b>	<b>Annual Peak</b>	<b>Annual Peak Growth</b>	<b>Firm Peak</b>	<b>Firm Peak Growth</b>
<b>2008</b>	21,221		20,732	
<b>2009</b>	21,570	1.6%	21,092	1.7%
<b>2010</b>	21,786	1.0%	21,290	0.9%
<b>2011</b>	21,956	0.8%	21,444	0.7%
<b>2012</b>	22,336	1.7%	21,830	1.8%
<b>2013</b>	22,686	1.6%	22,168	1.5%
<b>2014</b>	23,323	2.8%	22,803	2.9%
<b>2015</b>	23,629	1.3%	23,092	1.3%
<b>2016</b>	23,756	0.5%	23,205	0.5%
<b>2017</b>	23,944	0.8%	23,395	0.8%
<b>CAGR 2008 - 2017</b>		1.4%		1.4%

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Load Forecast

Peak Load Forecast for 2008 – 2017 SSRP Update  
(Non-Firm Coincident Peak By Jurisdictions)

Forecast Year	EAI		ELL		EMI		ENOI		EGS-LA		ETI		Entergy System	
	Peak	Growth	Peak	Growth	Peak	Growth	Peak	Growth	Peak	Growth	Peak	Growth	Peak	Growth
<b>2008</b>	4,820		5,322		3,301		910		3,788		3,081		21,221	
<b>2009</b>	4,898	1.6%	5,336	0.3%	3,372	2.2%	926	1.8%	3,856	1.8%	3,182	3.3%	21,570	1.6%
<b>2010</b>	4,894	-0.1%	5,484	2.8%	3,383	0.3%	935	1.0%	3,828	-0.7%	3,262	2.5%	21,786	1.0%
<b>2011</b>	4,864	-0.6%	5,592	2.0%	3,402	0.6%	943	0.8%	3,877	1.3%	3,278	0.5%	21,956	0.8%
<b>2012</b>	4,959	2.0%	5,722	2.3%	3,430	0.8%	949	0.6%	3,927	1.3%	3,349	2.2%	22,336	1.7%
<b>2013</b>	4,970	0.2%	5,799	1.4%	3,549	3.5%	962	1.3%	4,011	2.1%	3,394	1.3%	22,686	1.6%
<b>2014</b>	5,316	7.0%	5,872	1.3%	3,592	1.2%	967	0.6%	4,095	2.1%	3,480	2.5%	23,323	2.8%
<b>2015</b>	5,391	1.4%	5,905	0.6%	3,673	2.3%	992	2.6%	4,125	0.7%	3,542	1.8%	23,629	1.3%
<b>2016</b>	5,418	0.5%	5,896	-0.2%	3,659	-0.4%	1,001	0.9%	4,171	1.1%	3,610	1.9%	23,756	0.5%
<b>2017</b>	5,357	-1.1%	5,979	1.4%	3,696	1.0%	1,015	1.3%	4,214	1.0%	3,684	2.1%	23,944	0.8%
<b>CAGR 2008 - 2017</b>	1.2%		1.3%		1.3%		1.2%		1.2%		2.0%		1.4%	

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Load Forecast

Peak Load Forecast for 2008 – 2017 SSRP Update  
(Non-Firm Non-Coincident Peak By Jurisdictions)

Forecast Year	EAI		ELL		EMI		ENOI		EGS-LA		ETI		Entergy System	
	Peak	Growth	Peak	Growth	Peak	Growth	Peak	Growth	Peak	Growth	Peak	Growth	Peak	Growth
<b>2008</b>	4,939		5,322		3,316		910		3,798		3,081		21,221	
<b>2009</b>	4,928	-0.2%	5,477	2.9%	3,428	3.4%	926	1.8%	3,886	2.3%	3,182	3.3%	21,570	1.6%
<b>2010</b>	4,925	-0.1%	5,614	2.5%	3,457	0.8%	935	1.0%	3,950	1.6%	3,262	2.5%	21,786	1.0%
<b>2011</b>	4,947	0.4%	5,694	1.4%	3,486	0.9%	943	0.8%	4,019	1.8%	3,278	0.5%	21,956	0.8%
<b>2012</b>	4,982	0.7%	5,722	0.5%	3,501	0.4%	949	0.6%	4,024	0.1%	3,349	2.2%	22,336	1.7%
<b>2013</b>	5,044	1.2%	5,801	1.4%	3,549	1.4%	962	1.3%	4,068	1.1%	3,394	1.3%	22,686	1.6%
<b>2014</b>	5,322	5.5%	5,872	1.2%	3,614	1.8%	974	1.3%	4,148	2.0%	3,480	2.5%	23,323	2.8%
<b>2015</b>	5,391	1.3%	5,906	0.6%	3,723	3.0%	992	1.8%	4,227	1.9%	3,542	1.8%	23,629	1.3%
<b>2016</b>	5,505	2.1%	5,950	0.7%	3,742	0.5%	1,001	0.9%	4,318	2.1%	3,610	1.9%	23,756	0.5%
<b>2017</b>	5,676	3.1%	6,011	1.0%	3,779	1.0%	1,015	1.3%	4,363	1.0%	3,684	2.1%	23,944	0.8%
<b>CAGR 2008 - 2017</b>	1.6%		1.4%		1.5%		1.2%		1.6%		2.0%		1.4%	

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Load Forecast

Peak Load Forecast for 2008 – 2017 SSRP Update  
(Firm Coincident Peak By Jurisdictions)

Forecast Year	EAI		ELL		EMI		ENOI		EGS-LA		ETI		Entergy System	
	Peak	Growth	Peak	Growth	Peak	Growth	Peak	Growth	Peak	Growth	Peak	Growth	Peak	Growth
<b>2008</b>	4,759		5,015		3,272		877		3,764		3,046		20,732	
<b>2009</b>	4,836	1.6%	5,008	-0.1%	3,344	2.2%	891	1.7%	3,831	1.8%	3,182	4.5%	21,092	1.7%
<b>2010</b>	4,832	-0.1%	5,140	2.6%	3,354	0.3%	899	0.9%	3,803	-0.7%	3,262	2.5%	21,290	0.9%
<b>2011</b>	4,802	-0.6%	5,237	1.9%	3,373	0.6%	905	0.7%	3,849	1.2%	3,278	0.5%	21,444	0.7%
<b>2012</b>	4,897	2.0%	5,372	2.6%	3,401	0.8%	911	0.6%	3,901	1.3%	3,349	2.2%	21,830	1.8%
<b>2013</b>	4,906	0.2%	5,439	1.3%	3,520	3.5%	923	1.3%	3,985	2.2%	3,394	1.3%	22,168	1.5%
<b>2014</b>	5,252	7.0%	5,511	1.3%	3,563	1.2%	928	0.6%	4,069	2.1%	3,480	2.5%	22,803	2.9%
<b>2015</b>	5,326	1.4%	5,530	0.3%	3,643	2.3%	952	2.6%	4,098	0.7%	3,542	1.8%	23,092	1.3%
<b>2016</b>	5,353	0.5%	5,510	-0.4%	3,630	-0.4%	961	0.9%	4,141	1.0%	3,610	1.9%	23,205	0.5%
<b>2017</b>	5,291	-1.2%	5,594	1.5%	3,666	1.0%	973	1.3%	4,186	1.1%	3,684	2.1%	23,395	0.8%
<b>CAGR 2008 - 2017</b>	1.2%		1.2%		1.3%		1.2%		1.2%		2.1%		1.4%	

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Load Forecast

Peak Load Forecast for 2008 – 2017 SSRP Update  
(Firm Non-Coincident Peak By Jurisdictions)

Forecast Year	EAI		ELL		EMI		ENOI		EGS-LA		ETI		Entergy System	
	Peak	Growth	Peak	Growth	Peak	Growth	Peak	Growth	Peak	Growth	Peak	Growth	Peak	Growth
<b>2008</b>	4,874		5,015		3,288		877		3,774		3,046		20,732	
<b>2009</b>	4,863	-0.2%	5,145	2.6%	3,400	3.4%	891	1.7%	3,862	2.3%	3,182	4.5%	21,092	1.7%
<b>2010</b>	4,859	-0.1%	5,253	2.1%	3,429	0.9%	899	0.9%	3,925	1.6%	3,262	2.5%	21,290	0.9%
<b>2011</b>	4,881	0.4%	5,326	1.4%	3,458	0.9%	905	0.7%	3,992	1.7%	3,278	0.5%	21,444	0.7%
<b>2012</b>	4,917	0.7%	5,372	0.9%	3,473	0.4%	911	0.6%	3,999	0.2%	3,349	2.2%	21,830	1.8%
<b>2013</b>	4,978	1.2%	5,440	1.3%	3,520	1.4%	923	1.3%	4,040	1.0%	3,394	1.3%	22,168	1.5%
<b>2014</b>	5,260	5.7%	5,511	1.3%	3,585	1.8%	935	1.3%	4,121	2.0%	3,480	2.5%	22,803	2.9%
<b>2015</b>	5,326	1.3%	5,530	0.3%	3,694	3.0%	952	1.8%	4,201	1.9%	3,542	1.8%	23,092	1.3%
<b>2016</b>	5,437	2.1%	5,550	0.4%	3,713	0.5%	961	0.9%	4,288	2.1%	3,610	1.9%	23,205	0.5%
<b>2017</b>	5,607	3.1%	5,616	1.2%	3,749	1.0%	973	1.3%	4,336	1.1%	3,684	2.1%	23,395	0.8%
<b>CAGR 2008 - 2017</b>	1.6%		1.3%		1.5%		1.2%		1.6%		2.1%		1.4%	

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## Load Forecast

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### Load Uncertainties

- The SSRP Update recognizes that projected peak load is subject to a number of uncertainties. SPO develops load forecast sensitivity cases to assess the affect that load uncertainty outcomes could have on resource needs.
- The current forecast incorporates internally developed assumptions regarding business strategies that could change over time. Changes in assumptions such as the evolution of each Operating Company's wholesale strategy or the level of Operating Company sponsored demand-side management efforts could affect projected load and the resulting resource requirements.
- External events in the global or national economy could present upside or downside risks to the forecast.
- Several alternatives are available to the System to balance the generation portfolio over the planning horizon in response to changing capacity needs resulting from load levels, including:
  - Accelerate or delay the timing of long-term resource additions;
  - Decelerate the timing of unit deactivations;
  - Adjust the level of reliance on limited-term purchase power.

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*Fuel Forecast*

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## Fuel Forecast

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### Process

- SPO develops long-term forecasts for fuel price, including commodity and delivery components, as inputs to the planning process. SPO updates its fuel price forecasts at least annually and more often if circumstances require. The specifics of the forecasting methodology and the underlying data sources differ somewhat by fuel. However, in general, the forecasting methodology includes the following elements.
  - Reliance on information regarding actual traded markets (e.g. New York Mercantile Exchange (“NYMEX”) futures contracts) especially in the near-term in which such traded markets may be most liquid;
  - Consideration of third party forecasts (including those of leading consulting firms) for long-term periods;
  - Development of multiple forecast sensitivities to recognize the uncertainties in long-term fuel pricing.

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## Fuel Forecast

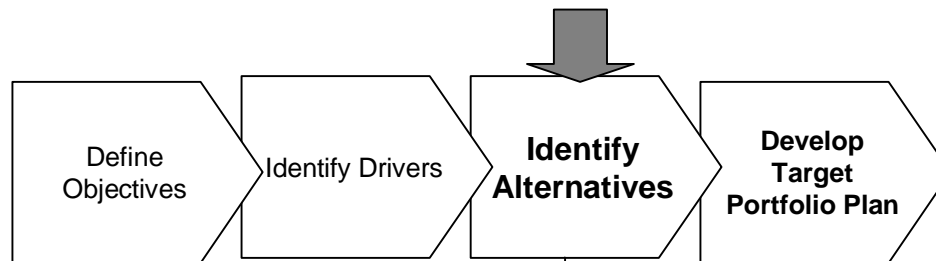
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### Natural Gas Price Forecast

- Prices for natural gas in the future are highly uncertain. An indication of future prices, at least in the near term, is provided by New York Mercantile Exchange (“NYMEX”) futures contracts for gas. However, the farther out into the future the NYMEX futures contracts extend, the less reliable they become as indications of gas price levels in future periods because the market appears to be less liquid. SPO relies on NYMEX futures gas prices to develop the near-term portion of its Reference Case Long-term Natural Gas Price Forecast. These prices are then assumed to trend toward a longer-term price level that is determined largely based on information provided by leading consulting firms. SPO’s Reference Case Long-term Natural Gas Price Forecast assumes that long-term gas prices will trend toward levels between \$6 and \$8/mmBtu (2007 real\$) and then rise in real terms. However, SPO prepares and considers sensitivities above and below the Reference Case.

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The following sections of the Update describe alternatives for meeting Supply Objectives:

- *The Wholesale Power Market*
- *Resource Alternatives*

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*Wholesale Power Market*

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## Wholesale Power Market

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### Merchant Capacity

- Since 1999, a very large quantity of new gas-fired merchant generation has been constructed and interconnected to the Entergy System. Merchant capacity (including QFs and IPPs in service) went from a base of 1,260 MW in 2000 to the current level of over 17,000 MW.
- Early on the System recognized that this unprecedented influx of new gas-fired generation could present an opportunity to reduce cost for native load customers in two ways: (a) an opportunity to displace the fuel costs associated with operating Entergy's own generation and replacing it with potentially less expensive power purchased from merchant plants; and (b) an opportunity to avoid the need to build new plants by acquiring long term commitments from merchant plants, either through long-term contracts or through plant acquisitions.
- The Entergy System frequently is still portrayed by merchants and others as dispatching its own gas-fired generation and foregoing the opportunity to purchase lower-cost energy from merchant generators. The reality is that a significant portion of Entergy System gas-fired generation (both capacity and energy) has been displaced with purchases from the wholesale market.
  - Since 2000, the Entergy System has deactivated 21 generating units with a combined capacity of > 1,300 MW.
  - The output of older, gas-fired units has declined by approximately 58% while purchase power energy has increased by 45% from 1999 to 2007.
  - The portion of total Entergy System energy requirements provided by older, gas fired units has decreased from 35% to 15% between 1999 and 2007 due to the System's procurement efforts.

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## Wholesale Power Market

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### Procurement Activities

- The System is not limited to using resources that it actually owns to meet the needs of its customers. At all times, the System is looking for viable, cost effective power purchase options that could be used to meet customers' needs at lower cost than would be the case if owned resources were used – so long, of course, as reliability is maintained. The System purchases power instead of running its own facilities when it is economic to do so and is consistent with operational and reliability requirements. Such purchases may be as long as “life of unit” or as short as one hour. The System uses a series of procurement processes corresponding to varying terms of the purchases.
- The System generally acquires longer-term resources necessary to satisfy forecasted load requirements of the System through formal Request for Proposal (“RFP”) processes, either to surface appropriate opportunities to execute, or to market-test self-build options. The RFP process is also used to acquire limited-term (1 – 5-year) resources.
- Since 1999 the System’s planning and procurement efforts have resulted in a reduction in the output of the System’s gas-fired generation and an increase in the use of purchased power.
- The evaluation of supply options will consider the overall System requirements as well as the needs of each individual Operating Company including the possible withdrawal of certain Operating Companies from the System Agreement. As previously indicated, EAI provided notice on December 19, 2005 pursuant to Section 1.01 of the System Agreement that it will withdraw from the System Agreement. EMI provided similar notice to the Operating Companies on November 8, 2007. Resource planning decisions will reflect EAI’s and EMI’s notice to terminate participation in the current System Agreement by 12/18/2013 and 11/7/2015, respectively.

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## Wholesale Power Market

### RFP Results

RFP	Short-term 3rd Party	Limited-term Affiliate	Limited-term 3rd Party	Long-term Affiliate	Long-term 3rd Party	Total
Fall 2002	0 MW	185-206 MW <a href="#">Note 1</a>	231 MW	101-121 MW <a href="#">Note 2</a>	718 MW	1,235- 1,276 MW
January 2003 Supplemental	222 MW	n/a	n/a	n/a	n/a	222 MW
Spring 2003	n/a	0 MW	381 MW	<a href="#">Note 3</a>	0 MW	381 MW
Fall 2003	n/a	0 MW	390 MW	n/a	n/a	390 MW
Fall 2004	n/a	n/a	1,250 MW	n/a	n/a	1,250 MW
2006 Long-Term	n/a	n/a	n/a	538 MW <a href="#">Note 4</a>	789 MW	1,327 MW
Fall 2006	n/a	0 MW	780 MW	n/a	n/a	780 MW
January 2008 RFP ( <a href="#">Note 5</a> )	n/a	n/a	TBD	n/a	n/a	TBD
2008 Western Region RFP	n/a	n/a	TBD	n/a	n/a	TBD
<b>Total</b>	<b>222 MW</b>	<b>185-206 MW</b>	<b>3,032 MW</b>	<b>639 - 659 MW</b>	<b>1,507 MW</b>	<b>5,585-5,626 MW</b>

Note 1: Includes a conditional option to increase the Capacity up to the upper bound of the range.

Note 2: The contracted Capacity will increase from 101 MW to 121 MW in 2010.

Note 3: It should be noted that this table does not reflect the River Bend 30% life-of-unit power purchase agreements totaling approximately 300 MW between Entergy Gulf States, Inc. (“EGS”) and Entergy Louisiana, Inc. (“ELI”) and between EGS and Entergy New Orleans, Inc. (“ENO”) related to EGS’s unregulated portion of the River Bend nuclear station which portion was formerly owned by Cajun Electric Power Cooperative, Inc. or the Entergy Arkansas Inc. (“EAI”) wholesale baseload capacity life-of-unit power purchase agreements totaling approximately 220 MW between EAI and ELI and between EAI and ENO related to a portion of EAI’s coal and nuclear baseload resources (which were not included in retail rates) executed in 2003. That capacity was identified and selected outside of the RFP process, but was market-tested in the Spring 2003 RFP, as a result of which the propriety of the selection of those resources was confirmed.

Note 4: Little Gypsy 3

Note 5: At the direction of the Louisiana Public Service Commission (“LPSC”), but with full reservation of all legal rights, ESI issued the January 2008 RFP for Supply-Side Resources seeking fixed price unit contingent products. Although the LPSC request was directed to Entergy Gulf States Louisiana, L.L.C. and Entergy Louisiana, LLC, ESI issued the RFP on behalf of all Entergy Operating Companies.

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## Wholesale Power Market

### Reduced Reliance On Natural Gas-fired Generation

- The older gas-fired plants owned and operated by the System operating companies are producing significantly less energy than they did in 1999.

<b>EAI Gas &amp; Oil</b>	<b>1999 MWh</b>	<b>2007 MWh</b>	<b>% Change</b>
Blytheville	22,222	0	-100%
Cecil Lynch	143	32,966	22953%
Hamilton Moses	72,111	0	-100%
Harvey Couch	169,720	25,113	-85%
Lake Catherine	1,818,820	25,877	-99%
Mabelvale	7,811	5,852	-25%
Robert E Ritchie	293,027	0	-100%
	<u>2,383,854</u>	<u>89,808</u>	<u>-96%</u>

<b>EMI Gas &amp; Oil</b>	<b>1999 MWh</b>	<b>2007 MWh</b>	<b>% Change</b>
Baxter Wilson	4,481,301	1,699,990	-62%
Delta (MS)	290,617	0	-100%
Gerald Andrus	2,465,453	1,349,389	-45%
Rex Brown	497,102	158,998	-68%
	<u>7,734,473</u>	<u>3,208,377</u>	<u>-59%</u>

<b>EGSI Gas &amp; Oil</b>	<b>1999 MWh</b>	<b>2007 MWh</b>	<b>% Change</b>
Lewis Creek	2,952,703	1,884,337	-36%
Roy S Nelson	2,454,438	1,077,058	-56%
Sabine	9,556,589	4,501,097	-53%
Willow Glen	4,296,373	207,084	-95%
	<u>19,260,103</u>	<u>7,669,576</u>	<u>-60%</u>

<b>ENO Gas &amp; Oil</b>	<b>1999 MWh</b>	<b>2007 MWh</b>	<b>% Change</b>
A B Paterson	98,725	0	-100%
Michoud	3,422,196	1,854,800	-46%
	<u>3,520,921</u>	<u>1,854,800</u>	<u>-47%</u>

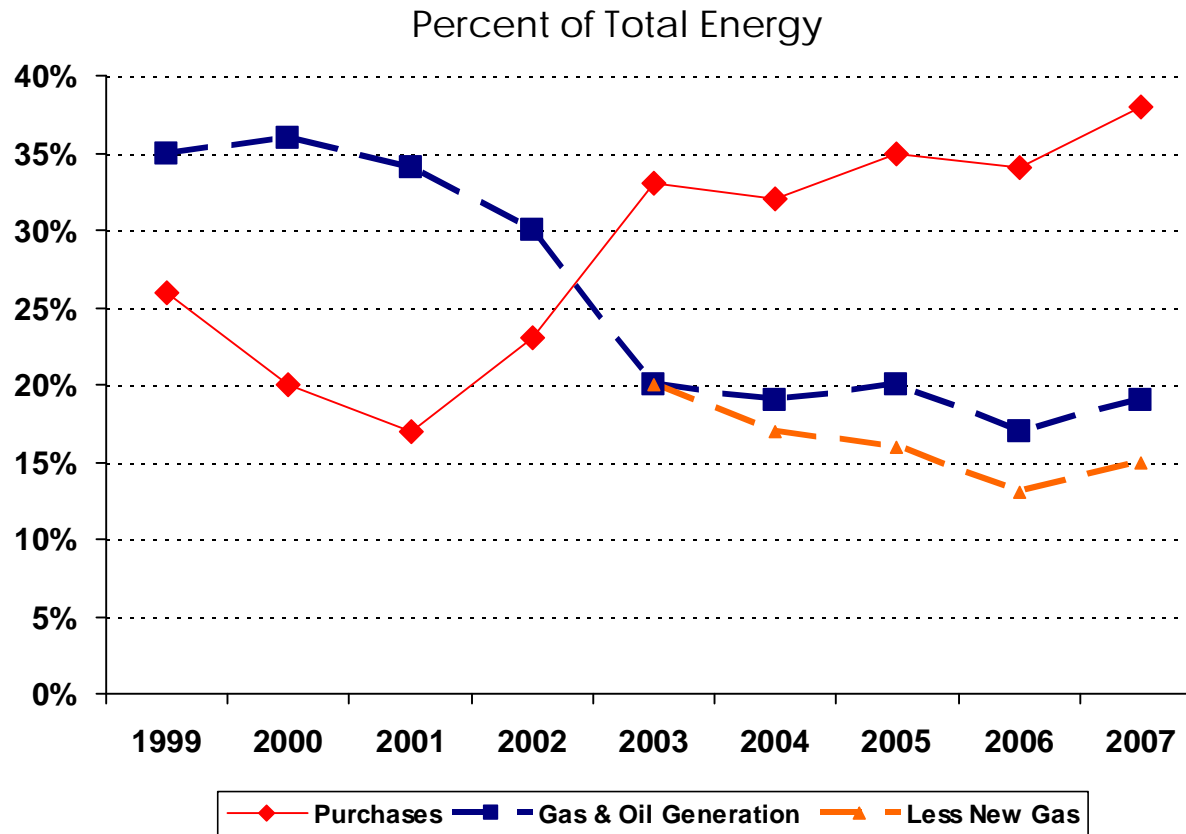
<b>ELL Gas &amp; Oil</b>	<b>1999 MWh</b>	<b>2007 MWh</b>	<b>% Change</b>
Buras	2,506	635	-75%
Little Gypsy	2,989,080	1,294,874	-57%
Monroe (LA)	14,883	0	-100%
Nine Mile Point LA	7,252,460	4,443,032	-39%
Sterlington	1,046,468	47,692	-95%
Waterford (LA)	2,274,507	545,332	-76%
	<u>13,579,904</u>	<u>6,331,565</u>	<u>-53%</u>

Source: FERC Form 1 Reports; Entergy annual net generation. For plants with no net positive generation, 0 MWh is shown.

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## Wholesale Power Market



Gas & Oil Generation includes the output of Perryville and Attala. “Less New Gas” excludes the output of Perryville and Attala.

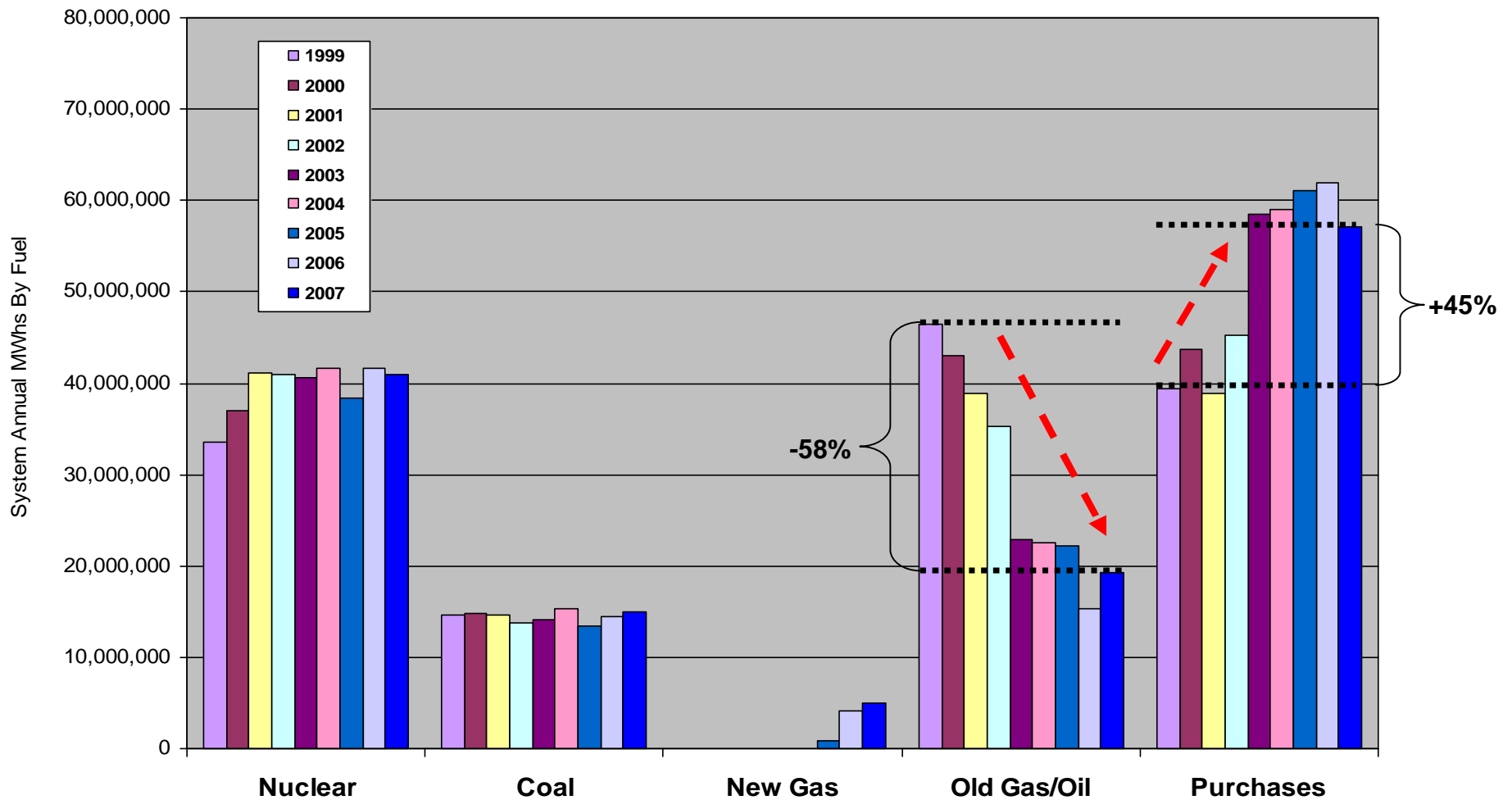
Source: Entergy Statistical Report and Investor Guides 2004 through 2006

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Wholesale Power Market

Entergy System Supply Mix – 1999-2007 Trend



Note: Output from older, gas-fired units increased slightly in 2007 over 2006 due to hotter year-over-year weather, load growth, and unit availability.

Source: FERC Form 1 Reports. Entergy annual net generation.

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## Wholesale Power Market

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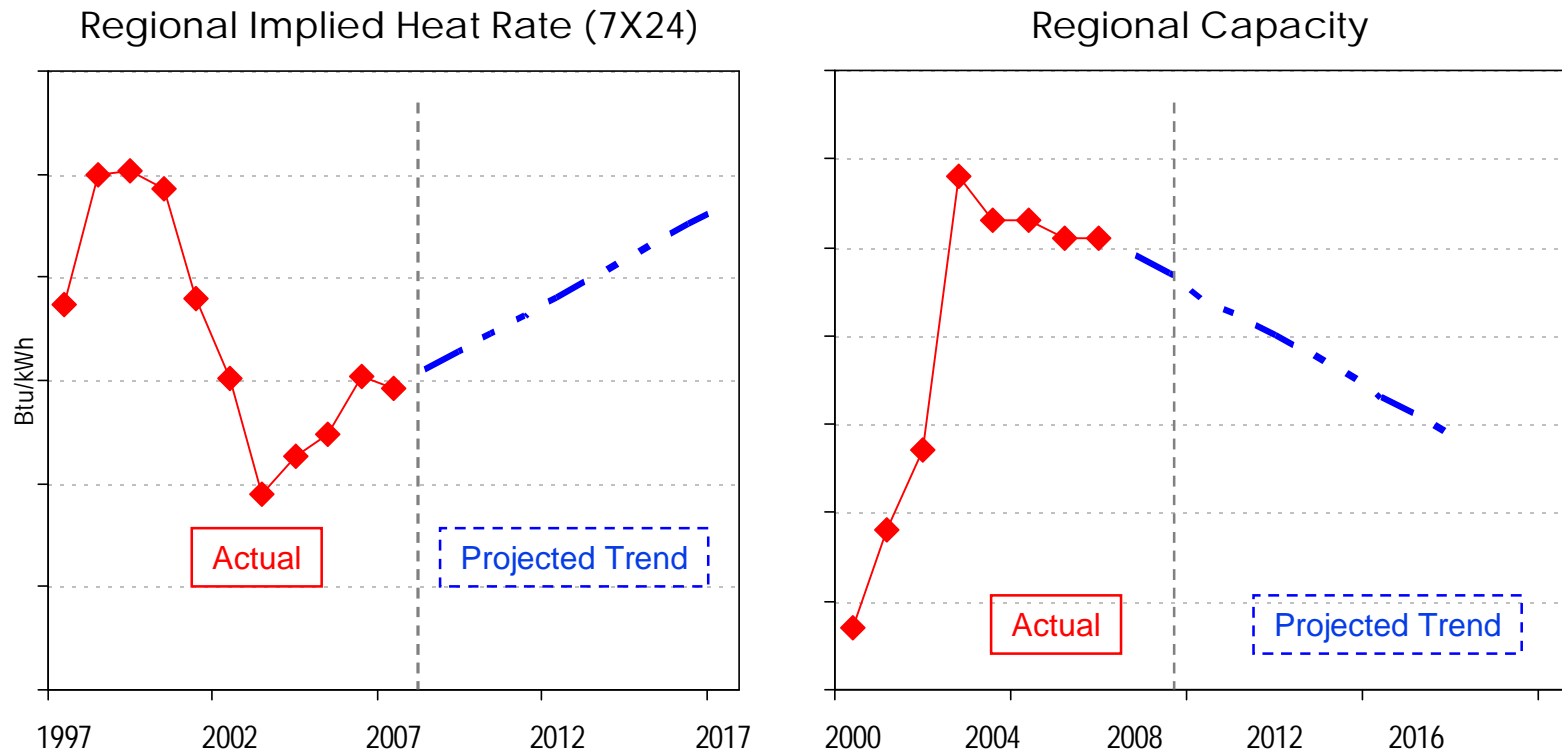
### Anticipated Future Market Conditions

- In the coming years the wholesale power market within the Entergy region is expected to tighten as load grows. The tightening wholesale power market is expected to result in higher and more volatile wholesale power prices.
- The changing conditions imply increasing risk related to over-reliance on the wholesale market.
- SSRP planning principles mitigate this risk by avoiding an over-reliance on limited term purchase power used to meet reliability requirements and an emphasis on long-term resources whether owned or contracted.

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## Wholesale Power Market

Wholesale market conditions in the Entergy Region are expected to tighten in the coming years resulting in higher prices and reduced availability of wholesale power.



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*Resource Alternatives*

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## Resource Alternatives

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### Renewable Generation Alternatives

- A number of factors including recent escalations in capital cost for power plant components, growing concerns regarding greenhouse gas emissions, and risk associated with fuel price and fuel availability have stimulated interest in renewable generation alternatives among utility planners, regulators, and policy makers.
- The Southeastern U.S. in general, and the Entergy region in particular, are disadvantaged relative to most regions in the U.S. in terms of renewable generation potential. Geographical and climatic conditions in the region are not favorable for most renewable technology alternatives. As a result, the potential for economic deployment of renewable generation in this region is less than the national average.
- The economics of renewable generation technologies are improving but generally remain less attractive than traditional generation alternatives. Moreover, many renewable alternatives involve significant operational limitations. The intermittent nature of renewable alternatives such as wind or solar create particular challenges for the Entergy System given the System's requirements for flexible capacity.
- The Entergy Operating Companies are continuing to evaluate renewable generation alternatives to identify economically attractive alternatives that may be deployable within the 2008 – 2017 planning horizon or beyond. The addition of renewable generation alternatives, if identified, could reduce the amount of traditional generation additions assumed in the Reference Planning Scenario.
- SPO is developing a Renewable Generation Strategy. The strategy will consider the implication of potential federal and state Renewable Portfolio Standards ("RPS"), the availability of renewable resources within the Entergy region, the commercial status of renewable technologies, the economic impact of renewable resources on customers, and operational considerations in the context of the strategic resource portfolio.

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## Resource Alternatives

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### Demand-side Management

- Factors similar to those driving interest in renewable generation are stimulating interest in demand-side management and energy efficiency initiatives.
- The Entergy Operating Companies are concluding a study to assess the potential for demand-side management and energy efficiency within the area. Final results of that study are not available at this time. However, preliminary results have been incorporated into the Reference Planning Scenario. Preliminary results indicate that approximately 1,100 MW of peak demand reduction is achievable over a 10 year period. The Reference Planning Scenario assumes that peak reliability requirements are reduced by these amounts.
- It is possible that the final results from the study could support DSM levels more or less than this. DSM initiatives in excess of the planning assumption could serve to reduce the amount of generation capacity required to be added over the planning horizon. If DSM initiatives fall below 1,100 MWs additional generation capacity would be needed to meet System reliability requirements.

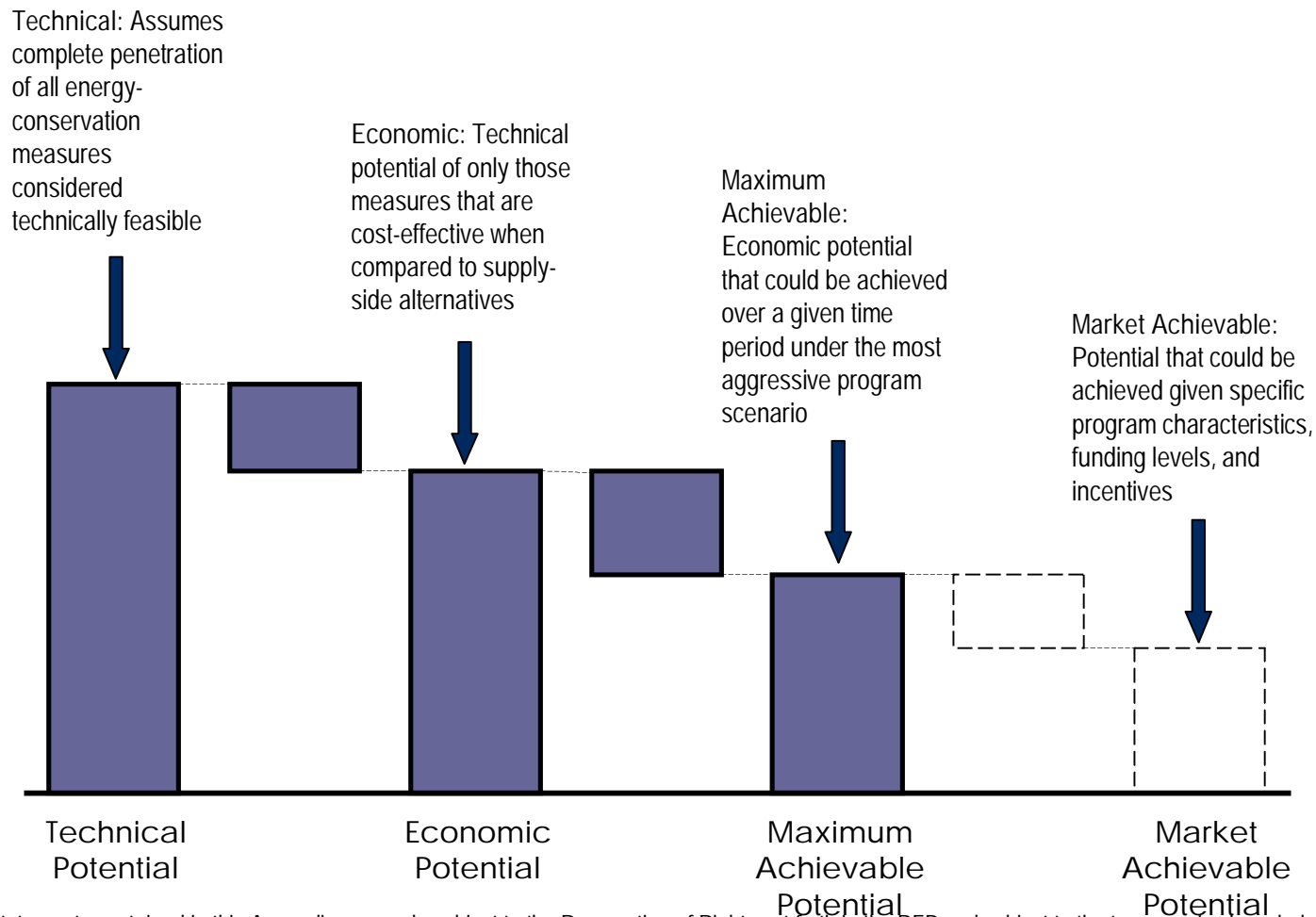
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Resource Alternatives

Overview of DSM Potential Study



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## Resource Alternatives

### DSM Assumptions in Reference Planning Scenario

- Additions of traditional generation capacity assumed in the Reference Planning Scenario would be increased or decreased depending on the levels of demand-side management and energy efficiency that is implemented.
- The amount of demand-side management and energy efficiency ultimately deployed will depend on a number of factors including the existence of enabling regulatory mechanisms.

#### Reference Planning Scenario DSM Assumption

Net Co-incident Peak MW Saved by Cumulative DSM Measures Installed

Year	1	2	3	4	5	6	7	8	9	10
EAI	8.3	15.2	25.9	43.7	67.1	89.1	113.0	138.9	166.7	196.4
ENO	1.0	2.1	4.2	8.2	13.5	18.5	23.9	29.7	36.0	42.8
EMI	3.7	6.8	11.7	20.0	30.9	40.4	50.8	62.1	74.3	87.5
EGS	7.5	13.7	22.6	36.2	53.9	74.1	96.7	121.7	149.2	179.3
ETI	5.6	11.3	26.4	49.6	79.3	119.4	162.8	209.3	259.1	312.3
ELL	10.8	19.4	35.7	61.0	93.6	126.0	161.3	199.2	240.0	283.8
<b>Total</b>	<b>36.8</b>	<b>68.5</b>	<b>126.5</b>	<b>218.6</b>	<b>338.2</b>	<b>467.5</b>	<b>608.4</b>	<b>760.9</b>	<b>925.4</b>	<b>1,102.0</b>

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SUMMER 2008 RFP – JULY 28, 2008

## Resource Alternatives

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### Traditional Generation Technologies

#### Existing Resources

- Considering the cost of self-build projects, the uncertain availability and cost of modern merchant capacity, and the overall System capacity need, strategic long-term planning decisions should recognize the value of existing resources.
- Many of the System's older gas-fired units, while operated at low capacity factors, provide economic sources of flexible capability to meet System reliability requirements.
- Investments to repower or extend the life of existing facilities could represent a potential source of economic generating capacity to meet long-term needs of the System.

#### Gas-fired Combustion Turbine (CT) Technology

- F-Class CT technology is the System's technology of choice for general peaking applications. However, as the cost of constructing new power plants has increased and the price of natural gas has remained high relative to historical levels, the operation range over which a CT is economic relative to the higher efficiency CCGT alternative has narrowed.

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## Resource Alternatives

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### Traditional Generation Technologies

#### Combined Cycle Gas Turbine (CCGT) Technology

- CCGTs are the System's technology of choice for load-following purposes. For load-following applications, CCGTs provide attractive economics relative to other alternatives across a wide range of natural gas price and CO2 cost assumptions.
- Despite reliance on gas as a fuel, CCGT and CT resources represent a relatively low risk alternative to meet near term System needs because they are suited operationally and economically to provide flexible capability. Moreover, reliance on natural gas can be partially offset by improved system efficiency.
- In the near-term, the addition of modern efficient gas-fired CCGTs and CTs can provide a relatively low risk alternative to meet reliability needs over the next several years as the System continues to evaluate new nuclear and other long-term base load alternatives.

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## Resource Alternatives

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### Traditional Generation Technologies

### New Nuclear

- Although the cost estimates for new nuclear technology remain uncertain, new nuclear capacity continues to offer the potential for an economic source of stable-priced power with zero carbon emissions to meet long-term base load needs.
- However, nuclear capacity cannot be deployed before 2017.
- The System continues to assess new nuclear as an alternative to meet long-term base load needs and is taking steps to maintain the option to develop new nuclear on a path consistent with its availability near the end of this planning period or shortly thereafter. The System has filed a Combined Construction and Operating License Application (“COLA”) for a new nuclear facility at the Grand Gulf site. In the coming year the System expects to take the following actions:
  - File a COLA at the River Bend site;
  - Make appropriate regulatory filings related to New Nuclear development spending; and
  - Apply for Department of Energy loan guarantees and receive feedback on whether either the Grand Gulf or River Bend projects receive the loan guarantee.
- The COLA for Grand Gulf indicated that EMI, ELL, and EGSL would own a new unit if constructed at Grand Gulf. However, the ownership shares among these three companies has not been determined. The COLA for River Bend is anticipated to be filed on a similar basis.
- The System anticipates assessing the results of these efforts to develop a better understanding of the best path forward for new nuclear development.

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## Resource Alternatives

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### Traditional Generation Technologies

#### Solid Fuel Technology

- The Little Gypsy Repowering Project continues to offer reasonable economics and is the only alternative available within the next five to seven years to provide meaningful levels of stable-price energy to reduce reliance on natural gas.
- The economics of longer-term solid fuel alternatives are less certain. By the end of this planning horizon a wider range of solid fuel alternatives may be deployable. Moreover, evaluations of solid fuel technologies deployable by the end of the ten-year planning horizon should consider that new nuclear may also be deployable. The System continues to assess solid fuel and nuclear economics.
- All solid fuel technologies involve higher relative capital cost and significant uncertainties particularly relating to potential emissions cost.

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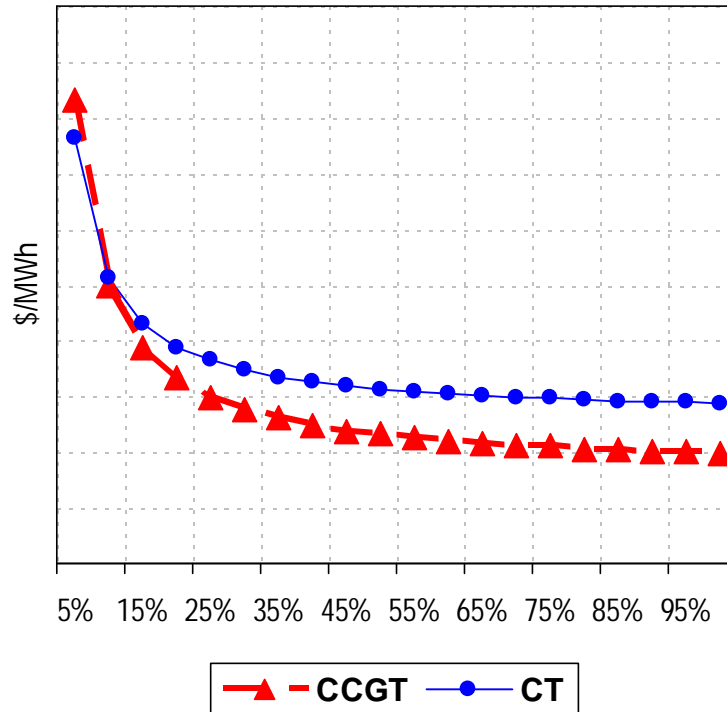
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## Resource Alternatives

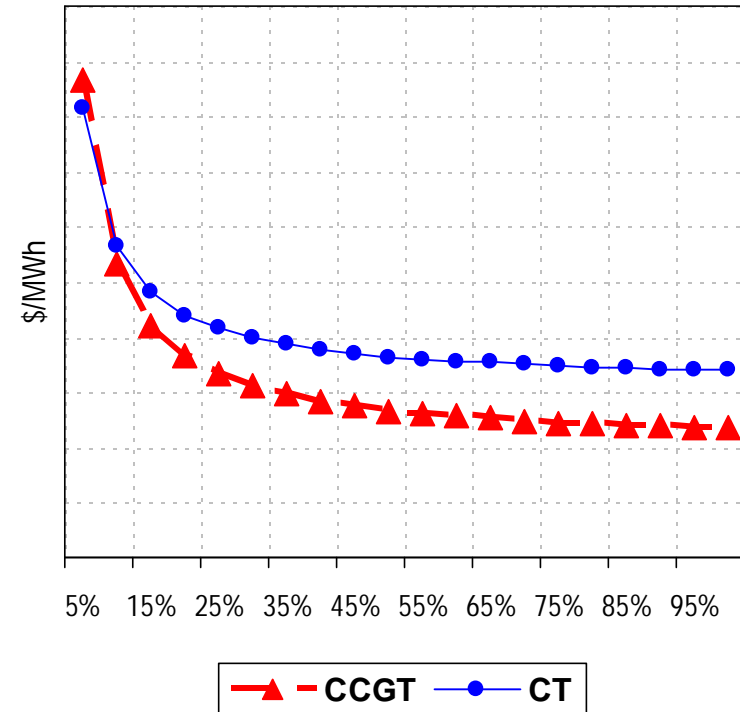
Gas-fired CTs represent a low cost source of capacity. However, gas-fired CCGTs are more economic except at very low capacity factors.

### CCGT v. CT Screening Curves (Based on Levelized 30-yr cost)

Gas Price is \$8/MMBtu (Real\$)



Gas Price is \$10/MMBtu (Real\$)



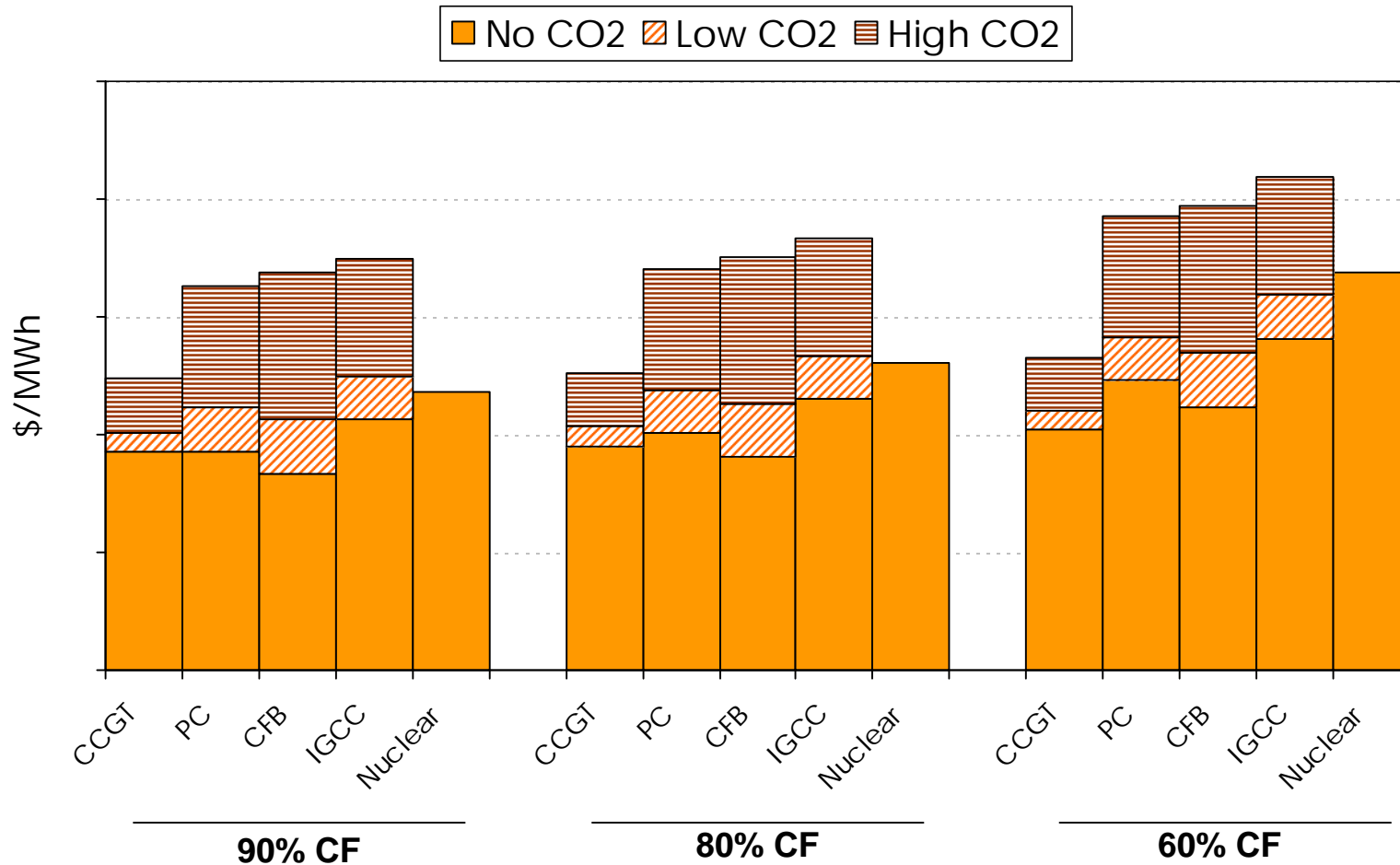
CCGT (Combined Cycle Gas Turbine); CT (Combustion Turbine)

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Resource Alternatives

30-Yr Levelized Cost of Electricity (\$8 Gas)



CCGT (Combined Cycle Gas Turbine); PC (Pulverized Coal); CFB (Circulating Fluidized Bed); IGCC (Integrated Gasification Combined Cycle)

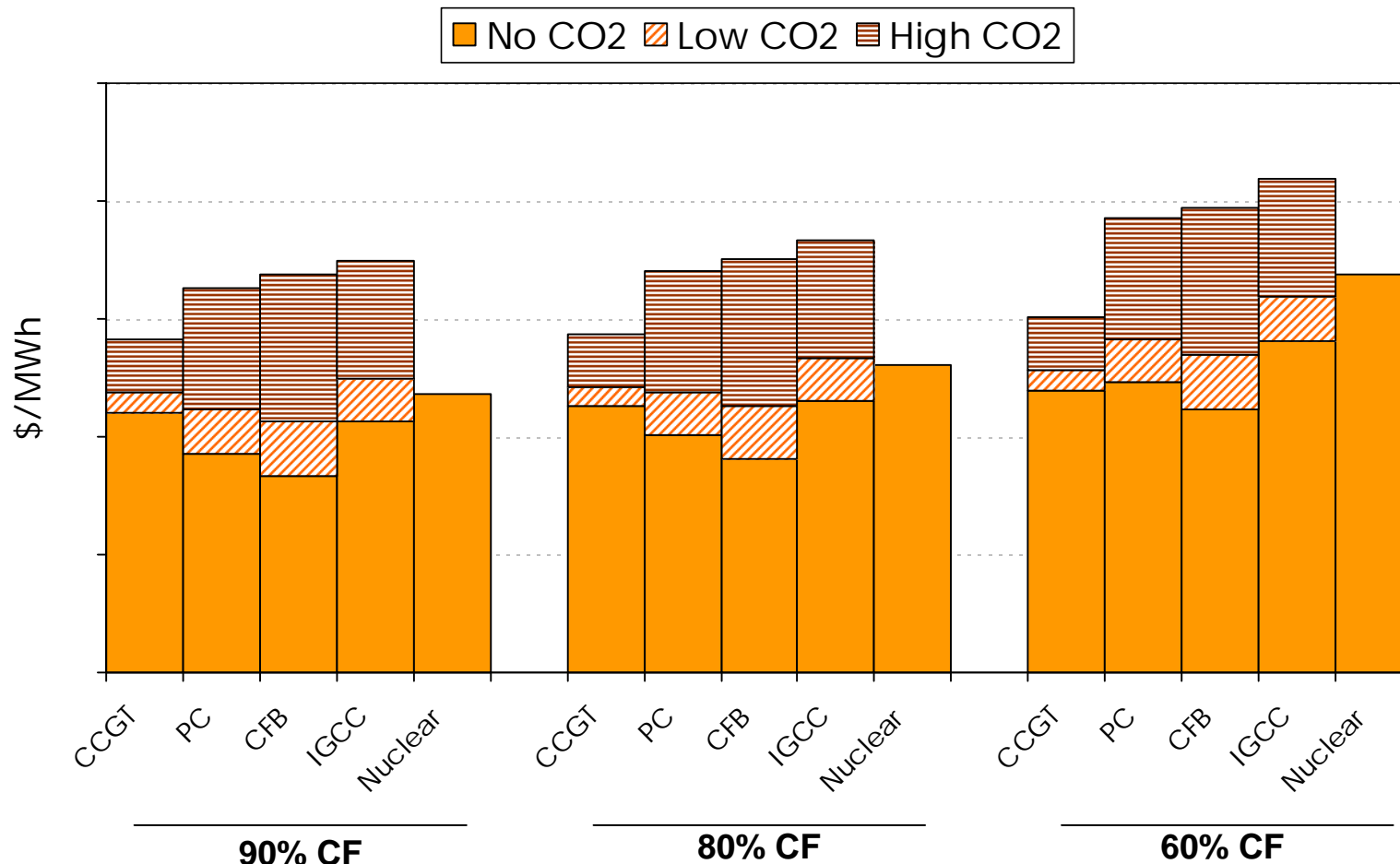
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Resource Alternatives

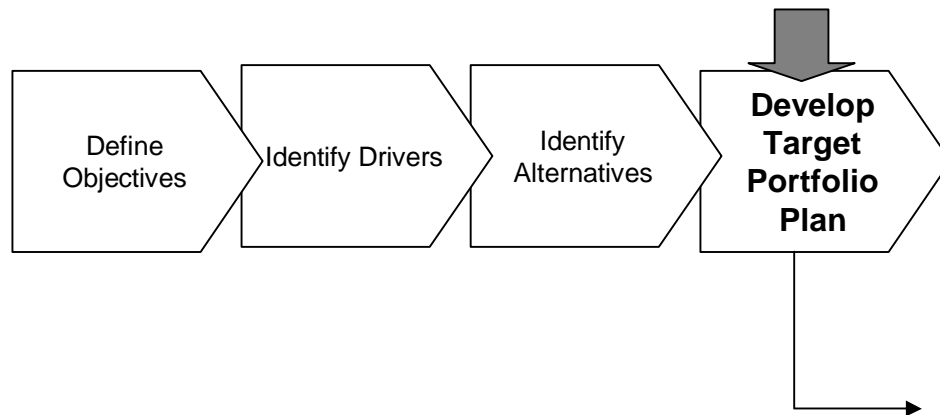
30-Yr Levelized Cost of Electricity (\$10 Gas)



CCGT (Combined Cycle Gas Turbine); PC (Pulverized Coal); CFB (Circulating Fluidized Bed); IGCC (Integrated Gasification Combined Cycle)

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**The following sections of the Update describe alternatives for meeting Supply Objectives:**

- *Overview of Supply Strategy*
- *Reference Planning Scenario*

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*Overview of Resource Supply Strategy*

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## Overview of Supply Strategy

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### Purchase Power Strategy

- The System will seek to meet the bulk of its reliability requirements with long-term capacity whether owned or contracted. The emphasis on long-term capacity serves to protect customers from risks associated with fluctuations in the market price of power and disruptions the availability of power.
- The SSRP assumes a reasonable reliance on limited-term purchases to meet System reliability requirements. However, the amount of limited-term capacity will be restricted to levels that do not expose customers to unreasonable risks associated with market price and availability. Consistent with this strategy, the 2008 – 2017 Reference Case Planning Scenario assumes that limited-term purchases will provide roughly 1,000 MW to 3,500 MW of capacity over the planning horizon.
- The System expects to maintain a portfolio of limited-term purchase power products with varying contract durations resulting in a laddering of contract expiration dates (multi-year contracts expiring at various times.)
- The portfolio of purchase power products will include:
  - Long-term resources (ten year to life-of-unit duration)
  - Limited-term products (one to five years)
  - Seasonal products
  - Monthly RFP purchases
  - Weekly RFP purchases
  - Daily purchases

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## Overview of Supply Strategy

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### Portfolio Mix for Long-term Controlled Resource Additions

- The Entergy Operating Companies continue to pursue a long-term strategy of a diversified portfolio mix. However, the current portfolio mix includes a large amount of gas-fired capacity. The economics of alternatives for addressing the System's reliance on natural gas depend on a number of uncertainties including fuel prices, environmental compliance, and capital cost. Given these uncertainties, near term priority will be placed on relatively lower risk CCGT and CT resources for near-term additions.
- CCGT resources are relatively low risk because they represent an economic alternative to meet System flexible capability needs across a range of uncertainty outcomes.
- The Little Gypsy Repowering Project continues to offer reasonable economics and is the only alternative available within the next five to seven years to provide meaningful levels of stable-priced energy to reduce reliance on natural gas.
- All longer-term alternatives for reducing the reliance on natural gas involve high capital costs and additional uncertainties. In light of the uncertainties associated with longer-term solid fuel and new nuclear generation alternatives, the System plans to continue to evaluate alternatives and defer commitment to any particular technology. The System will:
  - Continue to develop new nuclear options as more detailed and certain information becomes available.
  - Investigate potential emerging solid-fuel technologies.
  - Assess promising solid fuel alternatives in light of emerging environmental legislation.

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## Overview of Supply Strategy

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### Portfolio Mix for Long-term Controlled Resource Additions

- The Entergy Operating Companies are continuing to evaluate renewable generation alternatives to identify economically attractive alternatives that may be deployable within the 2008 – 2017 planning horizon. The addition of economically attractive renewable generation alternatives, if identified, could reduce the amount of traditional generation additions assumed in the Reference Planning Scenario. However, renewable technologies, at least at this time, are not likely to displace the need for all traditional capacity.
- The Entergy Operating Companies are continuing to evaluate demand-side management and energy efficiency initiatives. The SSRP Update anticipates increasing levels of demand-side management and energy efficiency initiatives.

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## Overview of Supply Strategy

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### Self-supply Options

- The SSRP calls for the System to identify self-supply options that would enable the System to construct new generating capacity if, and when, it is needed and economically justified. The availability of identified self-supply options mitigates the exposure of the Operating Companies to purchase power supply risks including availability and price volatility by providing real options that can be executed in a timely manner.
- The availability and price of market alternatives are matters of uncertainty. In contrast, self-supply options can be executed with a relative degree of certainty. Consequently, the SSRP generally adopts the default assumption that long-term resource additions are in the form of executed self-supply options. This is especially so with respect to resource additions intended to address supply needs in which location or technology are critical. For example, the Area Planning process identifies the most attractive self-supply options within each Planning Area. These self-supply alternatives provide the basis for assumptions regarding resource additions where needed to address specific issues within the Planning Areas.
- The assumption that a resource addition is accomplished in the form of self-supply alternative does not imply that other resource alternatives would not be considered. The overarching objective in resource selection is to identify resources that meet planning objectives at the lowest reasonable cost. Self-supply alternatives are expected to be replaced by market alternatives if the latter are determined to be more economic and provide the same level of reliability.

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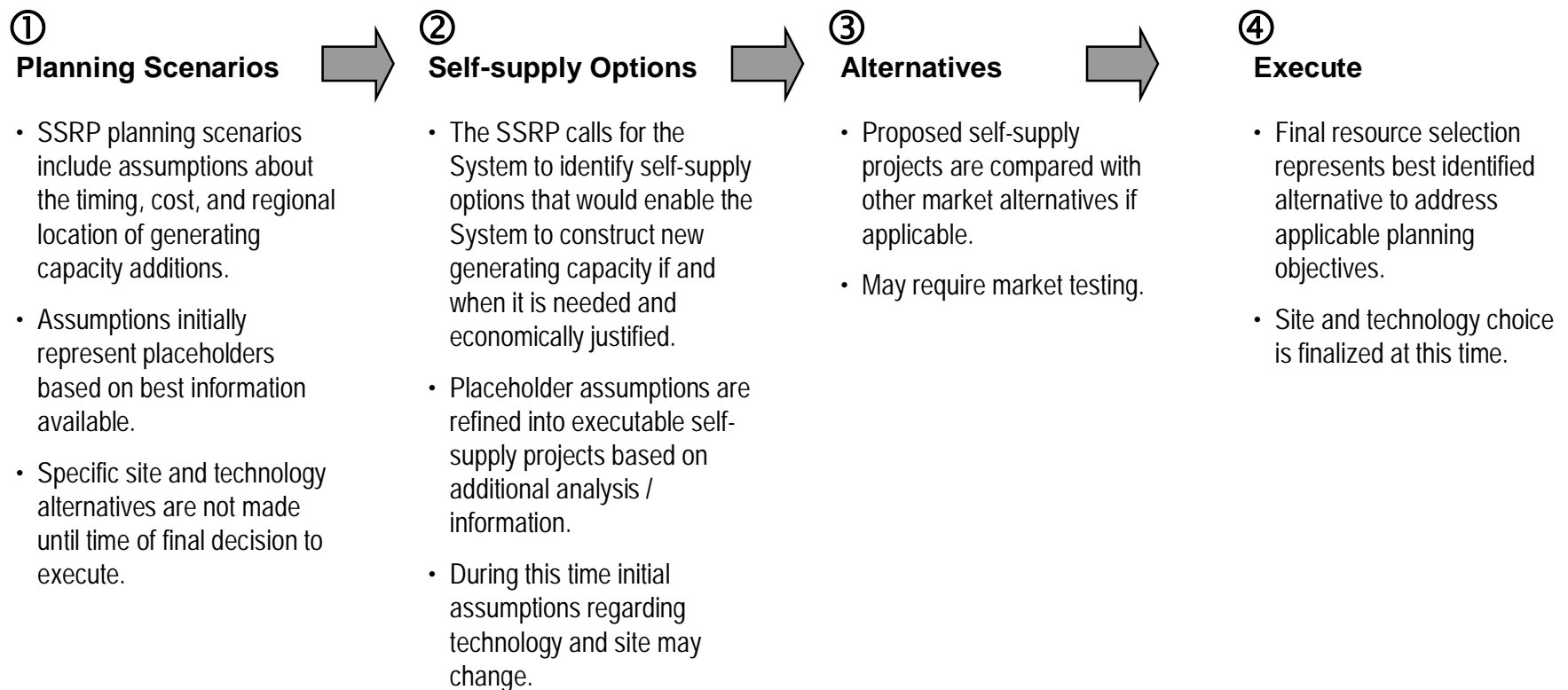
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## Overview of Supply Strategy

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### Approach to Project Selection and Development

**The addition of resources to the portfolio occurs through a process in which initial planning assumptions are continually refined in light of best available information.**



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## *Reference Planning Scenario*

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## Reference Planning Scenario

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### Overview

- SSRP planning scenarios include assumptions regarding the timing, cost, and regional location of long-term generating capacity additions. These assumptions are meant to represent “placeholders” and do not prescribe definitive technology choices or site selections. The SSRP envisions that decisions about technology and location of resources additions will be made as generation projects are implemented over the planning horizon. The System will choose technologies, select sites, and determine resource timing based on the best information available at the time. The relative economics of technology alternatives, and thus the optimal portfolio mix, depend on the outcome of a number of key uncertainties including, but not limited to, future natural gas price levels and potential CO2 legislation. By deferring technology and site selection to the time of project development, the System is able to recalibrate the resource plan over time to ensure a better portfolio mix as better information becomes available and as uncertainties are resolved.
- Reference Case planning assumptions provide guidance regarding future capacity needs and resource additions given the best information available at this time. Sensitivity cases provide information about how resource needs and additions might change under High and Low load growth scenarios.

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## Reference Planning Scenario

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### Overview of Key Resource Assumptions

- The Reference Planning Scenario assumes the addition of a CCGT identified through the 2008 Summer RFP. Given current market conditions there is a reasonable expectation that the 2008 Summer RFP could identify economically attractive CCGT alternatives. However, the result of the 2008 Summer RFP is uncertain. It is not possible to predict whether the RFP will result in the selection of capacity, if so how much would be selected, or in which Planning Region such capacity would be located. In the event that the outcome of the 2008 Summer RFP differs from the assumption used in the SSRP, subsequent resource additions would be adjusted accordingly to address System and Planning Area needs.
- Any self-supply projects assumed in the plan might be replaced with long-term power purchase contracts or acquisitions based on the results of market testing.
- The System has identified a self-supply alternative in the Amite South planning region. The project is intended to meet long-term System reliability needs, provide flexible capacity for the System, and support regional reliability. The System anticipates market testing this project within the coming year.
- The System has identified a self-supply alternative in the Western division of the WOTAB planning region. The project is intended to meet long-term System reliability needs, provide flexible capacity for the System, and support regional reliability. The System anticipates market testing this project within the coming year.
- The System expects to determine next steps and timing in the potential development of a CCGT self-supply option in Arkansas.
- Also during the next year, the System will consider development of a WOTAB CCGT option depending on the outcome of the Summer 2008 RFP.

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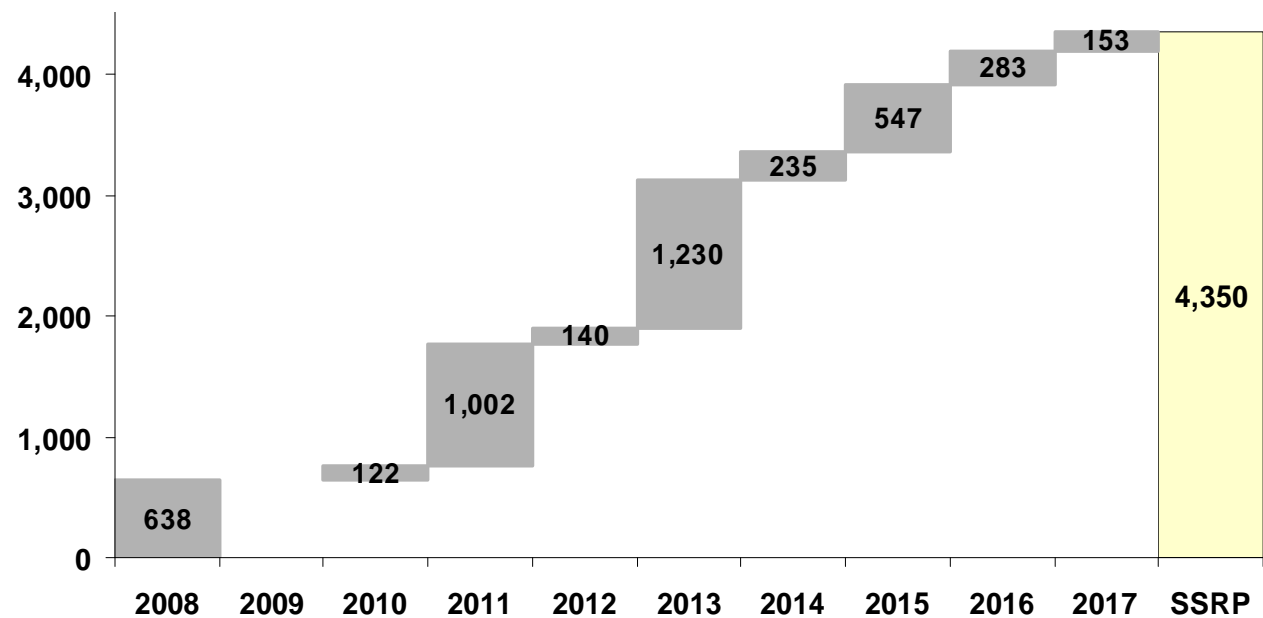
## Reference Planning Scenario

- Since additional resources are currently needed to meet reliability requirements, any deactivation assumption results in the planned addition of replacement resources
- The Reference Planning Scenario assumes a need for replacement capacity equal to 4,350 MW over the ten-year planning horizon
- Replacement capacity estimates are distributed over the planning period to support a gradual transformation of the portfolio

**Note:**

This timeline for long-term capacity deactivations represents an assumption for long-term capacity planning purposes only and should **not** be interpreted as a retirement schedule for existing generating units

Reference Planning Scenario Unit Deactivations (MW)



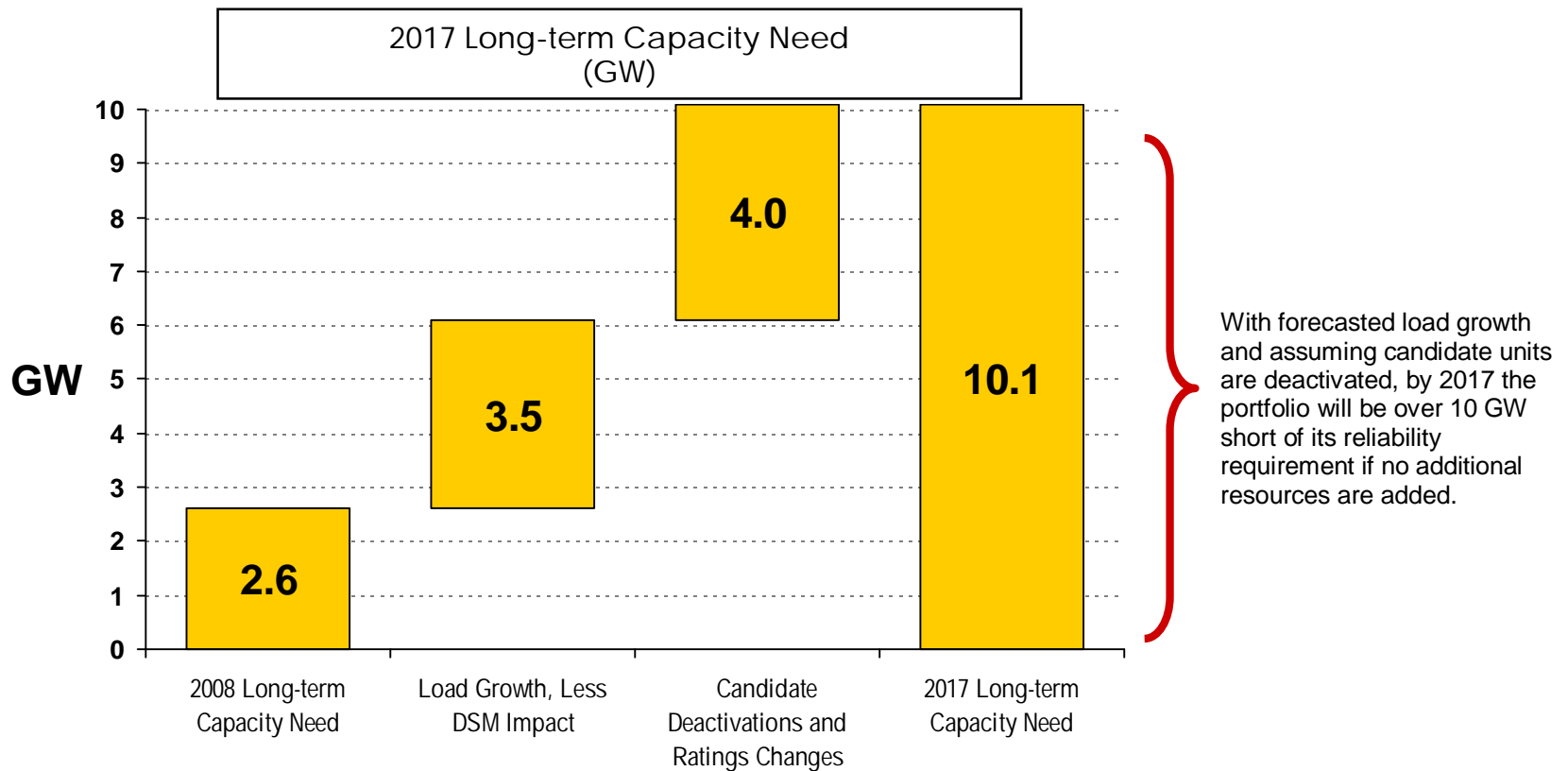
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## Reference Planning Scenario

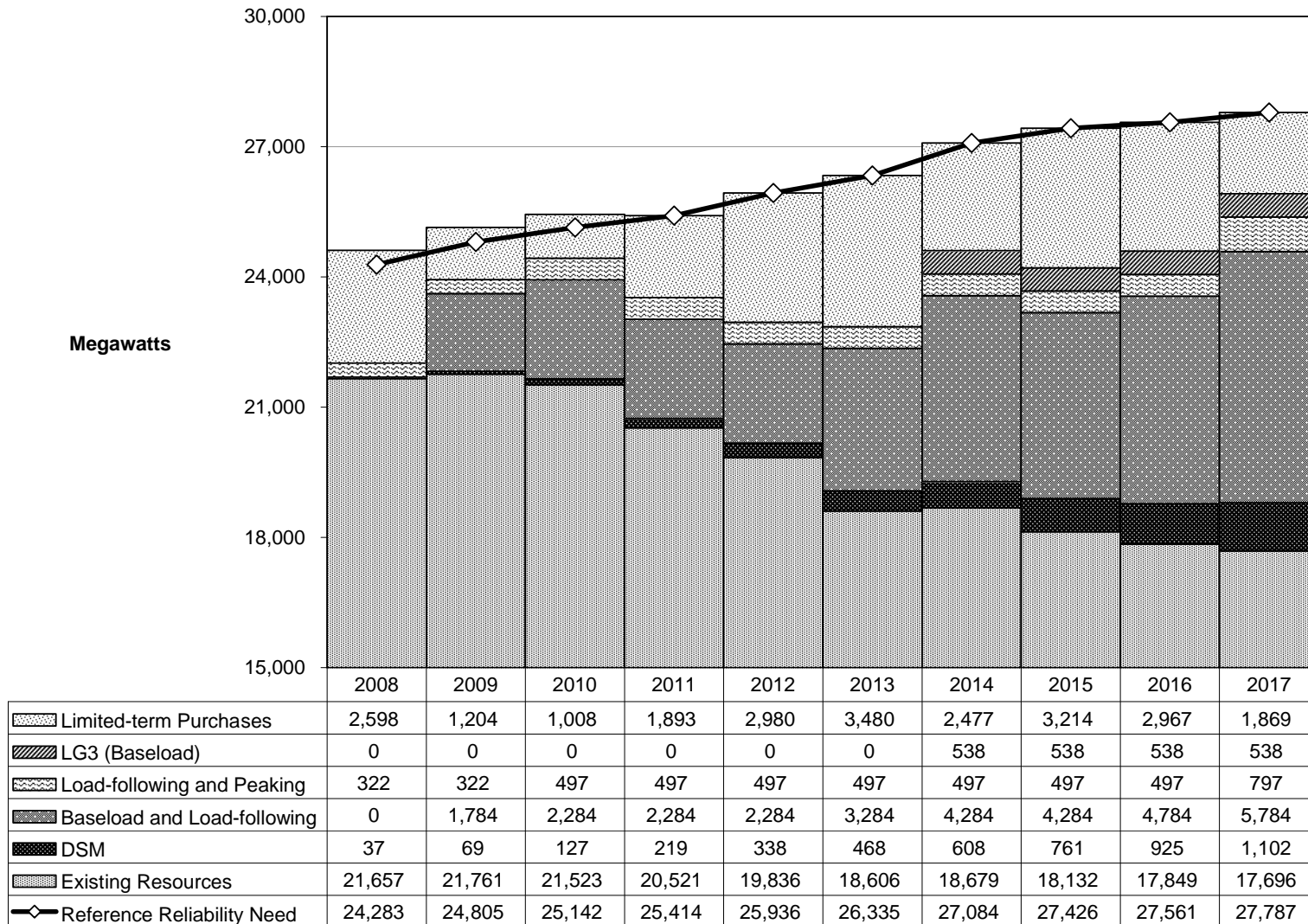
### Sources of Incremental Capacity Need Over Planning Horizon

The System must add capacity to address reliability and operational flexibility needs. A reserve margin target of 16.8% is used for long-term reliability planning.



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## Reference Planning Scenario



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