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December 20, 2013

Via Hand Delivery

Ms. Terri Lemoine Bordelon
Records and Recording Division
Louisiana Public Service Commission
602 North 5th Street
Baton Rouge, Louisiana 70802

Re: 2013 Integrated Resource Planning (“IRP”) Process for Entergy
Louisiana, LLC and Entergy Gulf States Louisiana, L.L.C. Pursuant to
General Order April 20, 2012
LPSC Docket No. I-33014

Dear Ms. Bordelon:

Pursuant to Sections 10(d) and 10(f) of the Integrated Resource Planning (“IRP”) Rules for Electric Utilities in Louisiana, approved by the Corrected General Order of the Louisiana Public Service Commission in Docket No. R-30021, enclosed are Entergy Louisiana, LLC (“ELL”) and Entergy Gulf States Louisiana, L.L.C.’s (“EGSL”) Data Assumptions and Description of Studies to be Performed. Also enclosed is a Notice of Appearance and Request to be Added to Service List.

Also enclosed are two copies of the Confidential Version of the Data Assumptions and Description of Studies to be Performed contained in the referenced filing, which are being provided to you under seal pursuant to the provisions of the LPSC General Order dated August 31, 1992, and Rules 12.1 and 26 of the Commission’s Rules of Practice and Procedure. The confidential materials included in the filing consist of competitively sensitive cost and market information, the disclosure of which may create an artificial target for suppliers in an otherwise-competitive wholesale market that are required to be provided on a confidential basis. For this reason, these materials are confidential and commercially sensitive. The public disclosure of the information contained herein would subject ELL and EGSL and/or their customers to a substantial risk of harm. Accordingly, we request that this information remain confidential.


Please retain the original Confidential Version for your files and return a date-stamped copy to our courier. The Confidential Version of this filing will be provided to the parties who have executed the applicable Confidentiality Agreement in this docket.



Ms. Terri Lemoine Bordelon
December 20, 2013
Page 2

Should you have any questions regarding the enclosed document, please do not hesitate to contact me.

Sincerely,



Jason M. Bilbe

JMB/ttm
Enclosures

cc: Official Service List

ENTERGY GULF STATES LOUISIANA, L.L.C. & ENTERGY LOUISIANA, LLC

LPSC DOCKET NO. I-33014

DATA ASSUMPTIONS AND DESCRIPTION OF STUDIES TO BE PERFORMED

2014 EGSL & ELL Integrated Resource Plans

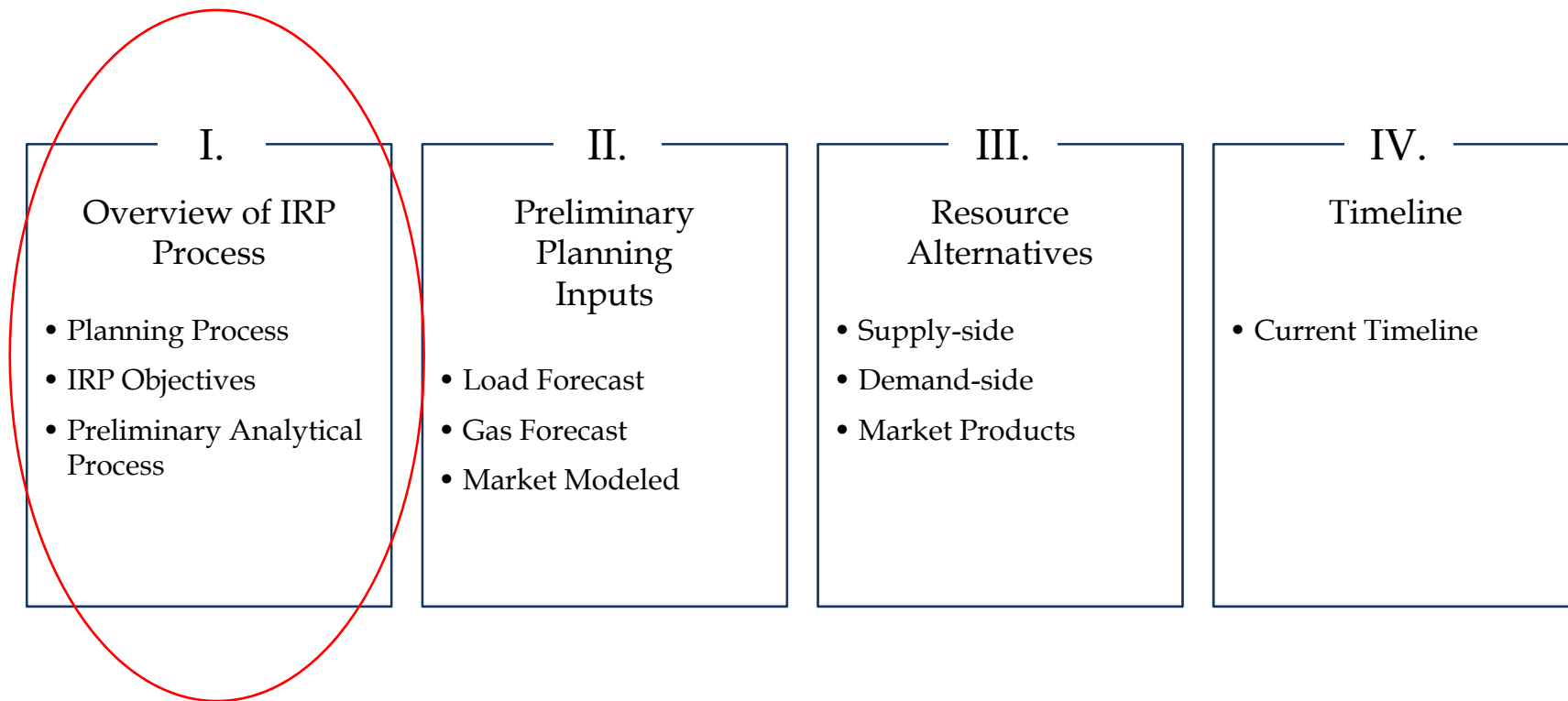
This version has had been redacted to maintain confidentiality of highly sensitive protected material pursuant to the Confidentiality Agreement in this docket. The redacted material is noted.

DECEMBER 20, 2013

The document describes preliminary proposed process and analytical framework for development of the EGSL and ELL 2014 Integrated Resource Plans.



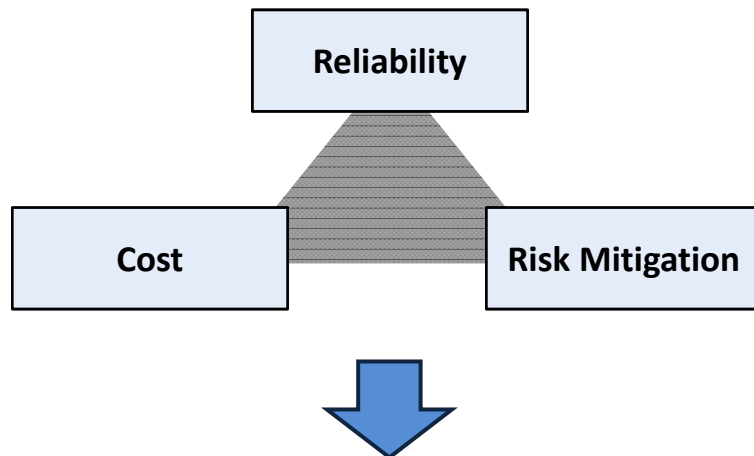
ORGANIZATION OF MATERIALS*



****All material presented is informational and subject to change based on additional analysis, new information or stakeholder feedback.***

IRP PLANNING OBJECTIVES

The process will seek to balance three objectives . . .



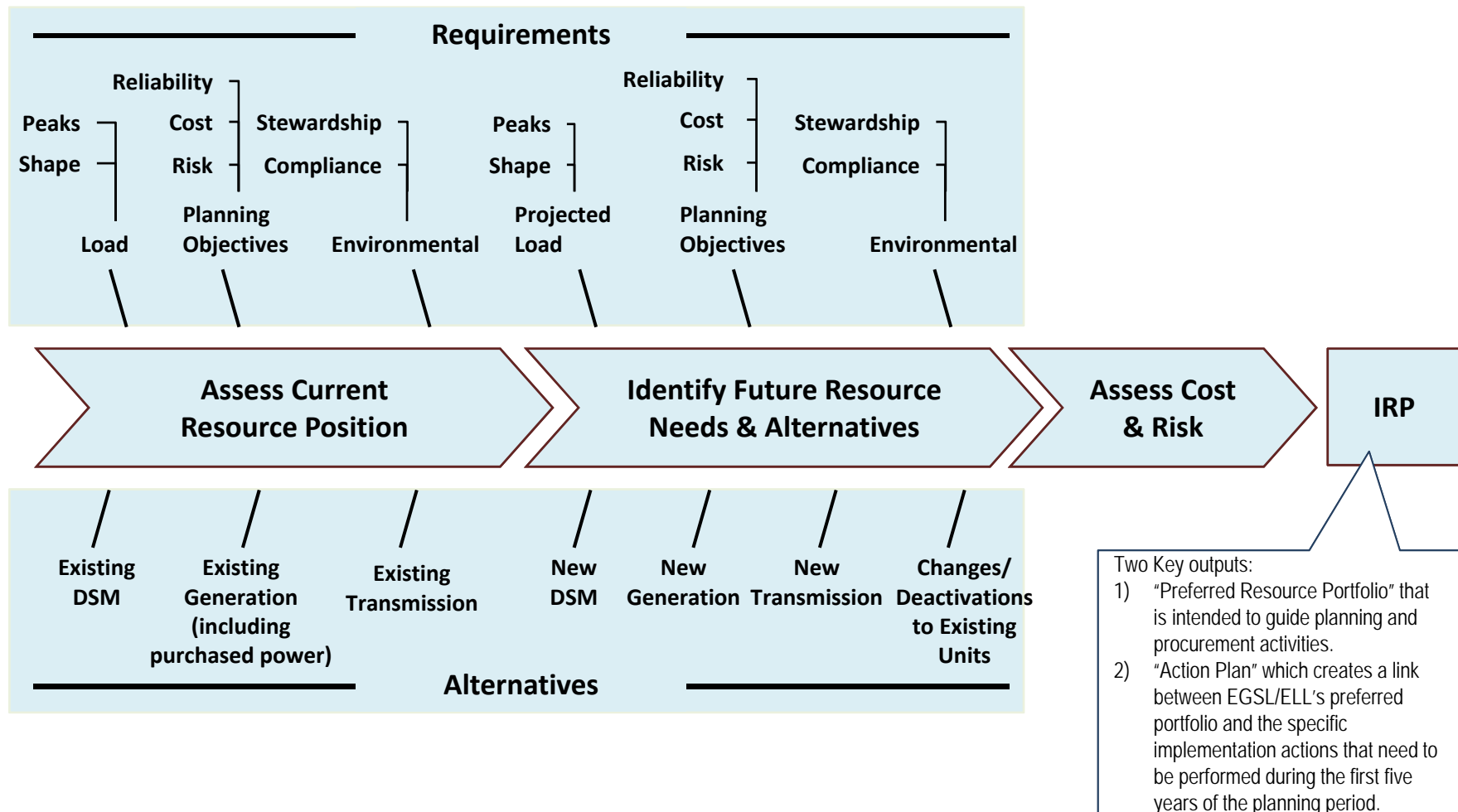
These objectives will be measured from a customer perspective. That is, the process seeks to design a portfolio of resources that meets customer power needs at a reasonable cost while considering risk.

While considering utilization of natural resources and effects on the environment . . .

- Consider the effects of environmental compliance / regulation on customer costs.
- Assess risk to reliability and cost associated with environmental concerns.
- Assess the implications of proposed portfolios (which include both supply-side and demand-side resources) on the use of natural resources and the effect on the environment by measuring key parameters such as:
 - CO₂ emissions,
 - Natural gas use, and
 - Coal consumption

CONCEPTUAL REQUIREMENTS OF AN IRP

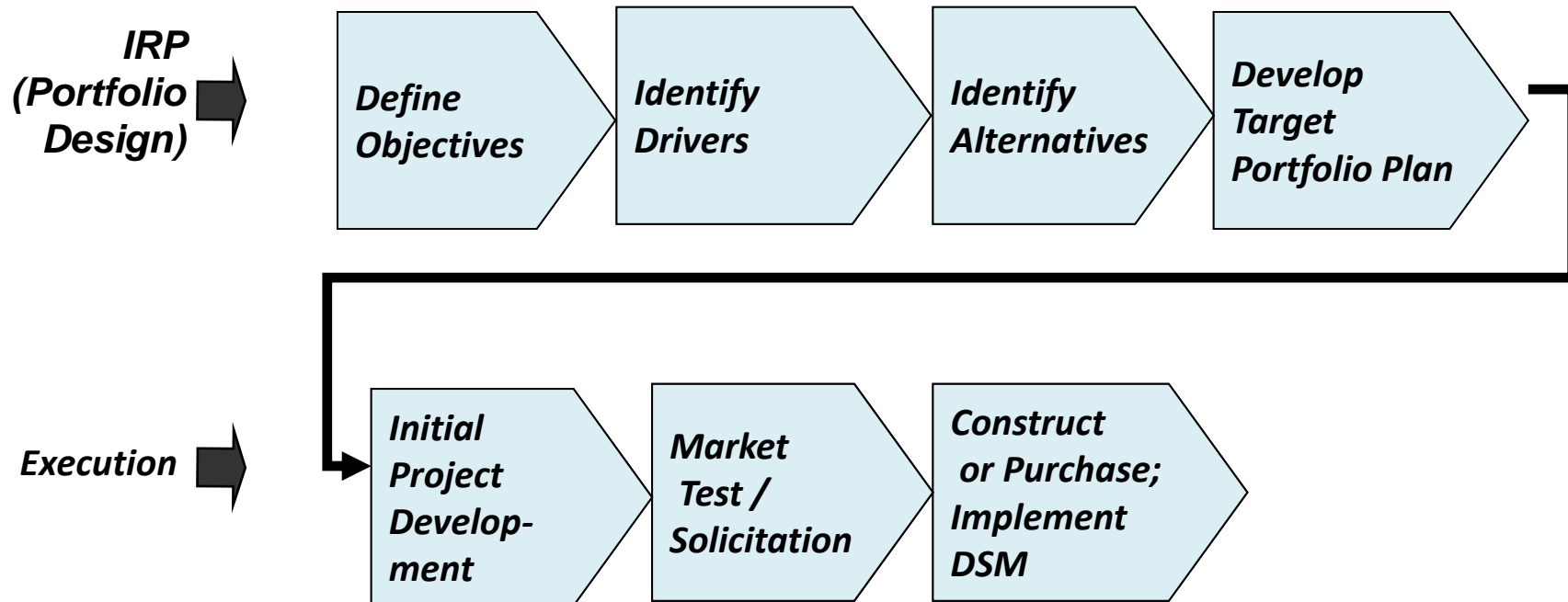
The IRP considers the range of alternatives available to meet customer needs in order to develop a preferred resource portfolio.



Note – The IRP guides future planning and procurement activities. However specific resource decisions are not made during the planning process.

PORTFOLIO DESIGN AND EXECUTION

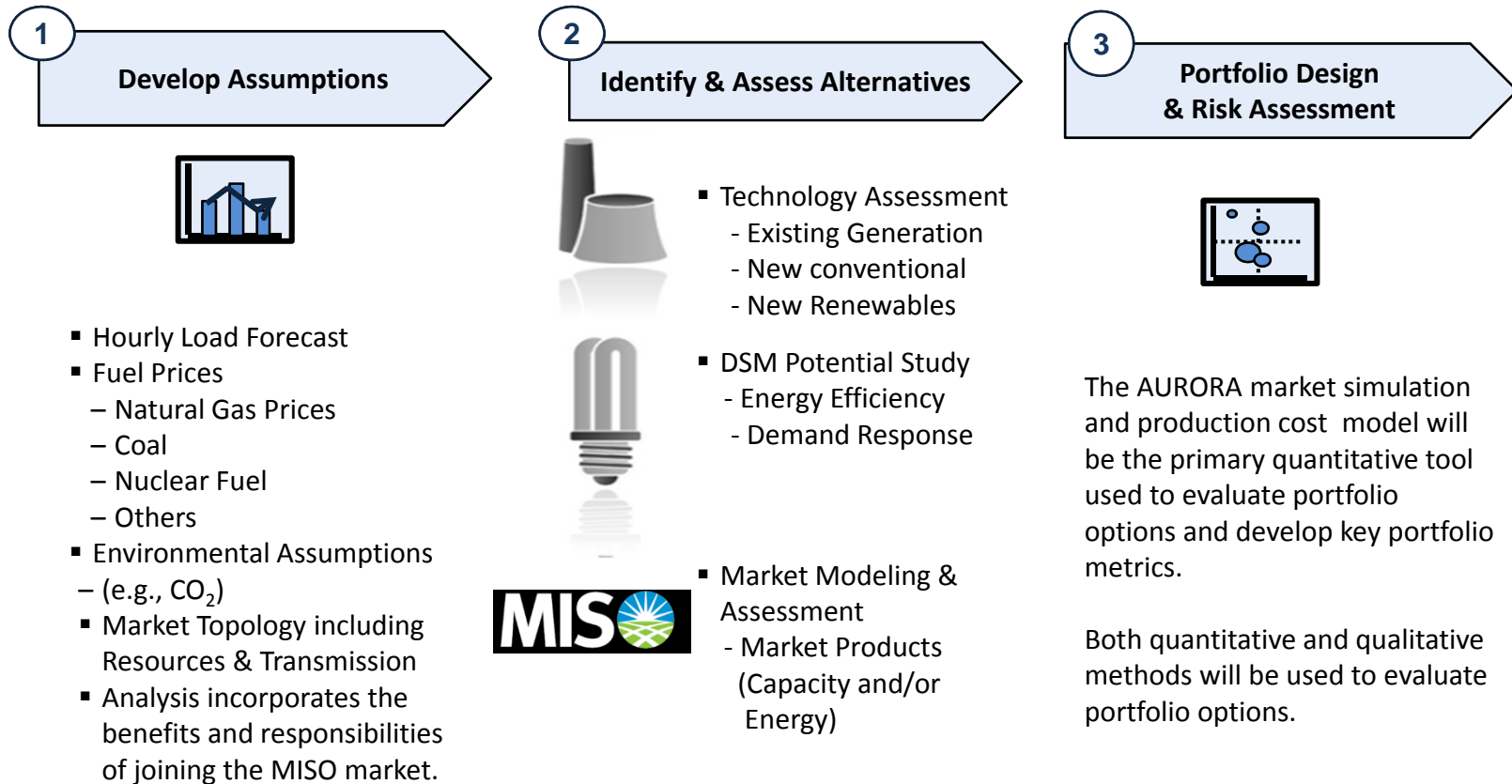
The preferred portfolio guides procurement activities but is not a commitment to any particular resources.



The IRP is a dynamic process for long-range planning that provides for a flexible approach to resource selection. The preferred portfolio resulting from the IRP planning process provides guidance regarding long-term resource additions, but is not intended as a static plan or pre-determined schedule for resource additions. Actual resource decisions are made at the time of execution.

PRELIMINARY ANALYTICAL PROCESS FOR 2014 IRP

The process conforms to the Integrated Resource Planning Rules for Electric Utilities in Louisiana approved by the LPSC in General Order No. R-30021 and will involve three broad phases of work activities:





IRP OUTPUT METRICS

Portfolios will be designed to provide reliable power . . .

All portfolios must include sufficient capacity to meet peak load plus contingencies.



Metric

- Planning Reserve Margin

Objective function is to minimize customer cost . . .

Analysis measures total supply costs, which include variable production cost and fixed supply costs. In other words, all supply costs that ultimately affect customer bills.



Metric

- Present Value of Total Supply Cost

While Considering Risks . . .

Portfolio design will consider risks relating to total supply cost and reliability. Risks include exposure to power price volatility and fuel cost uncertainty.



Metrics

- Variability in Total Supply Cost across scenarios
- Change in portfolio rankings

Other Considerations & Metrics

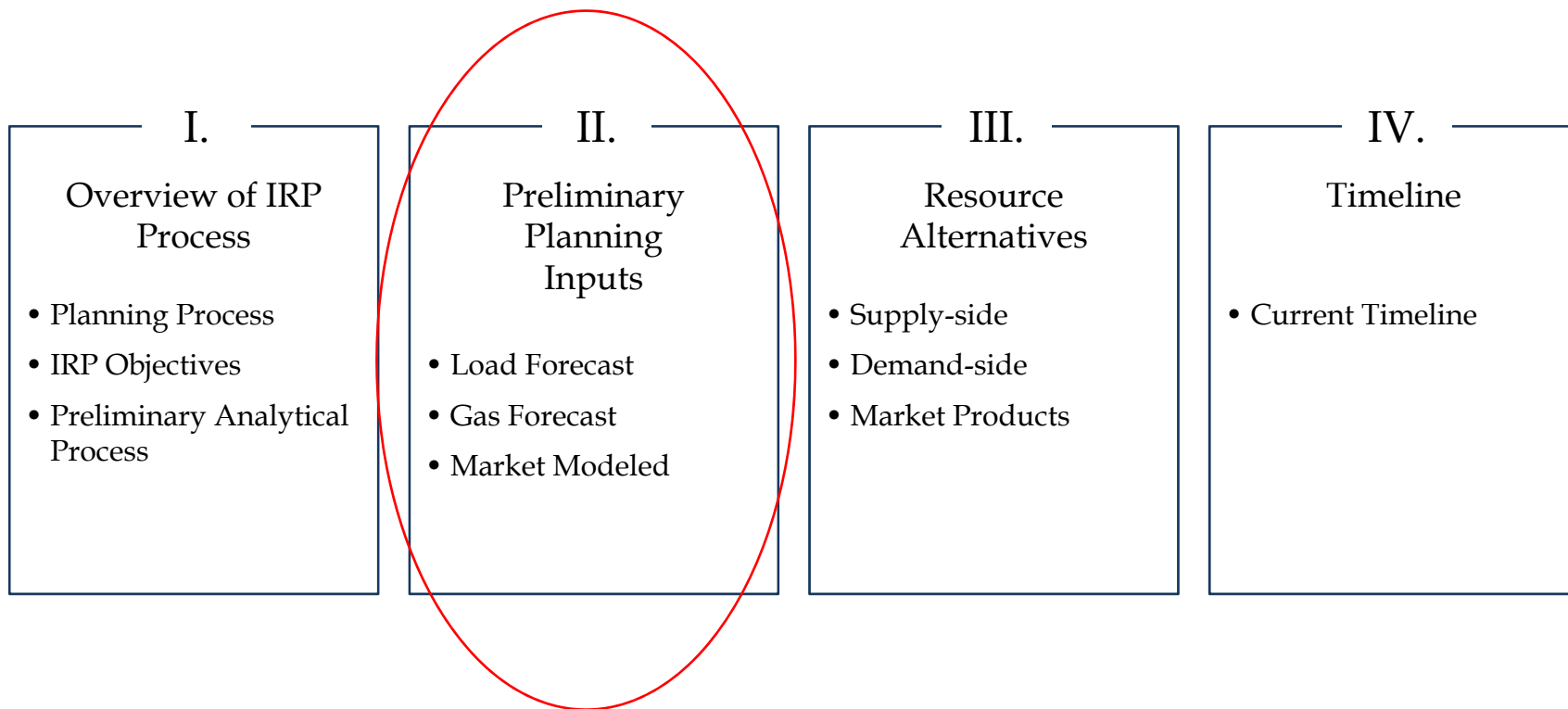
Analysis will produce a variety of other metrics.



Metrics

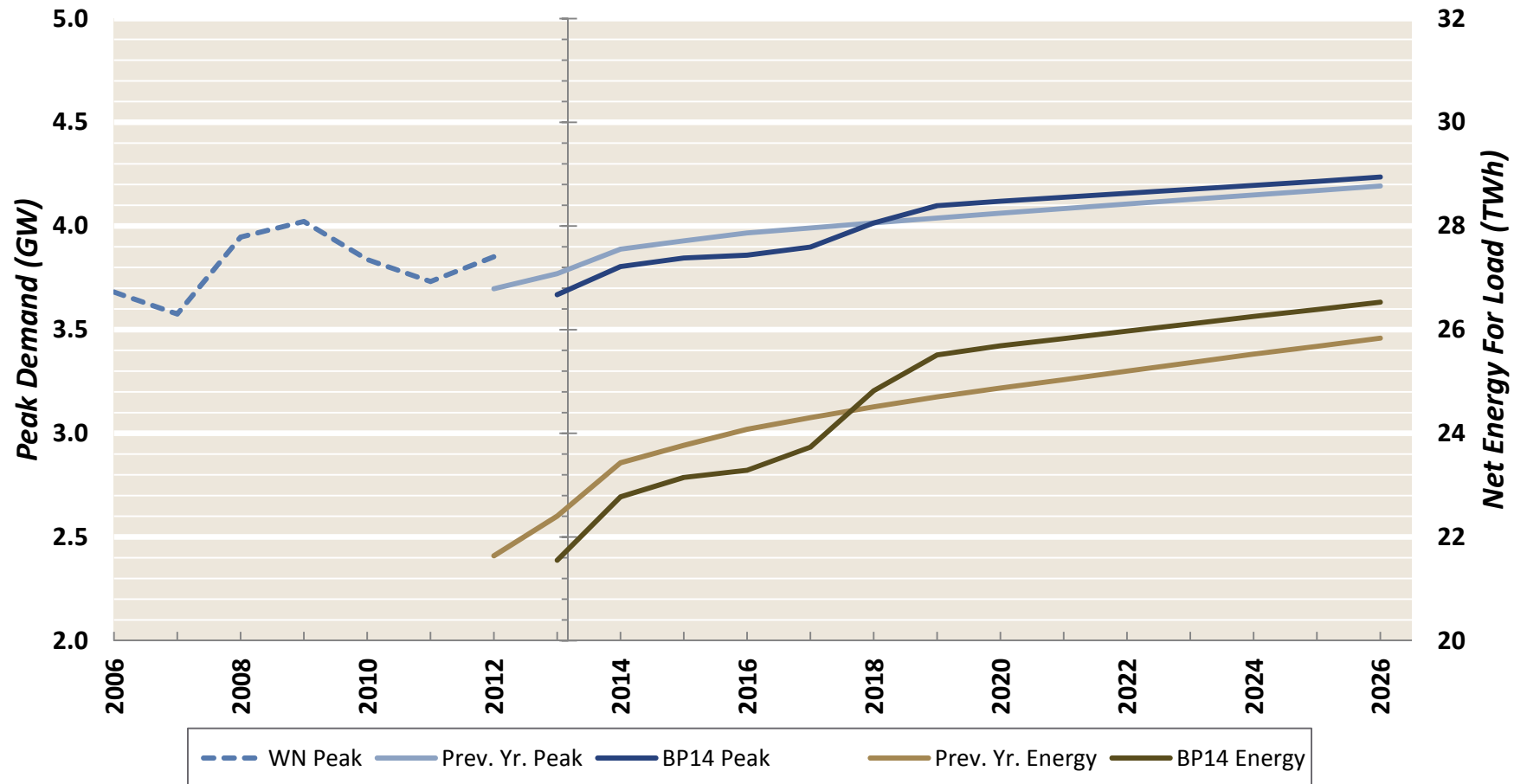
- Emissions
- Natural Gas Consumption
- Coal consumption

ORGANIZATION OF MATERIALS*



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EGSL REFERENCE CASE LOAD FORECAST

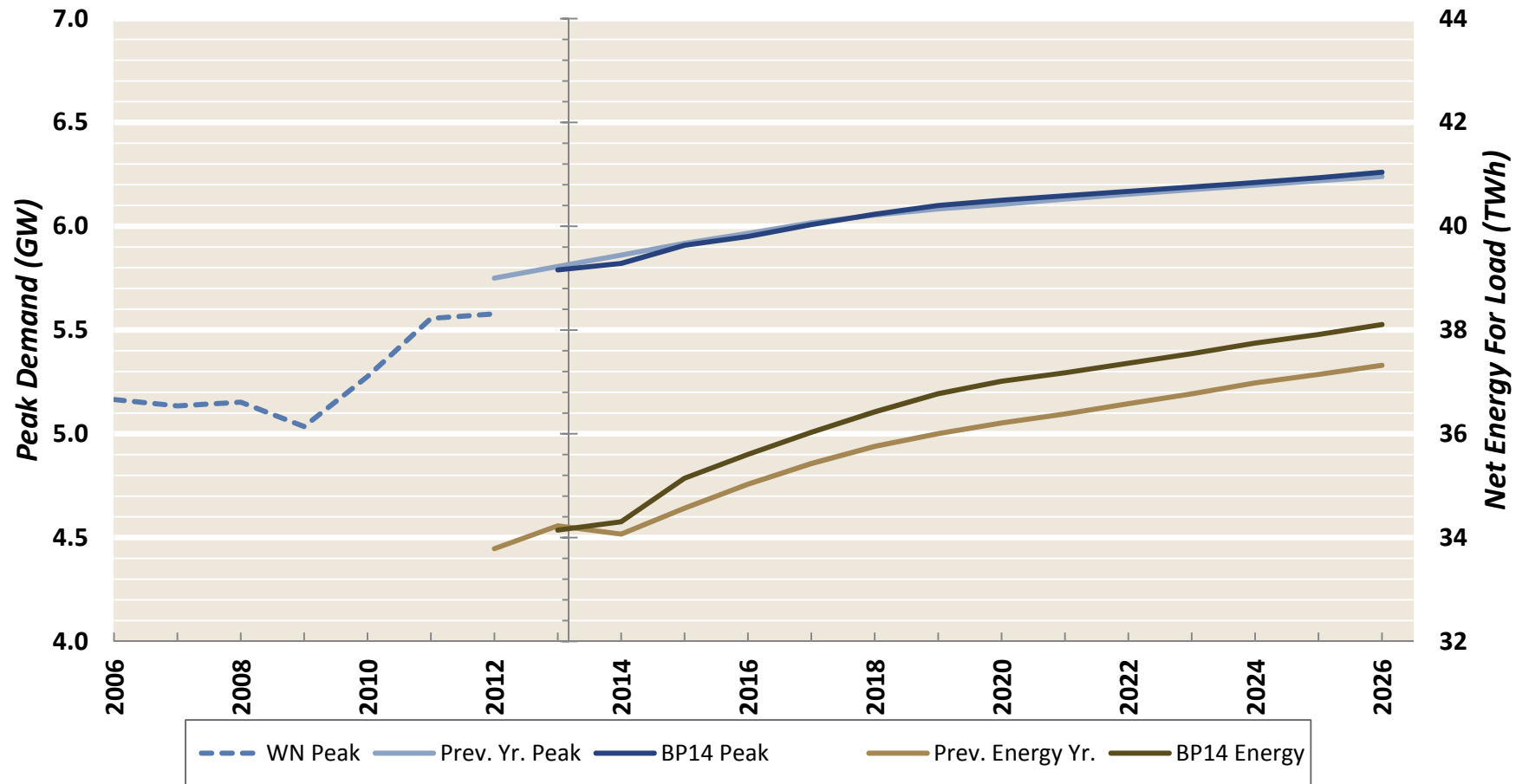


10-Yr CAGR	Prev. Yr. F'cst	BP14 F'cst.
Peak:	1.06%	1.31%
Energy:	1.54%	1.94%

WN Peak = Actual peak adjusted to normal weather
BP = Business Plan which is the five year financial plan used for budgeting

	2013	2015	2020	2025	2030
Peak (MW)	3,669	3,846	4,120	4,215	4,322
Energy (GWh)	21,553	23,150	25,690	26,388	27,108

ELL REFERENCE CASE LOAD FORECAST



10-Yr CAGR	Prev. Yr. F'cst.	BP14 F'cst.
Peak:	0.68%	0.67%
Energy:	0.80%	0.95%

WN Peak = Actual peak adjusted to normal weather
BP = Business Plan which is the five year financial plan used for budgeting

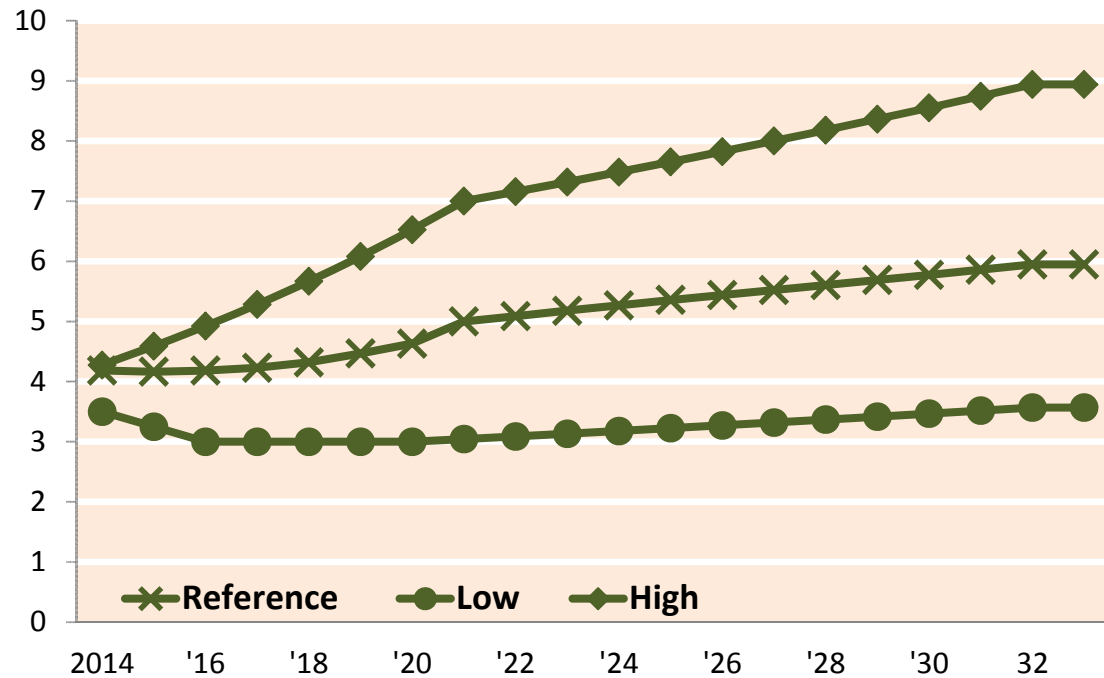
	2013	2015	2020	2025	2030
Peak (MW)	5,790	5,908	6,125	6,234	6,367
Energy (GWh)	34,144	35,142	37,013	37,914	38,906

HENRY HUB NATURAL GAS PRICE FORECAST

SPO June 2013 Long-Term Henry Hub Natural Gas Price Forecasts (2013\$/MMBtu)

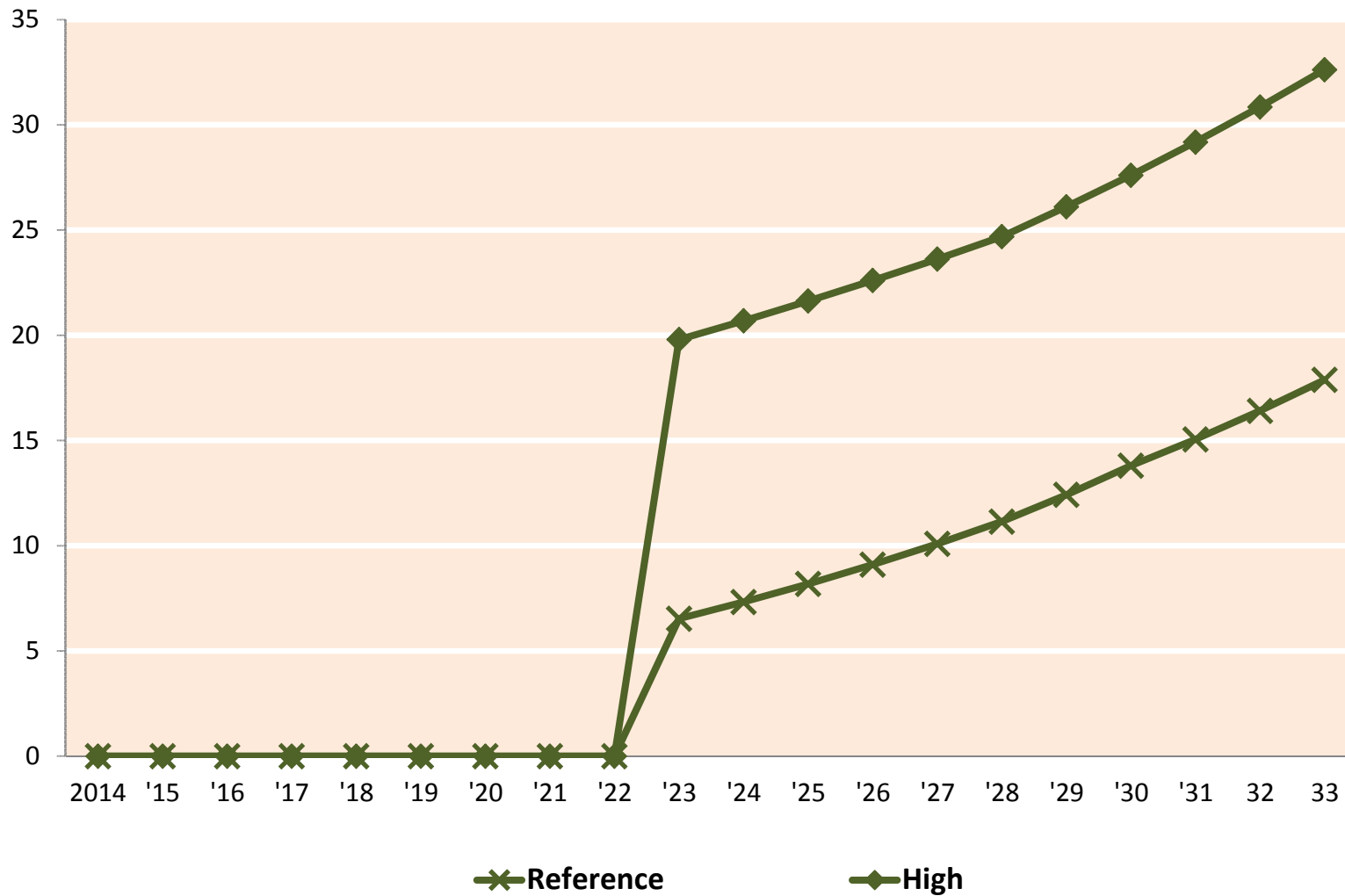
Process

- SPO Planning Analysis relies on a number of leading consultants in preparing the natural gas price forecast.
- The early years of the long-term forecast (~1st 5 years) are based on NYMEX forward prices without modification.
- In the later years, the Reference Case Natural Gas forecast represents a consensus view of the consultants' forecasts.
- The High and Low Cases represent plausible alternative scenarios developed by SPO (informed by consultants and a review of historical fundamentals and prices).



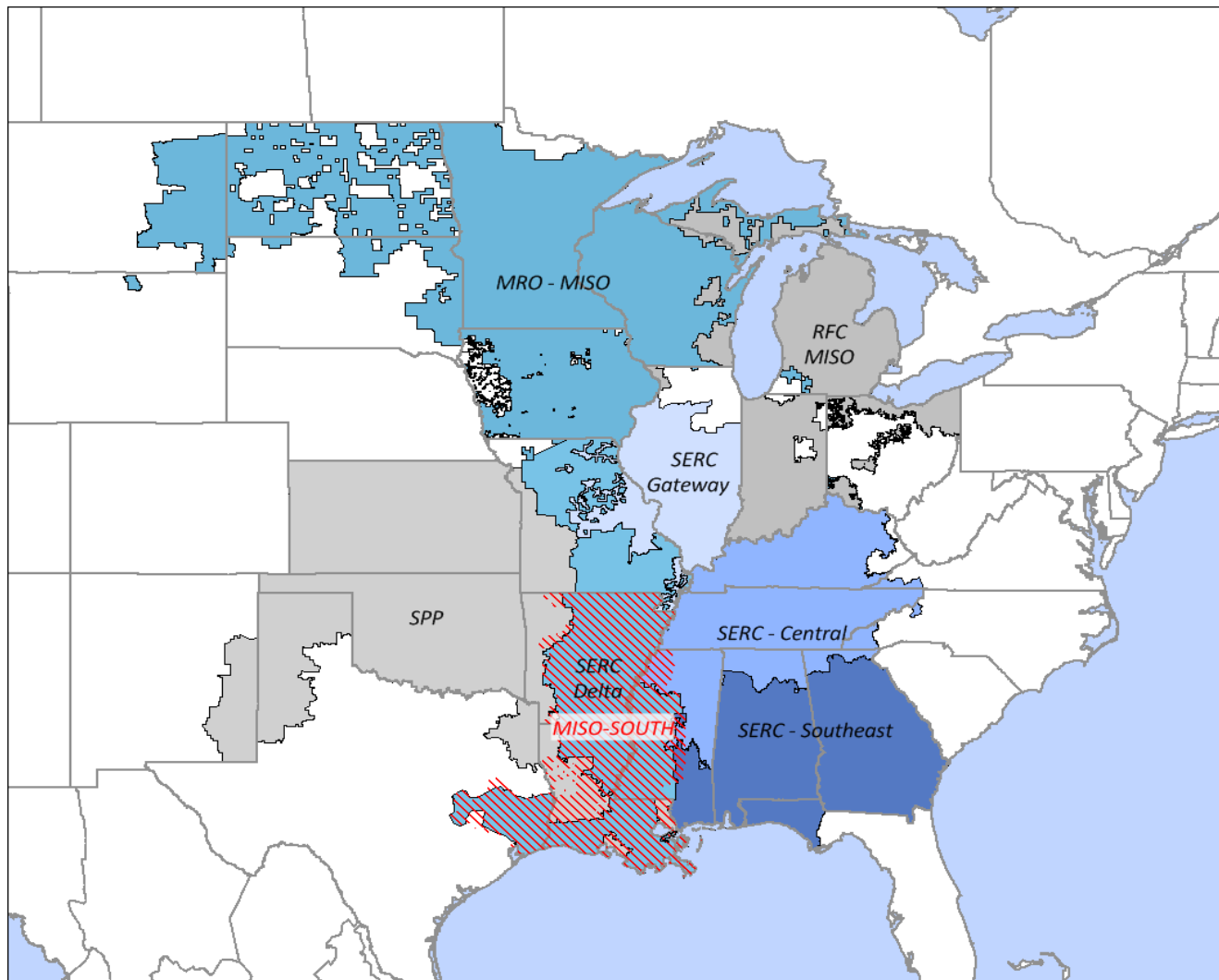
CO₂ PRICE FORECAST

April 2013 Long-Term CO₂ Price Forecast (2013\$/U.S. Ton)

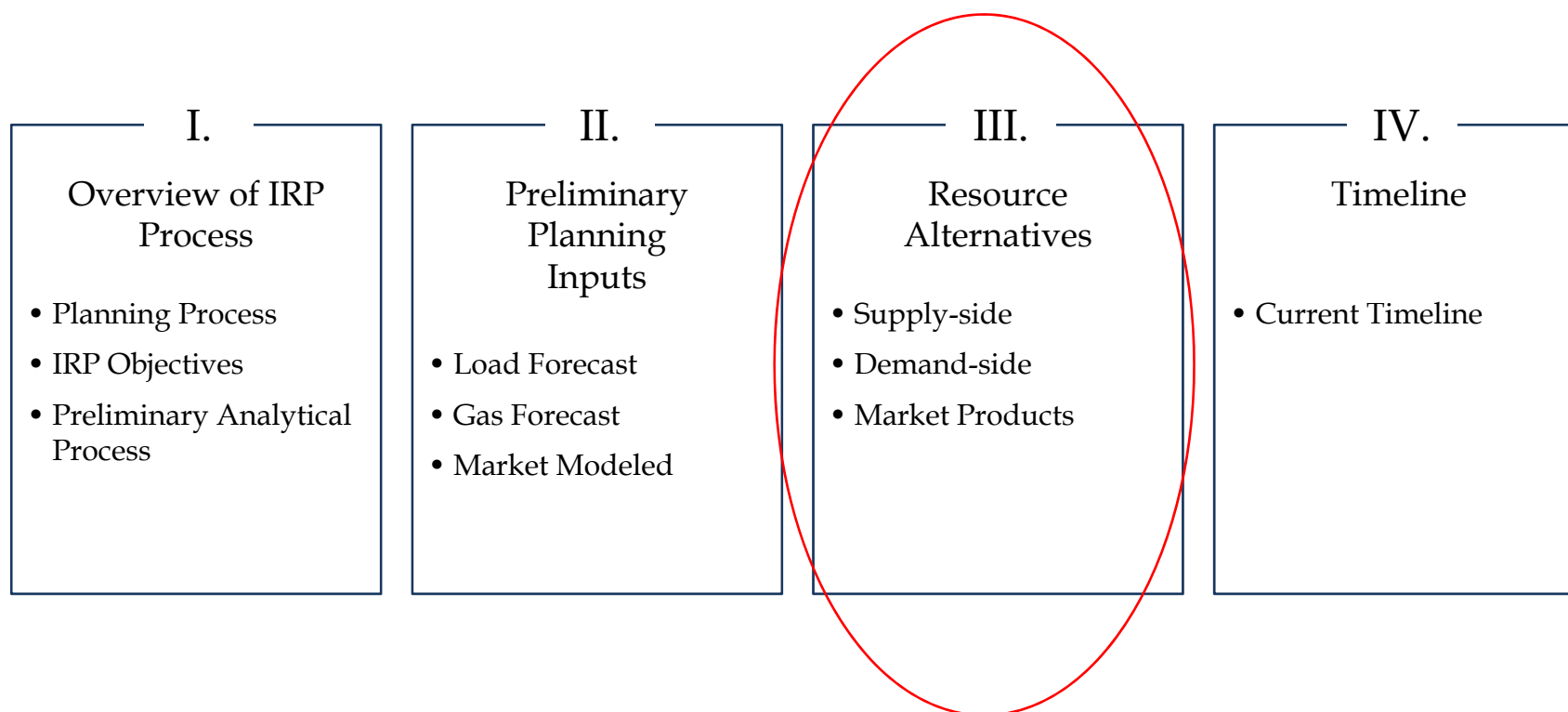


SCOPE OF AURORA MARKET MODELING FOR IRP

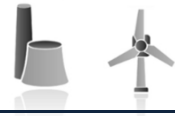
Input Variables Feed the AURORA model which simulates the economic commitment and hourly dispatch of resources to meet loads in MISO and other markets in relative proximity to EGSL and ELL service areas.



ORGANIZATION OF MATERIALS*



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SUPPLY-SIDE TECHNOLOGIES

A Technology Assessment is generally updated each year and assesses a range of technologies. The list below was part of the April 2013 Technology Assessment and will be updated as needed in 2014.

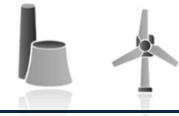
- Pulverized Coal
 - Subcritical Pulverized Coal
 - Supercritical Pulverized Coal
 - Ultra Supercritical Pulverized Coal
- Fluidized Bed
 - Circulating Fluidized Bed
 - Atmospheric Fluidized Bed
 - Pressurized Fluidized Bed
 - Topping Pressurized Fluidized Bed
- Integrated Gasification (“IGCC”)
 - Oxygen-Blown IGCC
 - Air-Blown IGCC
 - Integrated Gasification Fuel Cell Combined Cycle
- Natural Gas Fired
 - Combustion Turbine
 - Combined Cycle
 - Small Scale Aeroderivative
- Fuel Cells
 - Molten Carbonate
 - Solid Oxide
 - Fuel Cell Combined Cycle
- Nuclear
 - Advanced Boiling Water Reactor
 - Generation IV
 - Modular Reactors
- Energy Storage
 - Pumped Hydro
 - Underground Pumped Hydro
 - Battery
 - Flywheel
 - Compressed Air Energy Storage
- Renewable Technologies
 - Biomass
 - Solar Photovoltaic
 - Solar Thermal
 - Wind Power
 - Municipal Solid Waste
 - Landfill Gas
 - Geothermal
 - Ocean & Tidal
 - In-stream Hydro



COST & PERFORMANCE OF SELECT SUPPLY SIDE RESOURCES

April 2013 Technology Assessment

Conventional Technologies 2012\$		Combustion Turbine		Combined Cycle Gas Turbine		Coal	Nuclear
		Heavy Frame CT	Aeroderivative CT - Large	2x1 CCGT	1x1 CCGT	PC With CCS	3rd Generation
Net Capacity (based on summer conditions)	(MW)	368	260	551	260	800	1310
Number of Units or Turbines	(#)	2	3	2	1	1	1
Typical Development Time	(years)	1.5	1.5	2	2	4	5
Typical Construction Time	(years)	1	1	3	3	4	10
Overnight Cost	(\$/kW)	\$690	\$1,186	\$1,163	\$1,374	\$3,845	\$5,196
Installed Cost	(\$/kW) ¹	\$887	\$1,465	\$1,493	\$1,755	\$4,702	\$7,826
Full Load Heat Rate - ISO	(Btu/kWh)	10,020	8,960	6,620	6,640	13,100	10,200
Full Load Heat Rate - Summer	(Btu/kWh)	10,240	9,200	6,950	6,960	13,100	10,200
Fixed O&M	(\$/kW-yr)	\$9.24	\$9.22	\$15.59	\$21.63	\$71.16	\$82.89
Variable O&M	(\$/MWh)	\$2.03	\$2.03	\$2.54	\$2.54	\$8.13	\$4.15
NO _x	(lbs/MMBtu)	0.03	0.03	0.015	0.015	0.040	0
SO ₂	(lbs/MMBtu)	0	0	0	0	0.02	0
H _g	(lbs/MMBtu)	0	0	0	0	0.000002	0
CO ₂	(lbs/MMBtu)	118.9	118.9	118.9	118.9	21	0
Expected Useful Life	(years)	30	30	30	30	40	40



COST & PERFORMANCE OF SELECT SUPPLY SIDE RESOURCES

April 2013 Technology Assessment

Renewable Generation 2012 \$		Wind		Solar	Biomass	Hydro	Geothermal
		On-Shore	Off-Shore	Solar PV	CFB	In Stream	Geothermal
Net Capacity (based on summer conditions)	(MW)	75	120	50	750	50	50
Number of Units or Turbines	(#)	50	40	1	3	50	1
Typical Development Time	(years)	1	2	2	4	1	1
Typical Construction Time	(years)	1	2	1.5	4.5	1	3
Overnight Cost	(\$/kW)	\$1,760	\$2,948	\$3,047	\$2,598	\$1,911	\$4,985
Installed Cost	(\$/kW)	\$1,840	\$3,489	\$3,275	\$3,429	\$2,273	\$5,296
Full Load Heat Rate - ISO	(Btu/kWh)	N/A	N/A	N/A	10,600	N/A	N/A
Full Load Heat Rate - Summer	(Btu/kWh)				10,600		
Fixed O&M	(\$/kW-yr)	\$40.66	\$91.49	\$20.33	\$45.75	\$81.32	\$82.20
Variable O&M	(\$/MWh)	\$1.02	\$1.02	\$0.00	\$10.17	\$0.00	\$7.75
NO _x	(lbs/MMBtu)	0	0	0	0.039	0	0
SO ₂	(lbs/MMBtu)	0	0	0	0	0	0
H _g	(lbs/MMBtu)	0	0	0	0	0	0
CO ₂	(lbs/MMBtu)	0	0	0	212.6	0	0
Expected Useful Life	(years)	20	20	25	40	25	30



DSM RESOURCES

There are two basic types of utility-sponsored DSM. Demand Response, which lowers capacity requirements, and Energy Efficiency, which lowers both capacity and energy requirements.

Demand Response

- Load management program that have the intended goal of reducing or shifting load from hours with high electricity cost and/or reliability problems.
- Demand Response programs may include direct load control (such as air conditioners and water heaters), and interruptible rates which include incentive payments designed to induce lower electricity use at times of high wholesale market prices or when system reliability is jeopardized.

Energy Efficiency

- Permanent changes to electricity use through replacement of end-use devices with more efficient equipment or more effective operation of existing devices, and any program or resource defined as an Energy Efficiency resource in any Energy Efficiency rule(s) issued by the Commission.
- Generally, this type of resource results in reduced energy consumption across all hours rather than just event-driven targeted load reductions in specific hours.

ICF International will produce a detailed DSM Potential Study For EGSL and ELL in 2014.



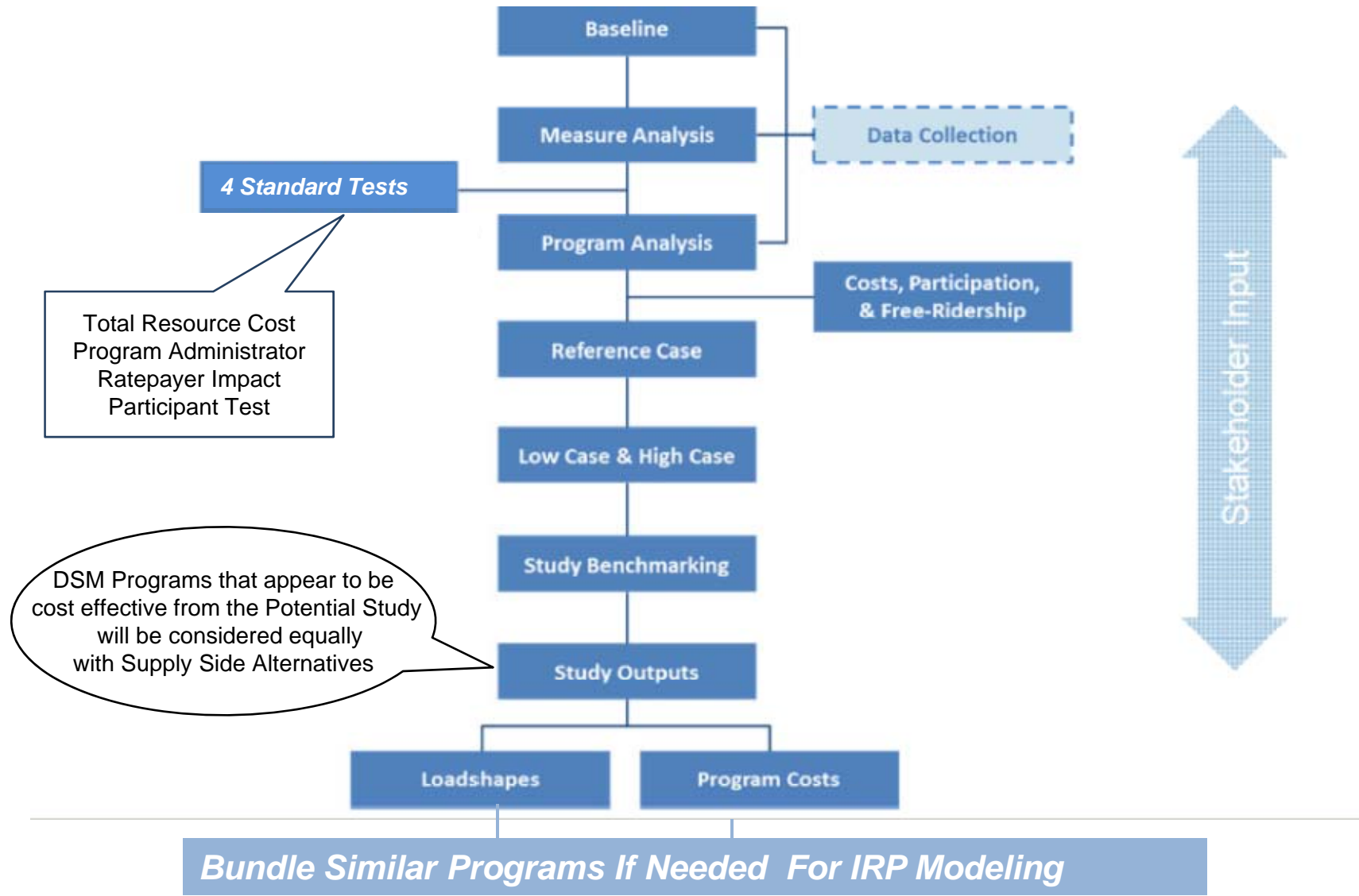
TYPES OF DSM POTENTIAL

<p>Technically Achievable</p>	<p><i>The estimated level of efficiency savings that could be achieved without consideration of cost, customer behavior or other barriers. Assumes customers adopt 100% of what is feasible.</i></p>	<p>X</p>
<p>Economically Achievable</p>	<p><i>Cost effective sub-set of Technically Achievable potential. Ignores customer financial constraints, behavioral issues or other market barriers.</i></p>	<p>X</p>
<p>Achievable Potential</p>	<p><i>Sub-set of Economically Achievable potential. In other words, what is likely to be achieved given customer profile and local market conditions. ICF Potential Study will solve for this level of DSM.</i></p>	<p>✓</p>

<p>✓</p>	<p>Appropriate For IRP</p>
<p>X</p>	<p>Not Appropriate For IRP</p>



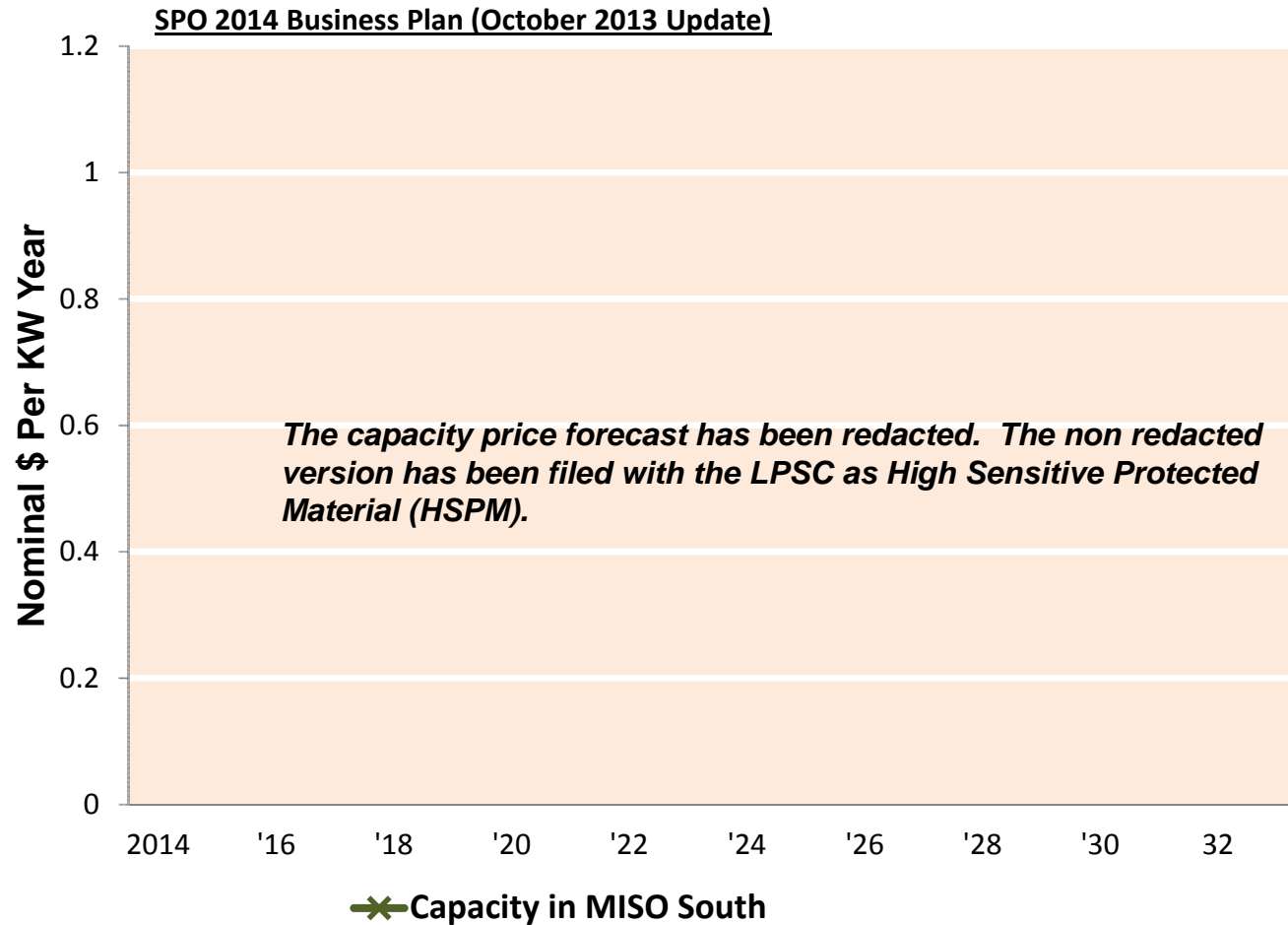
2014 DSM POTENTIAL STUDY PROCESS MAP



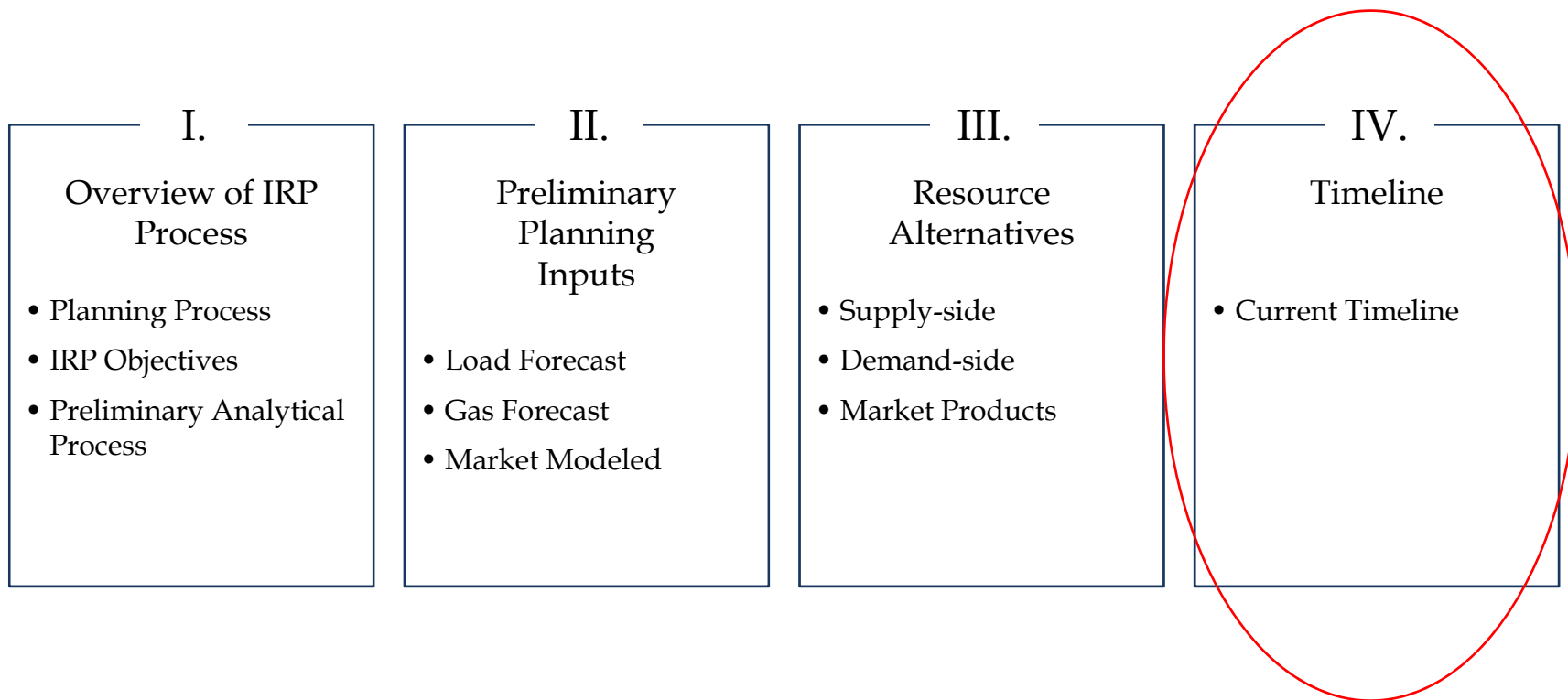


ENTERGY SOUTH SPOT CAPACITY PRICE FORECAST

The chart below is a forecast of prices for short-term capacity-only products that can meet MISO's Resource Adequacy Requirements.







ORGANIZATION OF MATERIALS*



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2014 IRP TIMELINE

	Completed
	Underway/ On Schedule
	Behind Schedule
	Not started

Event	Description	Target Date	Status
1	Filing initiating 1st Full Cycle	October 21, 2013	
2	File data assumptions and description of studies to be performed	December 20, 2013	
3	1st Stakeholder meeting	Mid-January 2014	
4	Stakeholder written comments due	February 21, 2014	
5	Publish draft IRP reports	October 21, 2014	
6	2nd Stakeholder meeting	November 21, 2014	
7	Stakeholder comments on draft IRP reports due	January 21, 2015	
8	Staff Comments about draft IRP reports due	February 23, 2015	
9	Final IRP reports due	May 21, 2015	
10	Stakeholder lists of disputed issues and alternative recommendations due	July 21, 2015	
11	Staff recommendation to Commission on whether a proceeding is necessary to resolve issues	August 21, 2015	
12	Commission order acknowledging IRPs or setting procedural schedule for disputed issues	October 21, 2015	
13	Filing initiating 2nd Full Cycle	October 23, 2017	

OTHER CONSIDERATIONS

- (1) Opportunities and Effects Associated with Participation in the MISO Markets
- (2) Potential Dissolution of the Entergy System Agreement
- (3) Potential Merger of EGSL and ELL

**BEFORE THE
LOUISIANA PUBLIC SERVICE COMMISSION**

**2013 INTEGRATED RESOURCE)
PLANNING ("IRP") PROCESS FOR)
ENERGY LOUISIANA LLC AND)
ENERGY GULF STATES LOUISIANA,)
L.L.C. PURSUANT TO GENERAL)
ORDER APRIL 20, 2012.)**

DOCKET NO. I-33014


NOTICE OF APPEARANCE AND REQUEST TO BE ADDED TO SERVICE LIST

Entergy Gulf States Louisiana, L.L.C. ("EGSL") and Entergy Louisiana, LLC ("ELL") (collectively, the "Companies"), respectfully request that the following attorneys be entered as counsel of record for the Companies and be added to the Official Service List in this docket:

<p>Karen H. Freese Entergy Services, Inc. 639 Loyola Avenue Mail Unit L-ENT-26E New Orleans, Louisiana 70113 Telephone: (504) 576-4170 Facsimile: (504) 576-5579 kfreese@entergy.com</p>	<p>Jason M. Bilbe Entergy Services, Inc. 639 Loyola Avenue Mail Unit L-ENT-26E New Orleans, Louisiana 70113 Telephone: (504) 576-4235 Facsimile: (504) 576-5579 jbilbe@entergy.com</p>
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WHEREFORE, the Companies request that service in connection with this proceeding be made on the Companies' counsel of record.

Respectfully submitted,

BY: 
Kathryn J. Lichtenberg, La. Bar No. 1836
Karen H. Freese, La. Bar No. 19616
Jason M. Bilbe, La Bar No. 24965
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**ATTORNEYS FOR ENTERGY LOUISIANA, LLC AND
ENERGY GULF STATES LOUISIANA, L.L.C.**

CERTIFICATE OF SERVICE

LPSC Docket No. I-33014

I, the undersigned counsel, hereby certify that a copy of the above and foregoing has been served on the persons listed below by facsimile, electronic mail, hand delivery and/or by mailing said copy through the United States Postal Service, postage prepaid, and addressed as follows:

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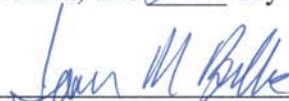
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Commissioner Foster L. Campbell
Office of the Commissioner
District V – Shreveport
Post Office Drawer E
Shreveport, LA 71161

New Orleans, Louisiana, this 20th day of December, 2013.



Jason M. Bilbe