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Lawrence J. Hand, Jr.
Senior Counsel
Legal Services - Regulatory

May 5, 2014

Via UPS Overnight Delivery

Ms. Terri Lemoine Bordelon
Records and Recording Division
Louisiana Public Service Commission
Galvez Building, 12th Floor
602 North Fifth Street
Baton Rouge, Louisiana 70802

Re: 2015 Integrated Resource Planning ("IRP") Process for Entergy Louisiana, LLC and Entergy Gulf States Louisiana, L.L.C. Pursuant to the General Order Dated April 20, 2012
LPSC Docket No. I-33014

Dear Ms. Bordelon:

On behalf of Entergy Louisiana, LLC and Entergy Gulf States Louisiana, L.L.C. (collectively, the "Companies"), enclosed please find following documents pertaining to the 2015 IRP Process:

(1) An updated Input Assumptions Status Report and Timeline;

(2) An HSPM CD containing an Excel workbook containing updates to IRP inputs previously filed on March 22, 2014, which is being filed under seal (adding Tabs 2-41, 2-42, 2-43 and 2-44 and updating Tab 5-1);

(3) A Public version of the Power Point slide deck updating the version filed on February 28, 2014 (updating the Market Model Inputs slide and adding 2 slides describing the fuel price methodologies);

(4) An HSPM version of the above-described Power Point slide deck, which is being filed under seal; and

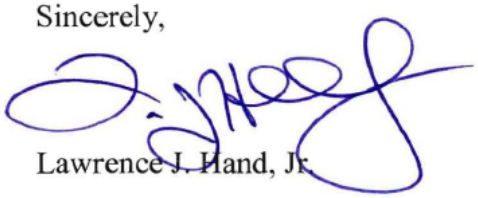
(5) A Generation Technology Assessment, including cost and performance.

Please file these documents in the record and return a date-stamped copy to me in the enclosed, self-addressed envelope. Stakeholder comments on these materials are due by May 15, 2014.

The HSPM CD and the HSPM version of the Power Point slide deck 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 Practices and Procedures. Please retain one sealed copy of the HSPM Versions for your files and return a date-stamped sealed copy to me in the enclosed, self-addressed envelope.

Thank you for your assistance with this matter.

Sincerely,



Lawrence J. Hand, Jr.

LJH/rdm
Enclosures

cc: Official Service List (*HSPM information provided only to signatories to the Confidentiality Agreement)*

EGSL/ELL 2015 IRP Inputs Timeline & Status Report

LPSC Docket No. I-33014: Preliminary Subject to Change - May 5, 2014

Legend	
✓	Items complete or substantially complete*
	Underway/on track
	Additional items to be completed

Items are expected to be substantially complete by the dates shown

Status (Date Expected to Be Completed)				
Item #		**Reference**	**Sensitivities / Scenarios**	**Deck with Current Assumptions**
1	IRP Scenario Storylines & Proposed Sensitivities	✓	✓	PowerPoint Presentation #1
2	Inflation	✓	✓	HSPM Excel Workbook
3	Financial Factors (e.g. Discount Rates)	✓	✓	HSPM Excel Workbook
4	DSM Potential Study Inputs from SPO	✓	Not Applicable	HSPM Excel Workbook
5	Load Forecast (Entergy & Non Energy) Scenario 1 (Reference Case)	✓	✓	HSPM Excel Workbook (See Note 1)
6	Load Forecast (Entergy & Non Energy) Three Alternative Scenarios	✓	✓	HSPM Excel Workbook
7	Henry Hub Gas Prices & Crude Oil Prices	✓	✓	HSPM Excel Workbook (See Note 1)
8	Delivered Coal Prices (Entergy)	✓	✓	HSPM Excel Workbook
9	Fuel Prices For Non Entergy Plants Methodology	✓	✓	PowerPoint Presentation #1
10	Nuclear Fuel Prices (Entergy)	✓	Not Applicable	HSPM Excel Workbook
11	Environmental Issues - CO2 Prices	✓	✓	HSPM Excel Workbook (See Note 1)
12	Environmental Issues - SO2 & NOx Prices	✓	Not Applicable	HSPM Excel Workbook
13	Entergy Utility Deactivation Schedule	✓	Not Applicable	HSPM Excel Workbook
14	Non Entergy Retirements	✓	✓	HSPM Excel Workbook
15	Current Entergy Power Purchase Agreements	✓	Not Applicable	PowerPoint Presentation #1
16	Technology Assessment/capital cost (Including renewables)	✓	Not Applicable	PowerPoint Presentation #2
17	Short-Term Capacity Purchase Prices	✓	Not Applicable	HSPM Excel Workbook
18	Long-Term Capacity Purchase Prices (CT Replacement Cost)	✓	✓	HSPM Excel Workbook
19	MISO South Merchant and QF Considerations	✓	Not Applicable	HSPM Excel Workbook
20	Entergy/Non Entergy Existing Resource List & Characteristics	✓	Not Applicable	HSPM Excel Workbook
21	Transmission Topology (Including Upgrades)	✓	Not Applicable	PowerPoint Presentation #1
22	System and Area Reserve Requirements	✓	Not Applicable	PowerPoint Presentation #1
23	ICF Potential Study Analytics Results	5/31/2014	Not Applicable	Not Available Yet
24	ICF Potential Study Results Report	7/31/2014	Not Applicable	Not Available Yet

Note 1: There is also a graphical representation of the Reference Case in the 2/28/14 PowerPoint Presentation.

Note 2: PowerPoint Presentation #1 is named "Portfolio Design Analytics (Scenarios & Sensitivities); AURORA Documentation". PowerPoint Presentation #2 is named "Technology Assessment"

Note 3: "HSPM" stands for Highly Sensitive Protected Material

BEFORE THE

LOUISIANA PUBLIC SERVICE COMMISSION

2015 INTEGRATED RESOURCE PLANNING ("IRP") PROCESS FOR ENTERGY LOUISIANA, LLC AND ENTERGY GULF STATES LOUISIANA, L.L.C. PURSUANT TO GENERAL ORDER APRIL 20, 2012.	**)**	**DOCKET NO. I-33014**

2015 LA IRP MACRO INPUTS

INTENTIONALLY OMITTED
HIGHLY SENSITIVE PROTECTED MATERIAL

May 5, 2014

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

LPSC DOCKET NO. I-33014

Portfolio Design Analytics (Scenarios & Sensitivities); AURORA Documentation

2015 EGSL & ELL Integrated Resource Plans

MAY 5. 2014

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. NOTE: ALL IRP MATERIALS ARE PRELIMINARY & SUBJECT TO CHANGE PRIOR TO THE FINAL REPORT FILING.

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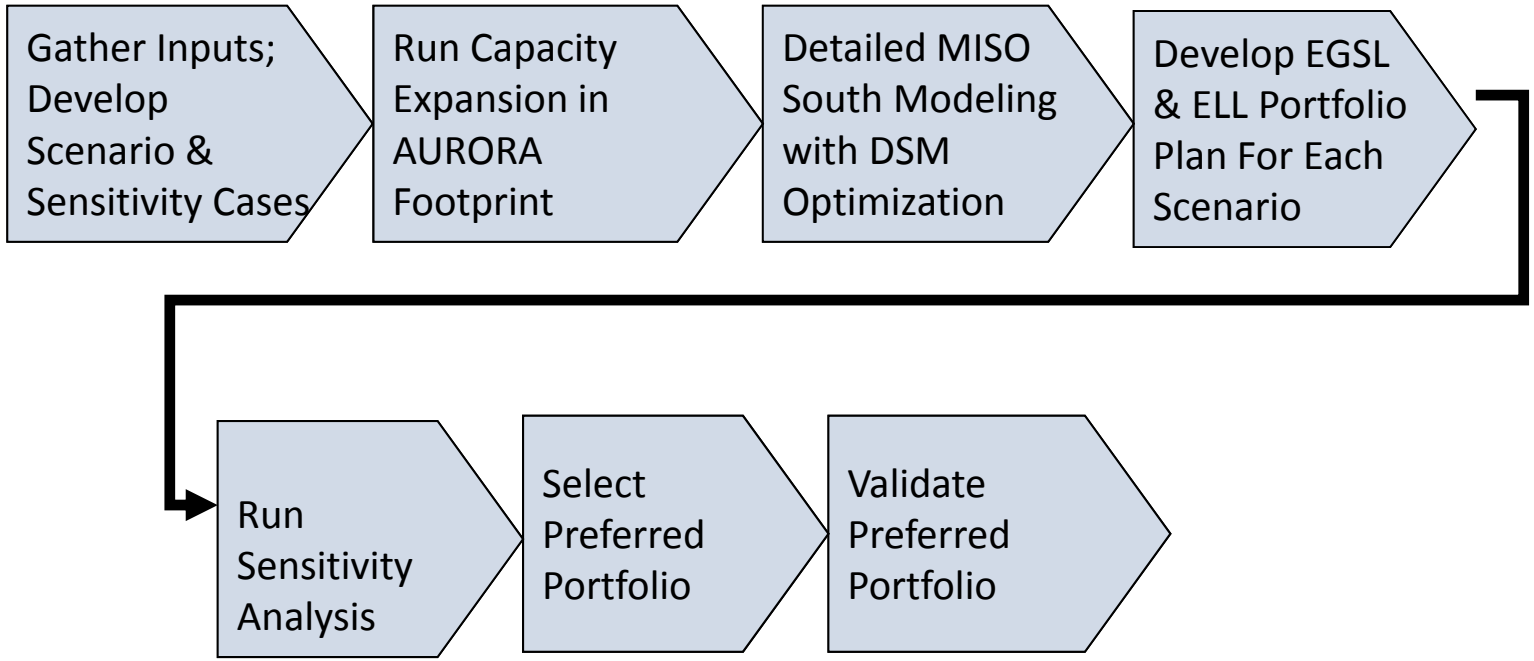
PORTFOLIO DESIGN ANALYTICS (SCENARIOS & SENSITIVITIES)

PORTFOLIO DESIGN ANALYTICS

As required in IRP Rule 6g, IRP analytics will rely on a combination of scenario and sensitivity analyses. The process will include seven broad steps:



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 portfolio decisions are made at the time of execution.

SCENARIOS AND SENSITIVITIES TO BE PERFORMED

The companies plan to examine four scenarios to assess alternative portfolio strategies under varying market conditions. The four scenarios are:

- Scenario 1
  - Reference Load, Gas, Oil, and Coal Prices
  - No direct CO2 cap and trade or tax on existing resources or new resources but EPA CO2 standards for new resources allowed to go into effect as currently proposed.
  - Most renewable incentives allowed to sunset.
  - No new RPS Standards.
- Three additional scenarios listed below and described on the next page.
  - Scenario 2 (Industrial Renaissance)
  - Scenario 3 (Distributed Disruption)
  - Scenario 4 (Resource Shift)

*EGSL/ELL use MISO capacity market purchases/sales to ensure appropriate resource adequacy

**To the extent that there is a CO_2 cap and trade or tax it is assumed to apply to new and existing resources equally.

The Sensitivity Analysis will consider the following uncertainties:

- Natural gas prices
- Coal prices
- Load (only change EGSL/ELL energy & peaks)*
- Capital cost for new generation
- General inflation and resulting cost of capital
- Implementation of CO_2 cost
- Gas and CO_2 combination**

SCENARIO STORYLINES

	Scenario 2	Scenario 3	Scenario 4
	Industrial Renaissance	**Distributed Disruption**	**Resource Shift**
General Themes	• U.S. energy boom continues with low gas and coal prices discounted to world prices. U.S. oil production remains strong but price stays linked to world market. • Low fuel prices drive high load growth especially in industrial class, but with Residential and Commercial class spillover benefits. • Higher capital cost for new power plants.	• States continue to support distributed generation. Consumers and businesses see it as a way to manage their own energy uses. • Medium-high oil prices drive consumer awareness across energy spectrum. • Overall economic conditions are steady with moderate GDP growth which enables investment in energy infrastructure.	• High natural gas exports and more coal exports lead to higher prices at home. • Slow economic growth due to higher energy prices. • Consumers and government look for utility transformation to cleaner and more stable fuels. • Conditions are ripe for renewables and new nuclear but their challenges remain.
Power Sales	• Power sales driven by industrial growth and modest rate increases due to low natural gas and coal prices.	• Power sales growth slows and ultimately turns negative. • Solar PV and Combined Heat and Power impact utility sales, however, most customers stay grid connected. • Customers seek maximum flexibility and reliability by relying on self generation and grid power to meet their needs.	• Slow economic growth leads to relatively low power sales.
CO_2 Policy	• Congress or the EPA ultimately passes a mild CO_2 cap and trade program (power sector only) effective in 2023.	• Congress or the EPA ultimately passes a mild CO2 cap and trade program (power sector only) effective in 2023.	• Congress takes control of CO2 cap and trade away from EPA and passes a Kerry -Lieberman style CO_2 program effective in 2023.
Energy Policy	• Most renewable energy subsidies sunset. • Not all states meet RPS goals.	• Net metering continues but issues related to cross subsidization are addressed. • Federal and state renewable subsidies continue	• Federal and state renewable subsidies continue • No new state RPSs.
Fuels	• Low fuel prices, but natural gas and coal still plentiful as exploration and production costs are also lower. Coal prices low to retain share.	• Natural gas prices are driven higher by EPA regulation of fracking & local opposition. Coal and oil prices also high.	• Natural gas, coal, and oil prices are high.

20 YEAR MARKET MODEL INPUTS (2015-2034)

	Scenario 1	Industrial Renaissance	Distributed Disruption	Resource Shift
Electricity CAGR (Energy GWh)	~0.8%	~1.D%	~0.1%	~0.4%
Peak Load Growth CAGR	~0.8%	~1.0%	~0.1%	~0.4%
Henry Hub Natural Gas Prices ($/MMBtu)*	$4.89 levelized 2013$	Low Case $3.84 levelized 2013$	Same as Reference Case ($4.89 levelized 2013$)	High Case ($8.18 levelized 2013$)
WTI Crude Oil ($/Barrel)*	$73.99 levelized 2013$	Low Case $69.00 levelized 2013$	Medium High ($109.12 levelized 2013$)	High Case ($173.71 levelized 2013$)
CO_2 ($/short ton)*	None	Cap and trade starts in 2023 $6.70 levelized 2013$	Cap and trade starts in 2023 $6.70 levelized 2013$	Cap and trade starts in 2023 $14.32 levelized 2013$
Conventional Emissions Allowance Markets	CAIR & MATS	CAIR & MATS	CAIR & MATS	CAIR & MATS
Delivered Coal Prices – Entergy Owned Plants (Plant Specific Includes Current Contracts) $/MMBtu*	Reference Case (Vol. Weighted Avg. $2.69 levelized 2013$)	Low Case (Vol. Weighted Avg. $2.30 levelized 2013$)	Same as Reference Case (Vol. Weighted Avg. $2.69 levelized 2013$)	High Case (Vol. Weighted Avg. $2.30 levelized 2013$)
Delivered Coal Prices – Non Entergy Plants In Entergy Region	Reference Case (Price Varies by Plant)	Low Case (Price Varies by Plant)	Same as Reference Case	High Case (Price Varies by Plant)
Delivered Coal Prices – Non Entergy Regions	Reference Case (Price Varies by Plant)	Low Case (Price Varies by Plant)	Same as Reference Case	High Case (Price Varies by Plant)
Coal Retirements Capacity (GW)*	Age 60**	Age 70**	Age 60**	Age 50**
New Nuclear Capacity (GW)*	***	***	***	***
New Biomass (GW)*	***	***	***	***
New Wind Capacity (GW)*	***	***	***	***
New Solar Capacity (GW)*	***	***	***	***

*Figures shown are for the period 2015-2034 covering a sub-set of the Eastern Interconnect which is approximately 34% of total U.S. 2011 TWh electricity sales.
Note: Levelized prices refer to the price in 2013 dollars where the NPV of that price grown with inflation over the 2015-2034 period would equal the NPV of levelized nominal prices over the 2015-2034 period when the discount rate is 6.62%. (ELL WACC). Converting to EGSL WACC would lower the levelized value between 0.3% to 2.3%.
**Entergy owned coal plants assumed to operate beyond the end of the IRP (2034). Some non Entergy plants retire early due to environmental compliance considerations
***After further consideration this information is no longer considered an "input" but an output of the "Market Modeling".

SENSITIVITY ANALYSIS

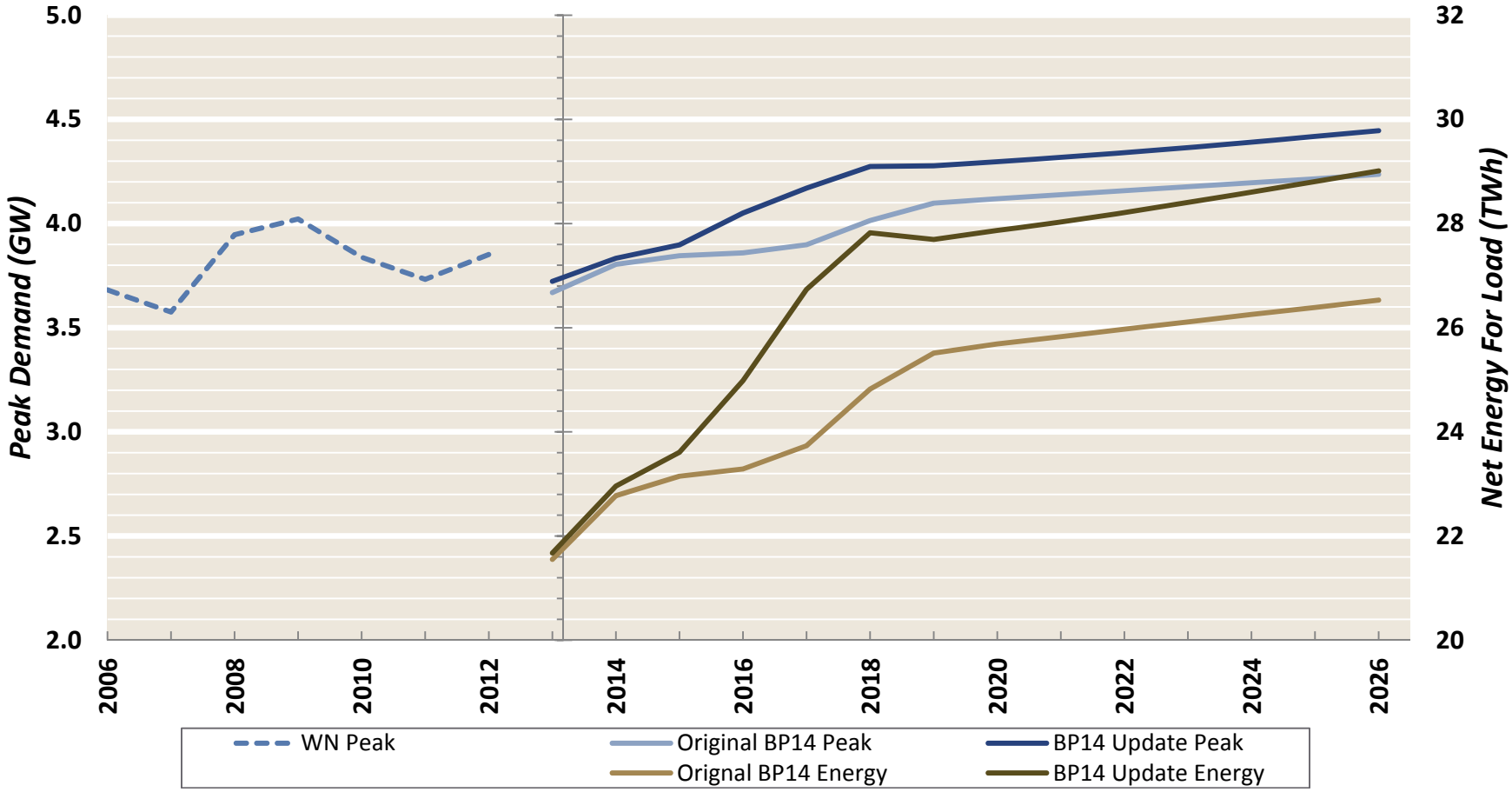
- Test sensitivity of objective function results of each portfolio by rerunning production cost and changing one or two variables.
- Run 15 sensitivity cases times 4 scenarios for a total of 60 cases. Yellow shading indicates the assumption in the respective scenario storyline.

	Scenario 1 (Reference)			Scenario 2 (Industrial Renaissance)		
1 Natural gas prices	Reference	Low	High	Low	Reference	High
2 Coal prices	Reference	Low	High	Low	Reference	High
3 Load (only change EGSL/ELL energy & peaks)*	Reference	Scenarios 2, 3 and 4		Scenario 2	Scenarios 1, 3 & 4	
4 Capital cost for new generation	Reference	Low	High	High	Low	High
5 General inflation and resulting cost of capital	Reference	Low	High	Reference	Low	High
6 Implementation of CO2 cost	None	Reference	High	Reference	None	High
7 Gas and CO2 combination	Reference /None	Low /Reference	High /High	Low /Reference	Reference /None	High /High

	Scenario 3 (Distributed Disruption)			Scenario 4 (Resource Shift)		
1 Natural gas prices	Reference	Low	High	High	Low	Reference
2 Coal prices	Reference	Low	High	High	Low	Reference
3 Load (only change EGSL/ELL energy & peaks)*	Scenario 3	Scenarios 1, 2 and 4		Scenario 4	Scenarios 1, 2 and 3	
4 Capital cost for new generation	Reference	Low	High	Low	Reference	High
5 General inflation and resulting cost of capital	Reference	Low	High	Reference	Low	High
6 Implementation of CO2 cost	Reference	None	High	High	None	Reference
7 Gas and CO2 combination	Reference /Reference	Low /None	High /High	High /High	Low /None	Reference /Reference

*EGSL/ELL use MISO capacity market purchases/sales to ensure appropriate resource adequacy

EGSL REFERENCE CASE (SCENARIO 1) LOAD FORECAST

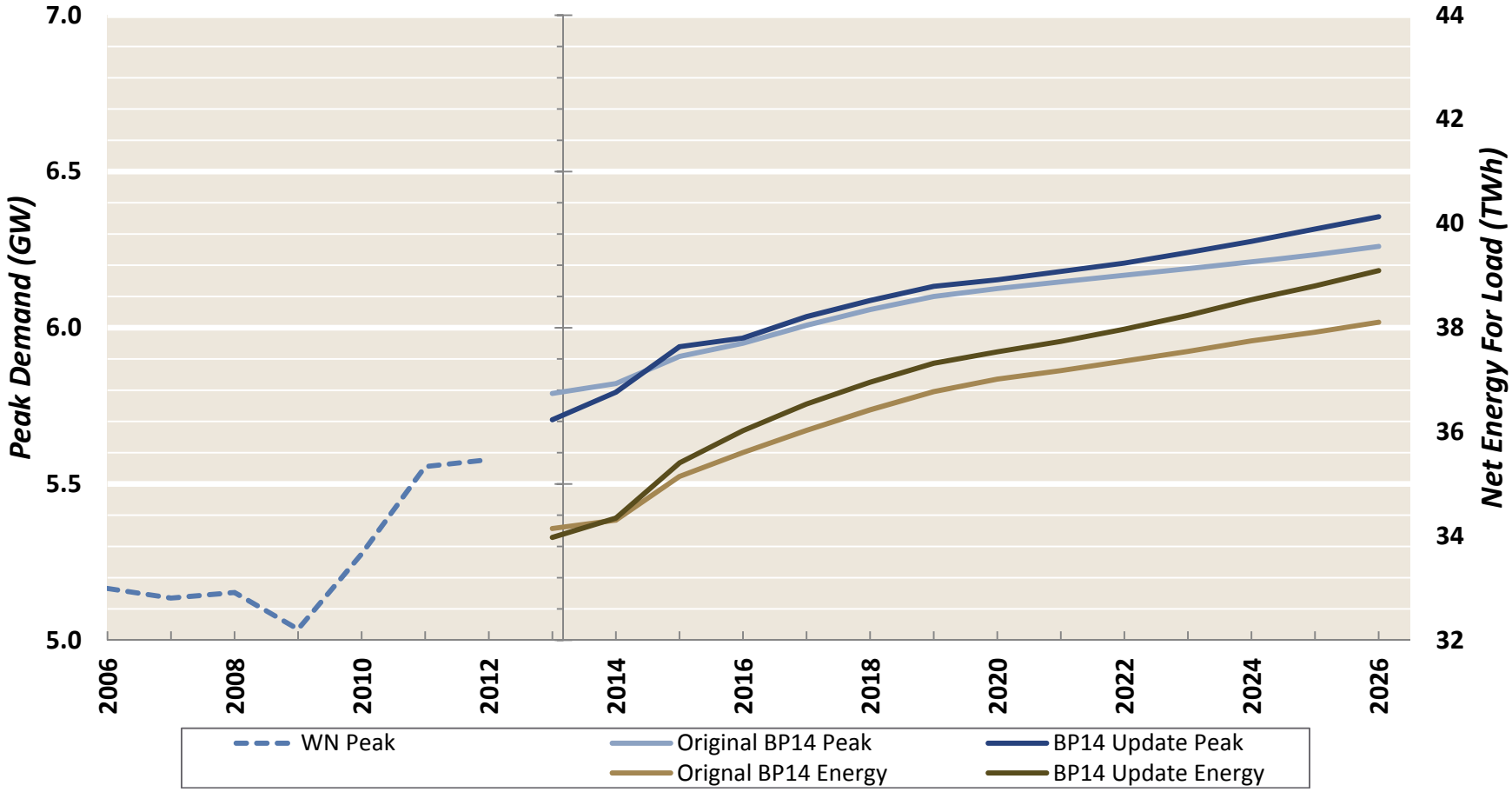


10-Yr CAGR From 2013	Original BP 14 F'cst	BP14 Update F'cst.
Peak:	1.31%	1.60%
Energy:	1.94%	2.74%

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

BP14 Update	2013	2015	2020	2025	2030
Peak (MW)	3,723	3,898	4,297	4,419	4,548
Energy (GWh)	21,673	23,608	27,868	28,806	29,817

ELL REFERENCE CASE (SCENARIO 1) LOAD FORECAST



10-Yr CAGR From 2013	Original BP 14 F'cst	BP14 Update F'cst.
Peak:	0.67%	0.90%
Energy:	0.95%	1.19%

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

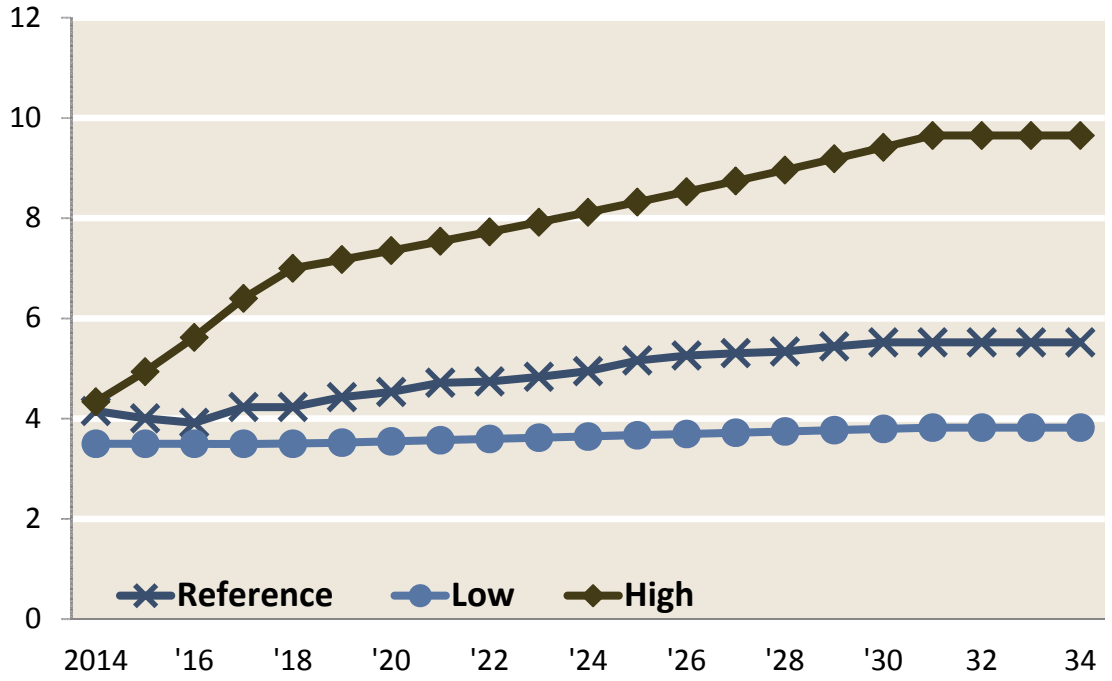
BP14 Update	2013	2015	2020	2025	2030
Peak (MW)	5,706	5,939	6,154	6,316	6,501
Energy (GWh)	33,973	35,404	37,317	38,802	40,242

HENRY HUB NATURAL GAS PRICE FORECAST

SPO January 2014 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 3 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).



FUEL PRICE METHODOLOGIES USED IN MODELING

Two factors drive the rigor and frequency of fuel price forecast updates. First the impact the fuel price assumption has on forecasting power prices; and secondly whether Entergy resources utilize the fuel in question.

FUEL PRICE METHODLOGY				
Fuel	***Load Serving Entity***	***Commodity Treatment***	***Transportation Treatment***	***Impact on Power Prices***
Natural Gas	Entergy OPCOs	Henry Hub proprietary forecast plus basis adjustments based on a historical analysis of basis	Transportation contracts and taxes to arrive at delivered price.	High
Natural Gas	Non Entergy MISO South	Henry Hub proprietary forecast plus adjustments from consultant averages of the basis differential at each non-Entergy hub	Default transportation adders provided by EPIS based on how they classify the resources (peaking, cycling, etc.)	High
Natural Gas	Other Modeled Footprint	Same as above		High
Coal	Entergy OPCOs	Proprietary forecast using future spot prices of Powder River Basin coal forecast by Energy Ventures Analysis plus existing coal contracts	Proprietary forecast of transportation cost based on rail contracts and forecasted spot rail prices by Energy Ventures Analysis	High
Coal	Non Entergy MISO South	Delivered price forecast on a plant by plant basis from Energy Ventures Analysis		High
Coal	Other Modeled Footprint	Delivered price forecast on a plant by plant basis from Energy Ventures Analysis		High
Nuclear Fuel	Entergy OPCOs	Proprietary forecast of each nuclear unit's commodity & fabrication cost considering existing contracts and future spot transportation cost	Proprietary forecast of each nuclear unit's transport cost considering existing contracts and future spot transportation cost	Low
Nuclear Fuel	Non Entergy MISO South	Volume weighted average cost for Entergy's regulated nuclear plants used for other nuclear plants		Low
Nuclear Fuel	Other Modeled Footprint	Same as above		Low

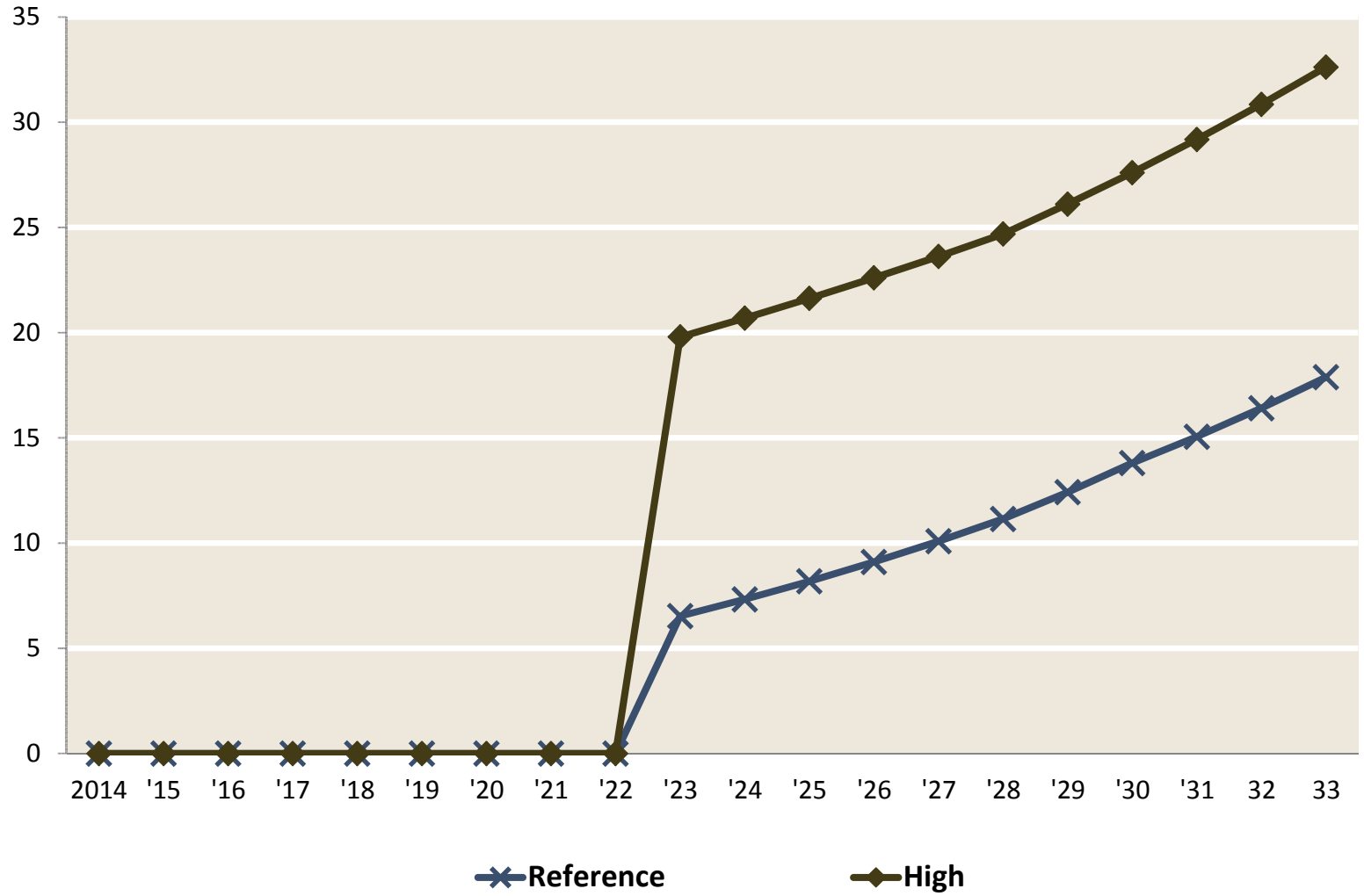
FUEL PRICE METHODOLOGIES USED IN MODELING (CONTINUED)

FUEL PRICE METHODLOGY				
Fuel	***Load Serving Entity***	***Commodity Treatment***	***Transportation Treatment***	***Impact on Power Prices***
Diesel/Fuel Oil	Entergy OPCOs	Use of petroleum for emergency use only at selected plants and therefore not modeled		Not meaningful*
Diesel/Fuel Oil	Non Entergy MISO South	Use of petroleum for emergency use only at selected plants and therefore not modeled		Not meaningful*
Diesel/Fuel Oil	Other Modeled Footprint	The delivered price forecast provided by AURORA vendor EPIS is used		Not meaningful*
Biomass	Entergy OPCOs	Proprietary forecast of delivered price based on market assessments by Argus Research and a forecast of lumber and wood price escalations provided by IHS Global Insight		Not meaningful
Biomass	Non Entergy MISO South	Proprietary forecast of delivered price based on market assessments by Argus Research and a forecast of lumber and wood price escalations provided by IHS Global Insight		Not meaningful
Biomass	Other Modeled Footprint	The delivered price forecast provided by AURORA vendor EPIS is used		Not meaningful

*Diesel prices impact coal transportation cost so the current and future outlook for diesel prices are considered in coal price forecasts.

CO_2 PRICE FORECAST

April 2013 Long-Term CO_2 Price Forecast (2013$/U.S. Ton) Reaffirmed in January 2014



AURORA Background and Construct

AURORAXMP ELECTRIC MARKET MODEL

- AURORAxmp Electric Market Model (AURORA) is a production cost model licensed by Entergy in April 2011 from software firm EPIS, Inc. in Sandpoint, ID (www.epis.com). Use of the tool at Entergy has advanced to the point where it is now the primary production cost tool used for MISO market modeling and Entergy long-term planning.

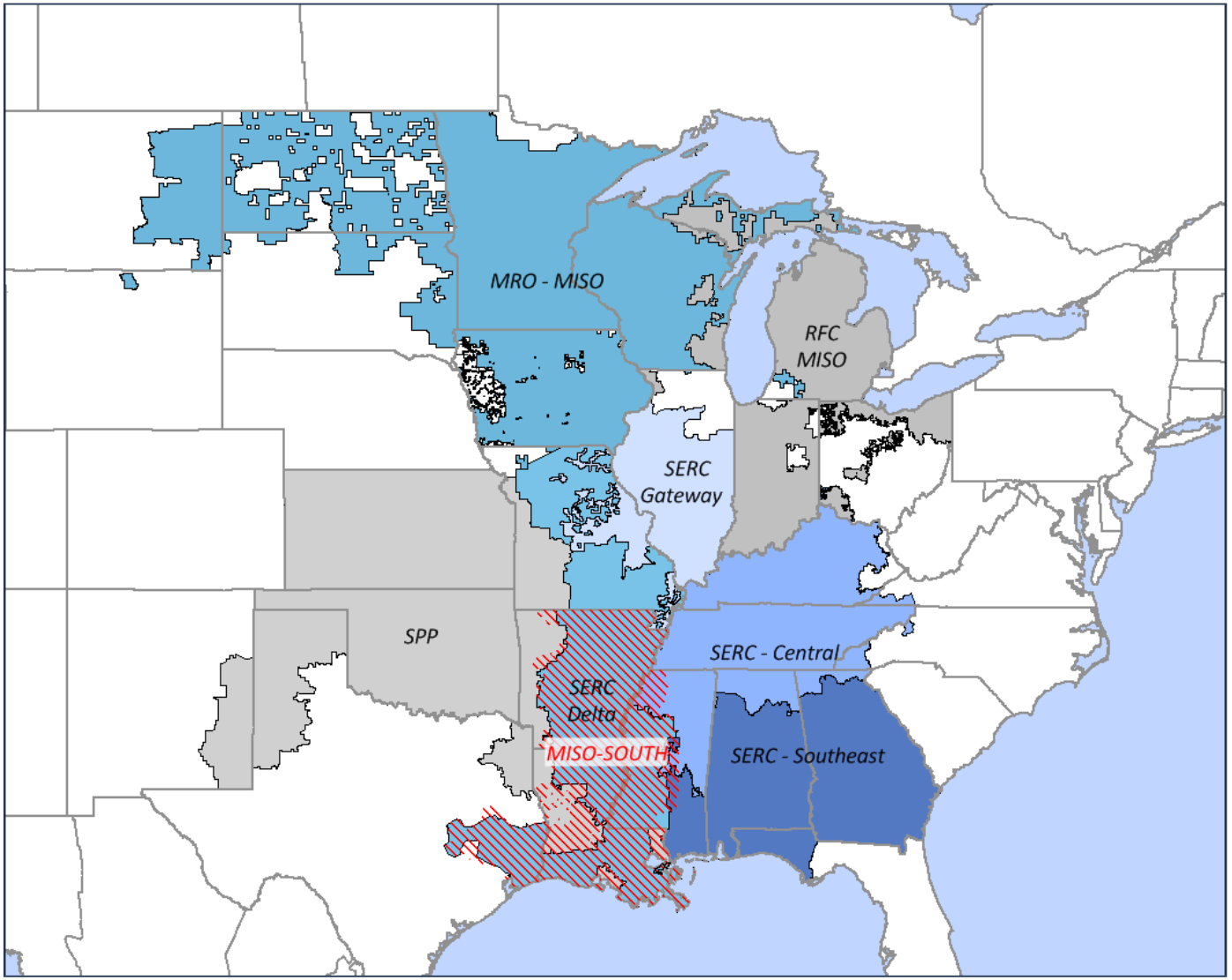
- The 2015 EGSL and ELL IRPs will utilize AURORA in scenario and sensitivity modeling. The 2014 Business Plan (February 2014 Update) AURORA case has been created using the latest planning assumptions . This will serve as the foundation for EGSL and ELL IRP Scenario 1 modeling. Assumptions in the IRP work which materially differ from the 2014 Business Plan (February 2014 Update) case will be noted in the IRP documents. The AURORA model has been calibrated to ensure accuracy of input data and output results. AURORA simulates the hourly operations of a power market over a projected study period. In this case, the model has been populated to allow studies for up to 21 years in length (1/1/2014 to 12/31/2034).

- The EGSL and ELL IRPs consider the years 2015-2034. Modeling, however, will start with 2014 to allow for verification of reasonableness as actual results in 2014 become available.

- The AURORA model as configured for IRP analysis uses a zonal representation of MISO and 1st Tier markets of MISO South. The MISO modeling is broken down into two regions, MISO North and MISO South. The MISO North region represents the MISO RTO as it existed in 2013 prior to Entergy and entities that joined MISO on December 19, 2013. The MISO South region includes Entergy operating companies, Entergy co-owners, IPPs and Qualifying Facilities, and other non-Entergy companies (i.e. CLECO, LAFA, LEPA and LAGN) within the Entergy footprint that participate in the MISO market. The 1st Tier markets consist of SPP, SERC – Central, and SERC – Southeast.

SCOPE OF AURORA MARKET MODELING

Entergy and surrounding regions will be modeled . . .



AURORA CONSTRUCT

The detailed map of the AURORA Construct has been redacted. The non redacted version has been filed with the LPSC as Highly Sensitive Protected Material (HSPM).

AURORA Model Assumptions

RESERVE REQUIREMENT ASSUMPTIONS

- System Reserve Requirements

System Reserve Requirement information has been redacted. The non redacted version has been filed with the LPSC as Highly Sensitive Protected Material (HSPM).

- Area Reserve Requirements

Area Reserve Requirement information has been redacted. The non redacted version has been filed with the LPSC as Highly Sensitive Protected Material (HSPM).

IMPORT AND EXPORT LIMIT ASSUMPTIONS

- The following zonal import and export limits will be used throughout the study period with the last year shown assumed through the end of the study:

The tables have been redacted. The non redacted version has been filed with the LPSC as Highly Sensitive Protected Material (HSPM).

UNIT ASSUMPTIONS

- Unit Capacities
  - The ratings for Entergy owned resources are the GVTC ratings[1] provided to MISO.

- Unit Availability and Inclusion
  - Resources taken from the 2009 Summer RFP, 2010 Renewable RFP, and 2011 EAI RFP are included as Entergy owned acquisitions/contracts.
  - All Entergy legacy units are modeled with the proposed deactivations schedule from the 2014 Business Plan Update (February 2014). There are 1,204 MW (Total ETR Utility capacity) where the deactivation date is to be determined. This is because the year of planned deactivation is currently being studied.
  - At this time Entergy unit deactivations do not vary by scenario, but that assumption could change for some scenarios pending additional review.
  - Non-Entergy resources deactivations:
    - Coal Units[2]
      - Scenario One (Reference) - at Age 60 years
      - Scenario Two (Industrial Renaissance) - at 70 years
      - Scenario Thee (Distributed Disruption) - at 60 years
      - Scenario Four (Generation Shift) – at 50 years
    - Gas, Nuclear & Other (At Age 60 years, modern CT and CCGT at age 30 years)

[1]Generation Verification Test Capacity (this is an annual test required by MISO to determine a resource's maximum capability based on a real power test).

[2]Some coal units are retired in the 2014-2020 period before they reach age 60 due to environmental regulations, primarily the MATS rule.

UNIT ASSUMPTIONS (CONTINUED)

- Maintenance
  - Thirty years of scheduled maintenance data are input for Entergy owned resources. Operations Planning collects data from the plants and co-owners, which includes their assumptions for the first 5 years. The pattern of scheduled maintenance is replicated and carried out through 2034.

- Forced Outage Rates
  - Annual forced outage rates are developed and input into the model for each Entergy owned fossil unit. These rates are based on historical Generation Availability Data Reporting System ("GADRS") data for May 2009 through April 2012.
  - Operations Planning reviews significant outage events to determine if each event is recurring or non-recurring in nature. Based on this review some events are removed from the forced outage rate calculation.
  - For nuclear units, forced outages are modeled as derates to the resource capacity to reflect historical outage experience.

UNIT COMMITMENT REQUIREMENTS

- Unit Commitment Requirements (Also known as RMR[1] Requirements)
  - Certain designated units must be committed in order to meet demand and provide voltage or transmission support within the area. The unit commitment requirements are created by the Energy Delivery organization.
  - The following tables show the requirements modeled in AURORA:

The tables have been redacted. The non redacted version has been filed with the LPSC as Highly Sensitive Protected Material (HSPM).

[1]Reliability Must Run

UNIT COMMITMENT REQUIREMENTS (CONTINUED)

The tables have been redacted. The non redacted version has been filed with the LPSC as Highly Sensitive Protected Material (HSPM).

EXISTING CONTRACTS

- The following table shows the existing Entergy contracts modeled in AURORA

The table has been redacted. The non redacted version has been filed with the LPSC as Highly Sensitive Protected Material (HSPM).

Preliminary

SPO PLANNING ANALYSIS

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

LPSC DOCKET NO. I-33014

GENERATION TECHNOLOGY ASSESSMENT

Technology Cost & Performance

MAY 5, 2014

An understanding of generation technology cost and performance is a necessary input to planning and decision support activities. SPO Planning Analysis monitors and assesses generation alternatives on an on-going basis. This May 2014 study updates technology assumptions and is intended as an input into the 2015 Integrated Resource Plan ("IRP") process for EGL and ELL as well as other decision support activities involving resource planning and/or transaction evaluations.

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TECHNOLOGY ASSESSMENT PROCESS

- An understanding of generation technology cost and performance is a necessary input to planning and decision support activities. SPO Planning Analysis monitors and assesses generation alternatives on an on-going basis. This study updates technology assumptions and is intended as an input into the 2015 Integrated Resource Plan ("IRP") process for EGSL and ELL as well as other decision support activities involving resource planning and/or transaction evaluations.

- The process has two main steps. First a screening level analysis is performed and then a detailed analysis is performed.

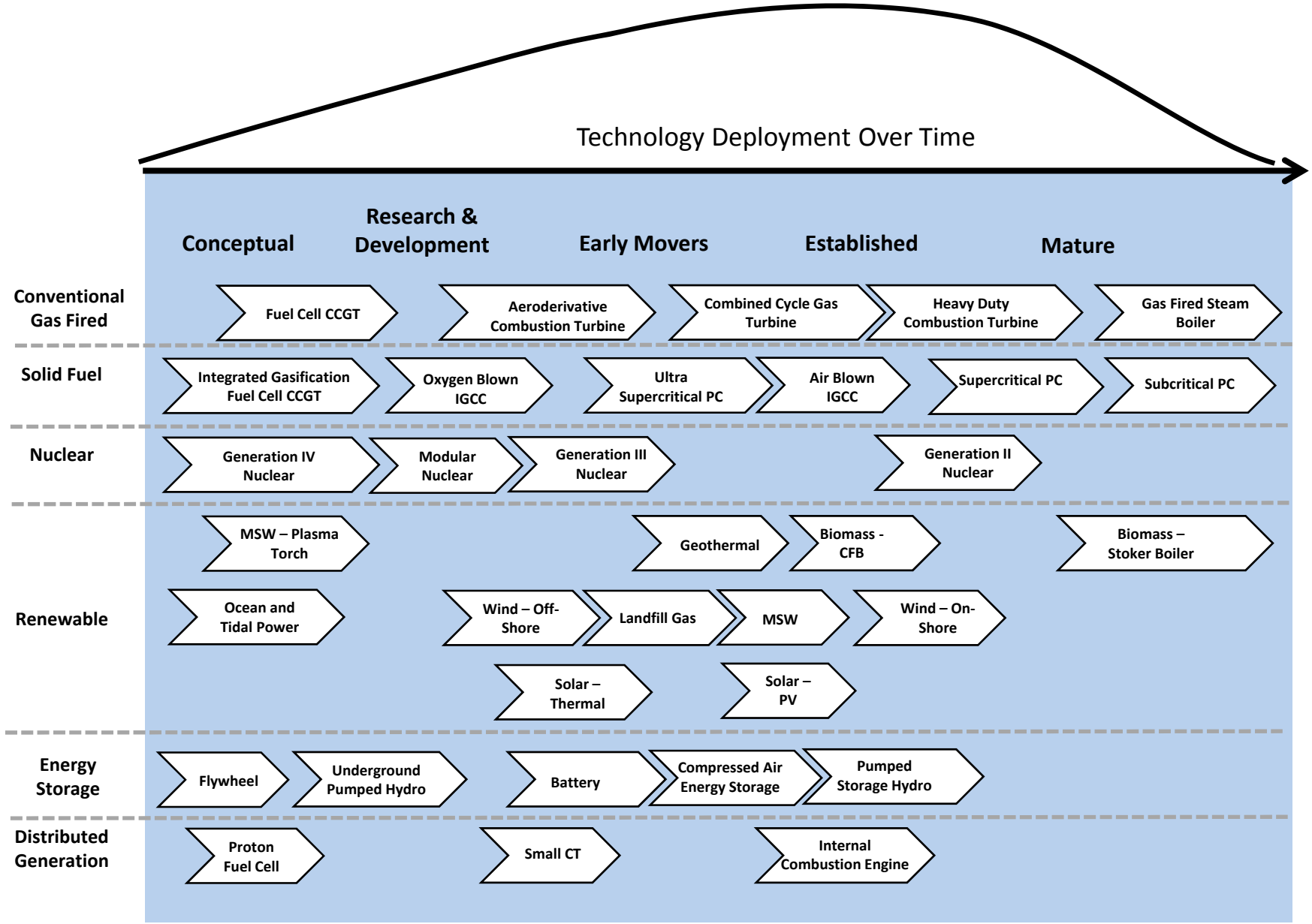
- The 2014 Generation Technology Assessment began by surveying available central state electricity generation technologies, generally those that are two megawatts or greater. The objective is to identify a reasonably wide a range of generation technologies. The initial list was subject to a screening analysis to identify generation technologies that are technologically mature and could reasonably be expected to be operational in or around the Entergy regulated service territory.

- ELL and EGSL prefer technologies that are proven on a commercial scale. Some technologies identified in this document lack the commercial track record to demonstrate their technical and operational feasibility. A cautious approach to technology development and deployment is therefore reasonable and appropriate in order to maintain System reliability and to protect Operating Company customers from undue risks. The Entergy Operating Companies generally do not plan to be the "first movers" for emerging, unproven technologies.

- SPO Planning Analysis through this Technology Screen has selected certain traditional and renewable generation technology alternatives which may reasonably be expected to meet EGSL's and ELL's primary objectives of cost, risk mitigation, and reliability. For each selected technology Planning Analysis developed the necessary cost and performance parameter inputs into the detailed modeling used to develop the reference technologies comprising the IRP Portfolio.

- SPO Planning Analysis will monitor the technologies eliminated as a result of the initial screen and incorporate changes into future technology assessments and IRPs.

A Variety of Supply Side Resources Alternatives Are Available



TECHNOLOGIES SCREENED

- Pulverized Coal
  - Subcritical Pulverized Coal
  - Supercritical Pulverized Coal
  - Ultra Supercritical Pulverized Coal
- Fluidized Bed
  - Atmospheric Fluidized Bed
  - Pressurized Fluidized Bed
- Integrated Gasification ("IGCC")
  - Oxygen-Blown IGCC
  - Air-Blown IGCC
  - Integrated Gasification Fuel Cell Combined Cycle
- Combustion Turbine / Combined Cycle / Other Natural Gas
  - Combustion Turbine
  - Combined Cycle
  - Large & Small Scale Aeroderivative
  - Steam Boiler
- Fuel Cells
  - Molten Carbonate
  - Solid Oxide
  - Phosphoric Acid
  - Proton Exchange Membrane
  - 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 (Fixed Tile and Tracking)
  - Solar Thermal
  - Wind Power
  - Municipal Solid Waste
  - Landfill Gas
  - Geothermal
  - Ocean & Tidal

TECHNOLOGIES SELECTED FOR DETAILED ANALYSIS

The following technologies are being carried forward for development of detailed planning assumptions . . .

- Pulverized Coal
  - Supercritical Pulverized Coal with carbon capture and storage*
- Natural Gas Fired
  - Combustion Turbine ("CT")
  - Combined Cycle Gas Turbine ("CCGT")
  - Large Scale Aeroderivative CT
  - Small Scale Aeroderivative CT
  - Internal Combustion Engine
- Nuclear
  - Advanced Boiling Water Reactor
- Renewable Technologies
  - Biomass
  - Wind Power
  - Solar PV (Fixed Tilt and Tracking)
- Battery Storage

*Proposed EPA regulations on CO_2 have basically eliminated all new coal plants without carbon capture.

TECHNOLOGY ASSUMPTIONS – GAS FIRED TECHNOLOGIES

Cost & Performance Appropriate For Technology Deployment in MISO South (Excludes any Subsidies)		F Frame CT	E Frame CT	Large Aero CT	Small Aero CT	Internal Combustion	2x1 F Frame CCGT	1x1 F Frame CCGT	1x1 G Frame CCGT
Number of Units or Turbines	(#)	1	1	1	2	5	2	1	1
Expected Useful Life	(years)	30	30	30	30	30	30	30	30
Typical Development Time	(years)	1.5	1.5	1.5	1.5	1.5	2	2	2
Typical Construction Time	(years)	1	1	1	1	1	3	3	3
Net Max Capacity (Summer)	(MW)	176	76	102	82	94	587	295	345
Installed Cost[1]	($/kW)[1]	$900	$1,150	$1,430	$1,605	$1,480	$1,500	$1,750	$1,570
Full Load Heat Rate – Summer	(Btu/kWh)	10,200	13,200	9,125	9,910	8,440	6,780	6,850	6,850
Typical Capacity Factor	(%)	0%-10%	0%-10%	10%-40%	0%-10%	10%-40%	65%-85%	65%-85%	65%-85%
Fixed O&M	($/kW-yr)	$11.70	$12.00	$9.70	$10.00	$23.00	$22.90	$23.50	$20.40
Variable O&M	($/MWh)	$2.00	$2.00	$2.00	$2.00	$3.30	$2.60	$2.60	$2.60
NOx Control Technology		Dry Low NOx burners	Dry Low NOx burners	SCR	SCR	SCR	SCR	SCR	SCR
NOx emissions, post control	(lbs/MMBtu)	0.03	0.03	0.01	0.01	0.04	0.01	0.01	0.01

1. All costs are in $2014

TECHNOLOGY ASSUMPTIONS – SOLID FUEL & RENEWABLES

Cost & Performance Appropriate For Technology Deployment in MISO South (Excludes any Subsidies)	Units	Coal [1]	Biomass	Nuclear	Wind	Solar PV (Fixed Tilt)	Solar PV (Tracking)	Battery Storage
Expected Useful Life	(years)	40	30	40	20	25	25	20
Typical Development Time	(years)	2	2	5	1	2	1	1
Typical Construction Time	(years)	4	3	10	1	1.5	1	2
Number of Units or Turbines	(#)	1	1	1	100	10	10	10
Net Max Capacity (Summer)	(MW)	800	100	1310	200	100	100	50
Installed Cost[2]	($/kW)	$4,900	$4,760	$8,000	$2,050	$2,600	$2,900	$2,400
Full Load Heat Rate - Summer	(Btu/kWh)	13,160	12,900	10,200	N/A	N/A	N/A	N/A
Typical Capacity Factor	(%)	85%	85%	90%	34%	18%	21%	20%
Fixed O&M	($/kW-yr)	$74.60	$65.00	$83.00	$22.00	$19.00	$23.00	$0.00
Variable O&M	($/MWh)	$8.75	$5.25	$4.15	$10.00	$0.00	$0.00	$0.00

1. Includes Carbon Capture & Sequestration for 90% CO2 removal, SCR, and Mercury Removal. Does not include any potential revenue offsets (e.g. enhanced oil recovery).
2. All costs are in $2014

LEVELIZED NOMINAL $/MWH FOR 2015 RESOURCES OVER THE EXPECTED LIFE OF RESOURCE

Based on ELL cost of Capital		No CO_2			CO_2 Beginning 2023		
Technology	**Capacity Factor**	**Reference Fuel**	**High Fuel**	**Low Fuel**	**Reference Fuel**	**High Fuel**	**Low Fuel**
F Frame CT	15%	$154	$180	$134	$160	$186	$140
E Frame CT	15%	$193	$227	$167	$201	$235	$175
Large Aeroderivative CT	30%	$123	$147	$106	$129	$153	$111
Small Aeroderivative CT	30%	$135	$161	$116	$141	$167	$122
Internal Combustion	30%	$131	$153	$114	$136	$158	$119
2x1 F Frame CCGT	65%	$81	$99	$68	$85	$103	$72
1x1 F Frame CCGT	65%	$87	$105	$74	$91	$109	$78
1x1 G Frame	65%	$83	$101	$69	$87	$105	$73
PC With CCS	65%	$177	$190	$164	$179	$192	$166
Biomass	90%	$161	$226	$128	$161	$226	$128
Nuclear	85%	$146	$146	$146	$146	$146	$146
Wind (No Subsidy)[1]	34%	$132	$132	$316	$132	$132	$316
Wind (Ten Yr. $22/MWh PTC)[2]	34%	$109	$109	$284	$109	$109	$284
Solar PV with 30% ITC (fixed tilt)[2]	18%	$220	$220	$544	$220	$220	$544
Solar PV with 30% ITC (tracking)[2]	21%	$181	$181	$445	$181	$181	$445
Battery Storage[3]	20%	$167	$167	$380	$167	$167	$380

1. Includes capacity match-up cost $47.88/MWh due to wind's 14.1% capacity value in MISO
2. Includes capacity match-up cost of $23.57/MWh assuming a 25.0% capacity value in MISO
3. Excludes cost required to charge batteries.

PROJECTED CAPITAL COST

Capital Cost Installed (Nominal)*	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
F Frame CT	$900	$903	$926	$953	$988	$1,024	$1,057	$1,078	$1,106	$1,120
E Frame CT	$1,150	$1,153	$1,183	$1,218	$1,263	$1,308	$1,351	$1,377	$1,413	$1,431
Large Aeroderivative CT	$1,430	$1,434	$1,471	$1,515	$1,570	$1,626	$1,679	$1,713	$1,757	$1,779
Small Aeroderivative CT	$1,600	$1,605	$1,646	$1,695	$1,757	$1,820	$1,879	$1,916	$1,966	$1,990
Internal Combustion	$1,480	$1,484	$1,494	$1,521	$1,576	$1,640	$1,687	$1,733	$1,782	$1,825
2x1 F Frame CCGT	$1,500	$1,504	$1,524	$1,561	$1,621	$1,689	$1,741	$1,785	$1,829	$1,855
1x1 F Frame CCGT	$1,750	$1,755	$1,778	$1,821	$1,891	$1,970	$2,031	$2,082	$2,134	$2,164
1x1 G Frame	$1,570	$1,575	$1,595	$1,633	$1,696	$1,768	$1,822	$1,868	$1,914	$1,941
PC With CCS	$4,905	$4,919	$4,947	$5,032	$5,207	$5,419	$5,565	$5,725	$5,895	$6,058
Biomass	$4,760	$4,774	$4,800	$4,883	$5,053	$5,259	$5,401	$5,556	$5,720	$5,879
Nuclear	$8,000	$8,023	$8,231	$8,473	$8,783	$9,099	$9,396	$9,582	$9,829	$9,952
Wind	$2,050	$2,016	$2,028	$2,002	$2,070	$2,140	$2,213	$2,267	$2,339	$2,401
Wind w/ PTC	$2,050	$2,016	$2,028	$2,002	$2,070	$2,140	$2,213	$2,267	$2,339	$2,401
Solar PV (fixed tilt)	$2,600	$2,342	$2,188	$2,064	$1,998	$1,944	$1,898	$1,862	$1,836	$1,817
Solar PV (tracking)	$2,900	$2,613	$2,440	$2,302	$2,228	$2,168	$2,117	$2,077	$2,047	$2,027
Battery Storage	$2,400	$2,406	$2,423	$2,467	$2,555	$2,659	$2,735	$2,810	$2,890	$2,959

*The year corresponds to the year the resource enters commercial operation

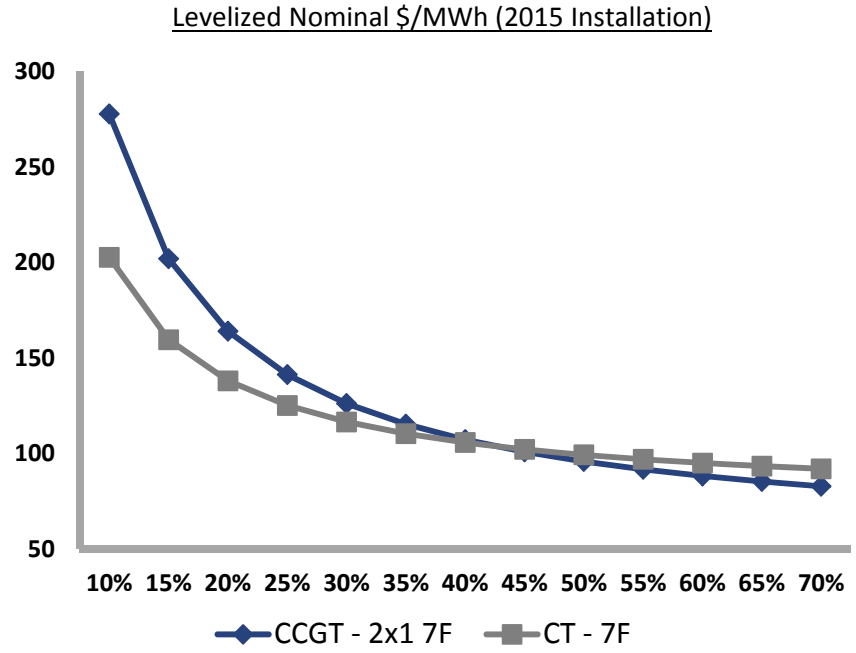
CONCLUSIONS

Absent policy drivers or the desire to diversify, modern gas based technologies offer a low capital cost, reliable and cost effective choice across a range of operating roles.

CCGTs are best for base load and core load following roles and CT are best for seasonal load following, peaking and reserve requirements.

In addition to lower forecasted total supply cost per MWh CCGTs also offer the following advantages over coal and nuclear resources:

- Lower upfront capital cost
- Shorter development and construction time meaning lower financing cost
- Easier siting and smaller environmental footprint
- Likely to have less environmental group opposition
- Shorter payback period in case operating conditions or fuel and emissions allowance cost change.
- Able to operate under a wide range of operating roles and contributes to flexible capability



Absent CO_2 regulation and high fuel prices gas resources offer lower total supply cost than all renewables studied and avoid the complexities associated with intermittency of wind and solar.

While new nuclear is not cost effective at this time. It does offer a hedge against future CO_2 prices and high natural gas prices. Therefore ELL and EGSL should continue to monitor new nuclear technologies. Maintain readiness to execute new nuclear projects when and if they appear viable through spending levels consistent with results of the on-going assessment

**Bus bar cost levelized in nominal $/MWh over expected life of resource (30 years for CCGT & CT)*