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May 26, 2015

Via Hand Delivery
Ms. Lora W. Johnson, CMC
Clerk of Council
Room 1E09, City Hall
1300 Perdido Street
New Orleans, LA 70112

Re: *In Re*: Resolution Regarding Proposed Rulemaking to Establish Integrated Resource Planning Components and Reporting Requirements for Entergy New Orleans, Inc. (Docket No. UD-08-02)

Dear Ms. Johnson:

Pursuant to Council Resolution R-14-224, enclosed please find an original and three copies of the materials that will be presented at the Entergy New Orleans, Inc.'s ("ENO") Integrated Resource Plan ("IRP") Interim Meeting that will be held from 1:00 p.m. until 3:00 p.m. on May 27, 2015. It will be held at the Lindy C. Boggs International Conference Center in Room 154, located in the University of New Orleans Research and Technology Park, 2045 Lakeshore Drive, New Orleans, Louisiana. Please file an original and two copies into the record in the above-referenced matter, and return a date-stamped copy to our courier.

A confidential version of the filing is being made available to the Council's advisors pursuant to the Council's Official Protective Order.

Thank you for your assistance with this matter.

Sincerely,

Brian L. Guillot

BLG/lp
Enclosures
cc: Official Service List UD-08-02 *(via electronic mail)*

ENO IRP Public Technical Conference

2015 IRP Process Update

Interim Milestone

May 27, 2015

Entergy

Conference Objectives

- Present Interim Milestone Deliverables
- Highlight process and timeline for continued public input

Interim Milestone Deliverables

Interim Milestone Deliverables

- This Milestone is an additional step in the process for development of the ENO 2015 IRP
- The Interim Milestone deliverables include:
  - IRP Process Update
  - Recap of ENO's Existing Portfolio and Resource Needs
  - Results of Portfolio Evaluation

Process Update for ENO 2015 IRP

2015 IRP Process Update

- The following are key milestones in the Council's process:
  - ~~June 27 Milestone 1 – Inputs to DSM Potential Study~~
  - ~~Sep 22 Interim Milestone – Renewables Technical Conference~~
  - ~~Oct 30 Milestone 2 – DSM Potential Study Results / IRP Inputs~~
  - ~~Feb 26 Milestone 3 – IRP Modeling Results~~
  - May 27 Interim Milestone* – Portfolio Evaluation Results
  - Jun 30 Milestone 4 – Draft IRP Report
  - Oct 2015 Final ENO 2015 IRP
- ENO will seek input at each of the milestones above prior to the Final ENO 2015 IRP

**** This step is not included in the procedural schedule approved by the Council for the 2015 IRP Process***

Questions

- ENO posts all IRP information and presentations to the IRP website:
  - Visit http://www.entergy-neworleans.com/IRP/

SPO PLANNING ANALYSIS

ENO 2015 IRP – INTERIM TECHNICAL CONFERENCE
MILESTONE 2 SENSITIVITY ANALYSIS

MAY 27, 2015

Entergy®

OBJECTIVES

Follow up items regarding Milestone 2 comments to be discussed:

- Sensitivity analysis of prior DSM Optimization
  - Delayed program implementation
  - Co-Optimization with Supply-side

- Review of key IRP inputs
  - Gas price forecast
  - MISO South capacity price projection

ASSESSMENT OF DELAYED DSM IMPLEMENTATION

- In the original DSM Optimization, program implementation was assumed to start in 2015
- To test the validity of that assumption, the AURORA capacity expansion model was used to determine if delaying program implementation could lead to an increase in DSM savings
  - SPO consulted with ICF and determined that delay of implementation was not feasible for 10 of the programs selected from the Potential Study
    - Would require a major shift in the assumed baseline load-shape for these programs
  - The remaining 14 programs were evaluated for additional savings associated with implementation beginning in 2015, 2019 or 2023

Original Industrial Renaissance DSM Portfolio		Delayed Industrial Renaissance DSM Portfolio	
Program	Start Year	Program	Start Year
DSM1 - Commercial Prescriptive & Custom	2015	DSM1 - Commercial Prescriptive & Custom	2015
DSM4 - RetroCommissioning	2015	DSM4 - RetroCommissioning	2019
DSM5 - Commercial New Construction	2015	DSM5 - Commercial New Construction	2015
DSM6 - Data Center	2015	DSM6 - Data Center	2015
DSM7 - Machine Drive	2015	DSM7 - Machine Drive	2015
DSM8 - Process Heating	2015	DSM8 - Process Heating	2015
DSM9 - Process Cooling and Refrigeration	2015	DSM9 - Process Cooling and Refrigeration	2015
DSM10 - Facility HVAC	2015	DSM10 - Facility HVAC	2015
DSM11 - Facility Lighting	2015	DSM11 - Facility Lighting	2015
DSM12 - Other Process/Non-Process Use	2015	DSM12 - Other Process/Non-Process Use	2015
DSM13 - Residential Lighting & Appliances	2015	DSM13 - Residential Lighting & Appliances	2015
DSM15 - ENERGY STAR Air Conditioning	2015	DSM15 - ENERGY STAR Air Conditioning	2015
DSM18 - Efficient New Homes	2015	DSM18 - Efficient New Homes	2019
DSM19 - Multifamily	2015	DSM19 - Multifamily	2023
		DSM21 - Pool Pump	2023

ASSESSMENT OF DELAYED DSM IMPLEMENTATION (CONT.)

- Conclusions:
  - The results of the sensitivity support the reasonableness of the existing DSM portfolios
  - Delay of program implementation did not eliminate any previously economic programs
    - Four of the programs were found to be marginally more economic with delayed implementation
    - One additional program previously uneconomic became economic if implementation was assumed to be delayed until 2023 (DSM 21 – Pool Pump)
  - Delaying implementation did not result in a meaningful reduction in total supply cost

Industrial Renaissance Levelized Real Total Supply Cost (MM$)			
Portfolio	Original Total Supply Cost	Delayed Total Supply Cost	Total Decrease
CT	$1,846	$1,845	-$1
CT/Wind	$1,905	$1,904	-$1
CT/Solar	$1,902	$1,901	-$1
CT/Wind/Solar	$1,903	$1,902	-$1
CCGT	$1,789	$1,787	-$2
Solar	$2,454	$2,452	-$2

DSM Co-Optimization

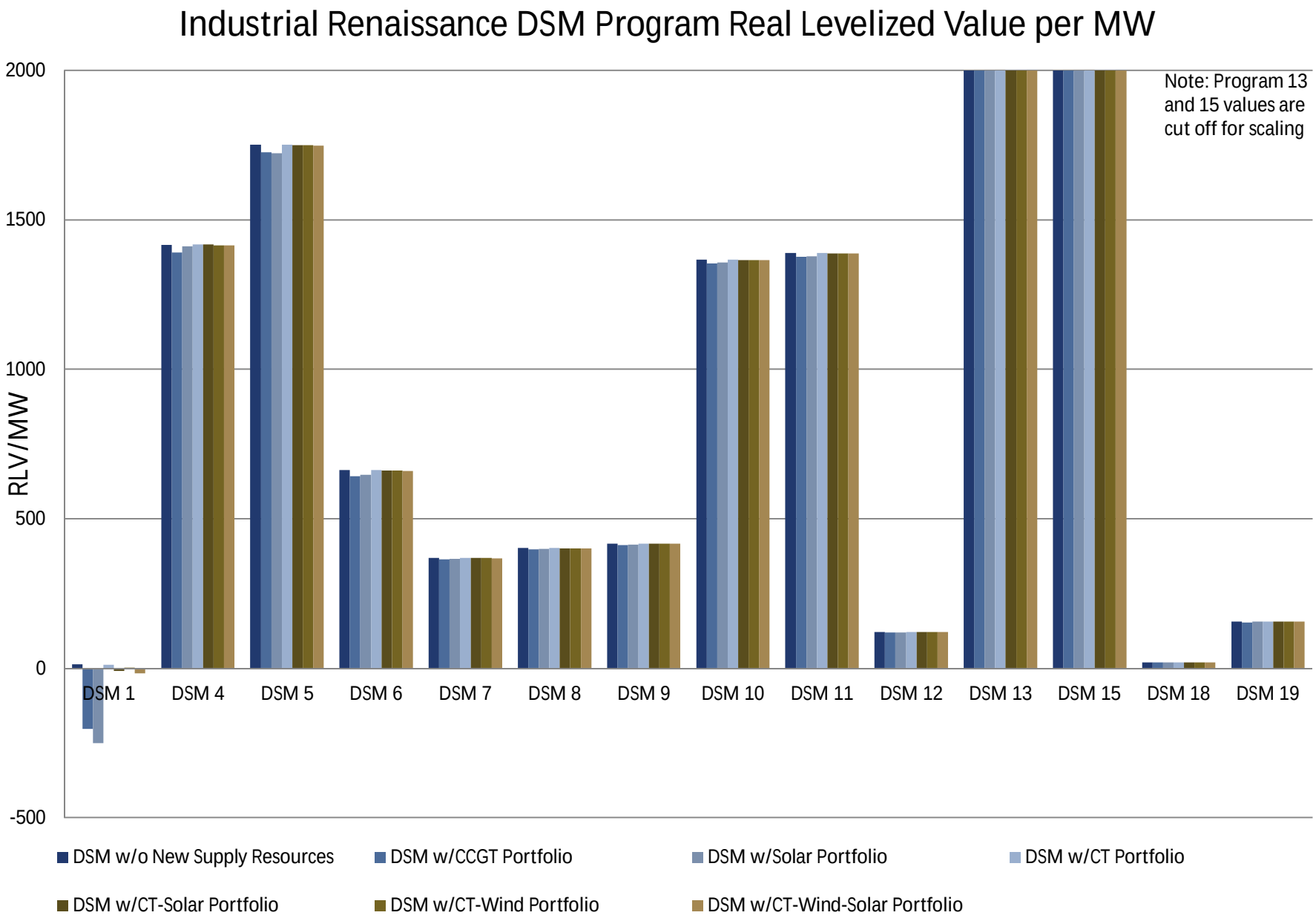
- The 2015 IRP DSM Optimization evaluated 24 DSM programs absent new supply-side resource alternatives
- ENO utilized AURORA to evaluated the effect of new ENO supply-side resource additions on the value of programs selected in the original DSM Optimization

Average Change[1] in ENOI Prices ($/MWh) with New Supply Resources Added					
Portfolio	IR	BB	DD	GS	Average
CCGT	-0.35	-0.43	-0.35	-0.37	-0.38
Solar	-0.28	-0.30	-0.29	-0.37	-0.31
CT	0.00	-0.02	0.02	-0.01	0.00
CT/Solar	-0.02	-0.06	-0.01	-0.05	-0.03
CT/Wind	-0.03	-0.09	-0.04	-0.04	-0.05
CT/Wind/Solar	-0.04	-0.06	-0.03	-0.06	-0.05

Average Change[2] in DSM RLV/MW ($/MW) with New Supply Resources Added					
Portfolio	IR	BB	DD	GS	Average
CCGT	-35.88	-27.69	-32.41	-31.97	-31.98
Solar	-34.52	-17.67	-33.05	-37.47	-30.68
CT	-0.16	-2.06	2.16	-0.78	-0.21
CT/Solar	-2.15	-4.08	-1.21	-4.75	-3.05
CT/Wind	-1.99	-4.72	-2.97	-3.05	-3.18
CT/Wind/Solar	-4.15	-3.86	-2.01	-4.41	-3.61

1) Average of annual prices, 2015-2034
2) Average of entire DSM portfolio (scenario-based)

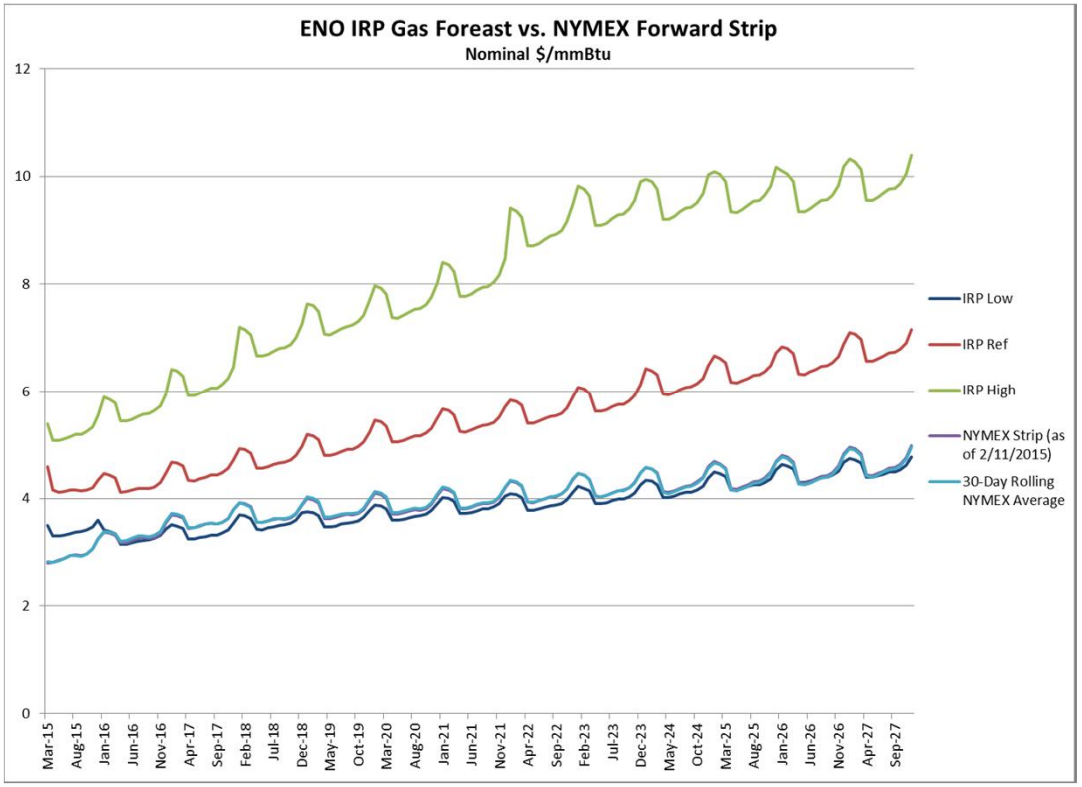
DSM Co-Optimization (cont.)



DSM Co-Optimization (cont.)

- Conclusions:
  - Co-optimizing DSM with new supply-side resources did not have a material effect on the projected value of DSM (with one exception)
    - DSM 1 became uneconomic for the reference case in 4 of the 6 supply portfolios
    - DSM 1 was already very marginal in value (see chart on slide 5)
  - The existing DSM portfolios in the IRP analysis appear reasonable

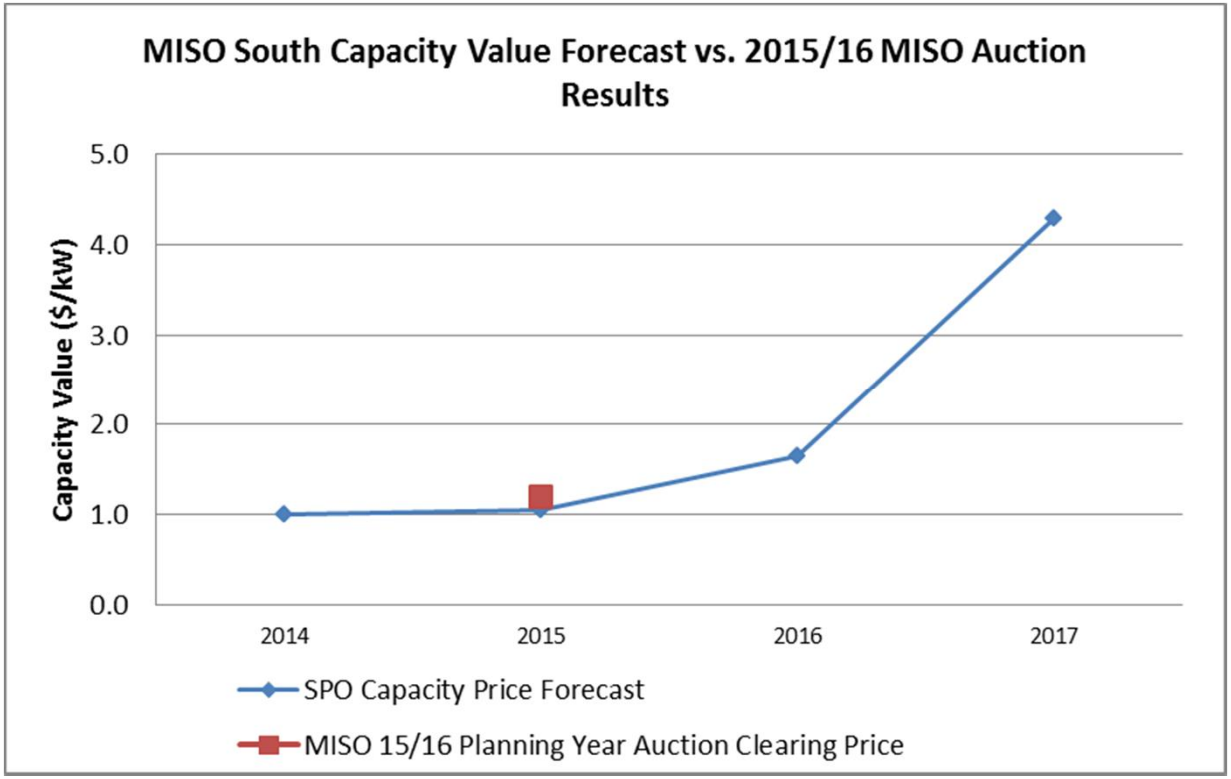
GAS PRICE FORECAST COMPARISON



- While the current outlook for natural gas prices is lower than the gas price forecast used in the 2015 IRP, the IRP Low Forecast is in line with current NYMEX futures.
  - In the IRP process, each portfolio was assessed with each gas price forecast (low, reference, and high)
- In general, lower gas prices tend to result in the following:
  - Natural gas resources (CTs and CCGTs) becoming more economic relative to other supply and DSM alternatives
  - DSM programs being considered less economic relative to natural gas-fired resources
- The Council's 3-year IRP cycle will allow for changes to future IRPs to account for changes in the long-term trend of natural gas prices

MISO South Capacity Price Comparison

- The Clearing Price for MISO Zones 8 and 9 settled at $1.20 /kW-yr. 2015/16 Planning Resource Auction
  - Results were concurrent with the previously filed 2015 Capacity Price Projection of $1.02/kW-yr. for MISO South



SUMMARY OF KEY CONCLUSIONS

- The 2015 IRP DSM Optimization methodology and results remain reasonable for long-range planning
  - Co-optimizing DSM with new supply-side resources did not have a material effect on the projected value of DSM
  - Delaying program implementation did not:
    - Eliminate any previously economic programs
    - Result in a meaningful reduction in total supply cost

- The 2015 IRP gas price forecasts remain a reasonable long-range planning assumption

- The 2015 IRP capacity price projection for MISO South remains a reasonable long-range planning assumption

SPO PLANNING ANALYSIS

2015 ENO IRP

Portfolio Composition and Results

MAY 27, 2015

Entergy®

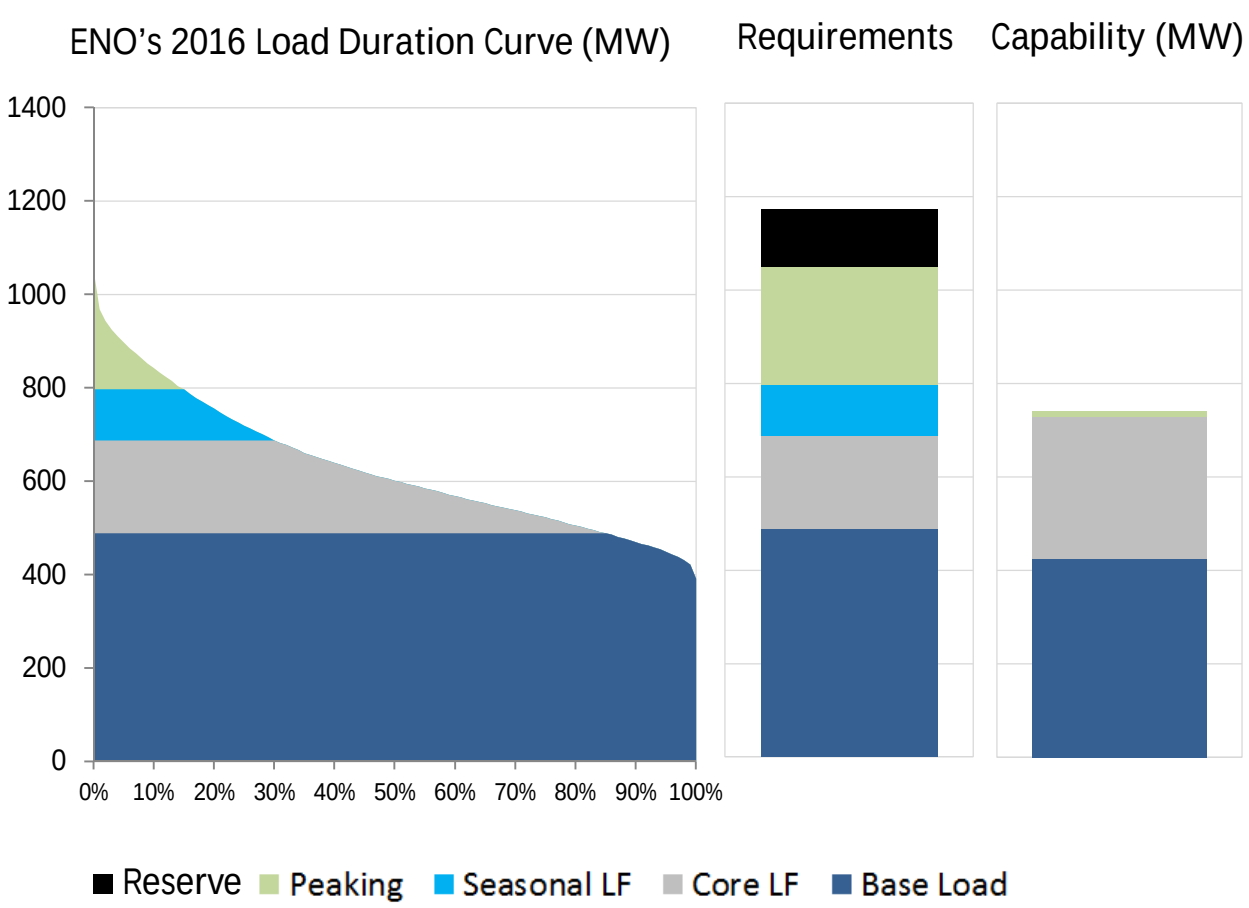
OBJECTIVES

The following topics will be discussed:

- ENO Supply Role Needs and Portfolio Mix
- Scenario Assumptions
- Portfolio Composition
- Portfolio Costs
- Environmental and Commodity Sensitivities

ENO PORTFOLIO AND SUPPLY ROLE NEEDS

ENO's 2016 generation portfolio is projected to have adequate capacity for its Base Load and Core Load Following needs; however, additional peaking capacity is needed

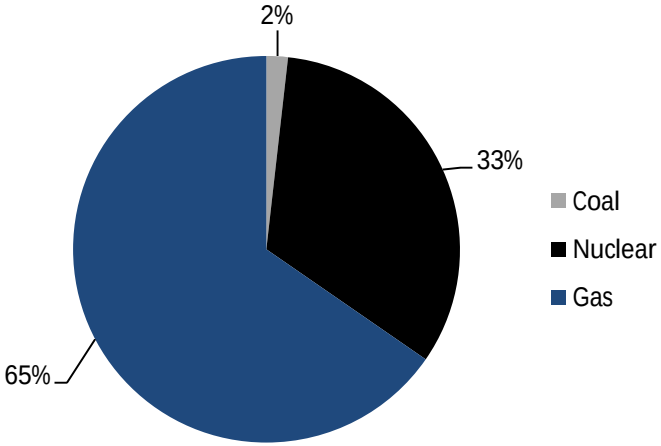


Unit	Fuel	Capability (MW)
Ninemile 6	Gas	112
Union	Gas	204
ANO 1	Nuclear	23
ANO 2	Nuclear	27
Grand Gulf	Nuclear	247
Independence 1	Coal	7
White Bluff 1	Coal	12
White Bluff 2	Coal	13

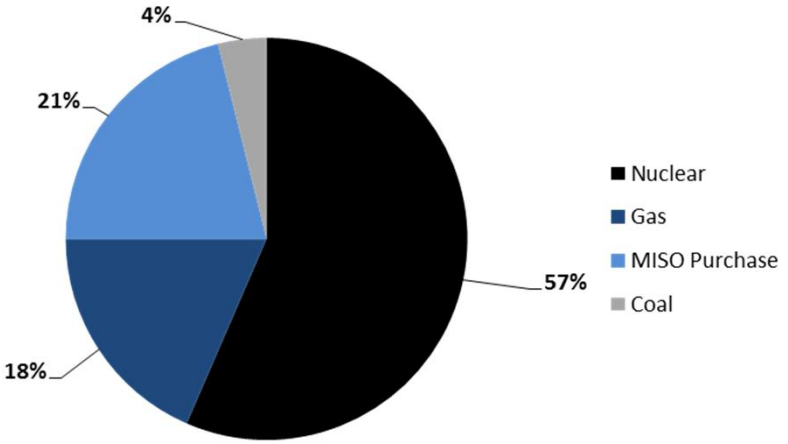
ENO'S CAPACITY & ENERGY MIX

With the planned deactivation of Michoud 2 and 3, nuclear and coal resources provide over 50% of capacity and over 60% of energy needs

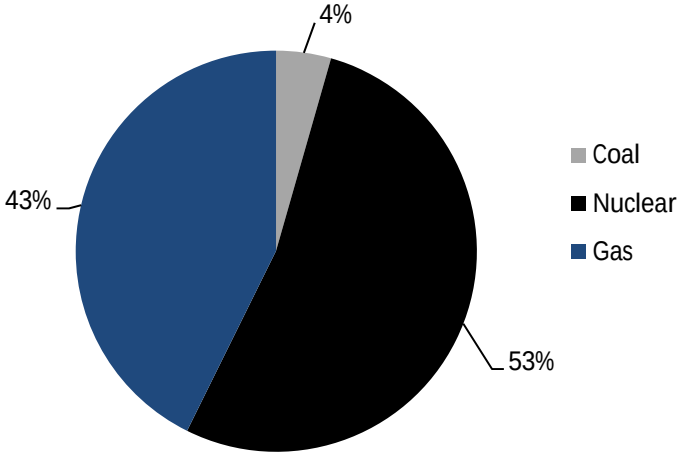
2014 Capacity (MW)



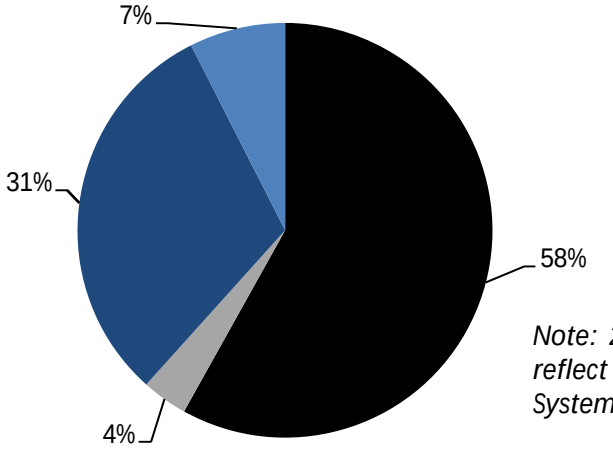
2014 Energy Mix (MWh)



2016 Capacity (MW)



2016 Energy Mix (MWh)



Note: 2016 does not reflect effect of System Agreement

20 YEAR MARKET MODEL INPUTS (2015-2034)

	Industrial Renaissance	Business Boom	Distributed Disruption	Generation Shift
Electricity CAGR (Energy GWh)	~1.0%	~1.0%	~0.4%	~0.8%
Peak Load Growth CAGR	~0.7%	~0.7%	~0.7%	~0.7%
Henry Hub Natural Gas Prices ($/MMBtu)*	$4.87 levelized 2014$	Low Case $3.84 levelized 2014$	Same as Reference Case ($4.87 levelized 2014$)	High Case ($8.18 levelized 2014$)
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	CSAPR & MATS	CSAPR & MATS	CSAPR & MATS	CSAPR & MATS
Delivered Coal Prices – Entergy Owned Plants (Plant Specific Includes Current Contracts) $/MMBtu*	Reference Case (Vol. Weighted Avg. $2.81 levelized 2013$)	Low Case (Vol. Weighted Avg. $2.43 levelized 2013$)	Same as Reference Case (Vol. Weighted Avg. $2.81 levelized 2013$)	High Case (Vol. Weighted Avg. $2.53 levelized 2013$)
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 (Years)*	Age 60**	Age 70**	Age 60**	Age 50**

*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 6.93%. (ENO WACC).
**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

PORTFOLIO COMPOSITION – DSM PROGRAMS

- The AURORA Capacity Expansion Model was used to develop a DSM portfolio for each of the scenarios.
- The result of this process was an optimal DSM portfolio for each scenario.

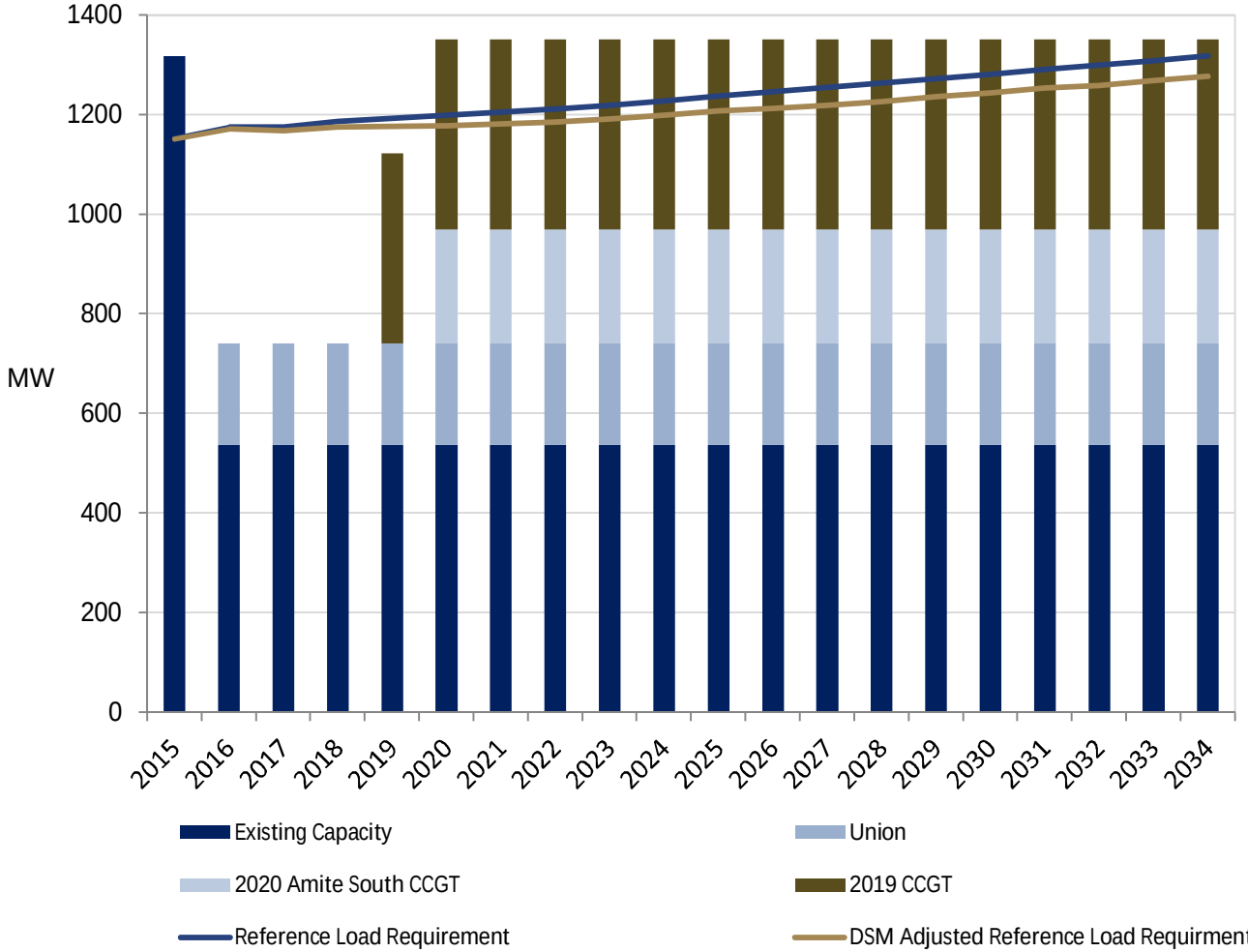
Portfolio Design Mix

	IR Portfolio	BB Portfolio	DD Portfolio	GS Portfolio
DSM	14 Programs	12 Programs	15 Programs	17 Programs
DSM Maximum (MW)	41	26	40	43

AURORA DSM Portfolios by Scenario			
Industrial Renaissance	Business Boom	Distributed Disruption	Generation Shift
DSM1 - Commercial Prescriptive & Custom		DSM1 - Commercial Prescriptive & Custom	DSM1 - Commercial Prescriptive & Custom
DSM4 - RetroCommissioning	DSM4 - RetroCommissioning	DSM4 - RetroCommissioning	DSM4 - RetroCommissioning
DSM5 - Commercial New Construction	DSM5 - Commercial New Construction	DSM5 - Commercial New Construction	DSM5 - Commercial New Construction
DSM6 - Data Center	DSM6 - Data Center	DSM6 - Data Center	DSM6 - Data Center
DSM7 - Machine Drive	DSM7 - Machine Drive	DSM7 - Machine Drive	DSM7 - Machine Drive
DSM8 - Process Heating	DSM8 - Process Heating	DSM8 - Process Heating	DSM8 - Process Heating
DSM9 - Process Cooling and Refrigeration	DSM9 - Process Cooling and Refrigeration	DSM9 - Process Cooling and Refrigeration	DSM9 - Process Cooling and Refrigeration
DSM10 - Facility HVAC	DSM10 - Facility HVAC	DSM10 - Facility HVAC	DSM10 - Facility HVAC
DSM11 - Facility Lighting	DSM11 - Facility Lighting	DSM11 - Facility Lighting	DSM11 - Facility Lighting
DSM12 - Other Process/Non-Process Use	DSM12 - Other Process/Non-Process Use	DSM12 - Other Process/Non-Process Use	DSM12 - Other Process/Non-Process Use
DSM13 - Residential Lighting & Appliances	DSM13 - Residential Lighting & Appliances	DSM13 - Residential Lighting & Appliances	DSM13 - Residential Lighting & Appliances
DSM15 - ENERGY STAR Air Conditioning	DSM15 - ENERGY STAR Air Conditioning	DSM15 - ENERGY STAR Air Conditioning	DSM15 - ENERGY STAR Air Conditioning
			DSM16 - Home Energy Use Benchmarking
DSM18 - Efficient New Homes		DSM18 - Efficient New Homes	DSM18 - Efficient New Homes
DSM19 - Multifamily	DSM19 - Multifamily	DSM19 - Multifamily	DSM19 - Multifamily
		DSM20 - Water Heating	DSM20 - Water Heating
			DSM21 - Pool Pump

AURORA CAPACITY EXPANSION - SUPPLY SIDE PORTFOLIOS

Industrial Renaissance, Business Boom, and Distributed Disruption Portfolio - CCGT

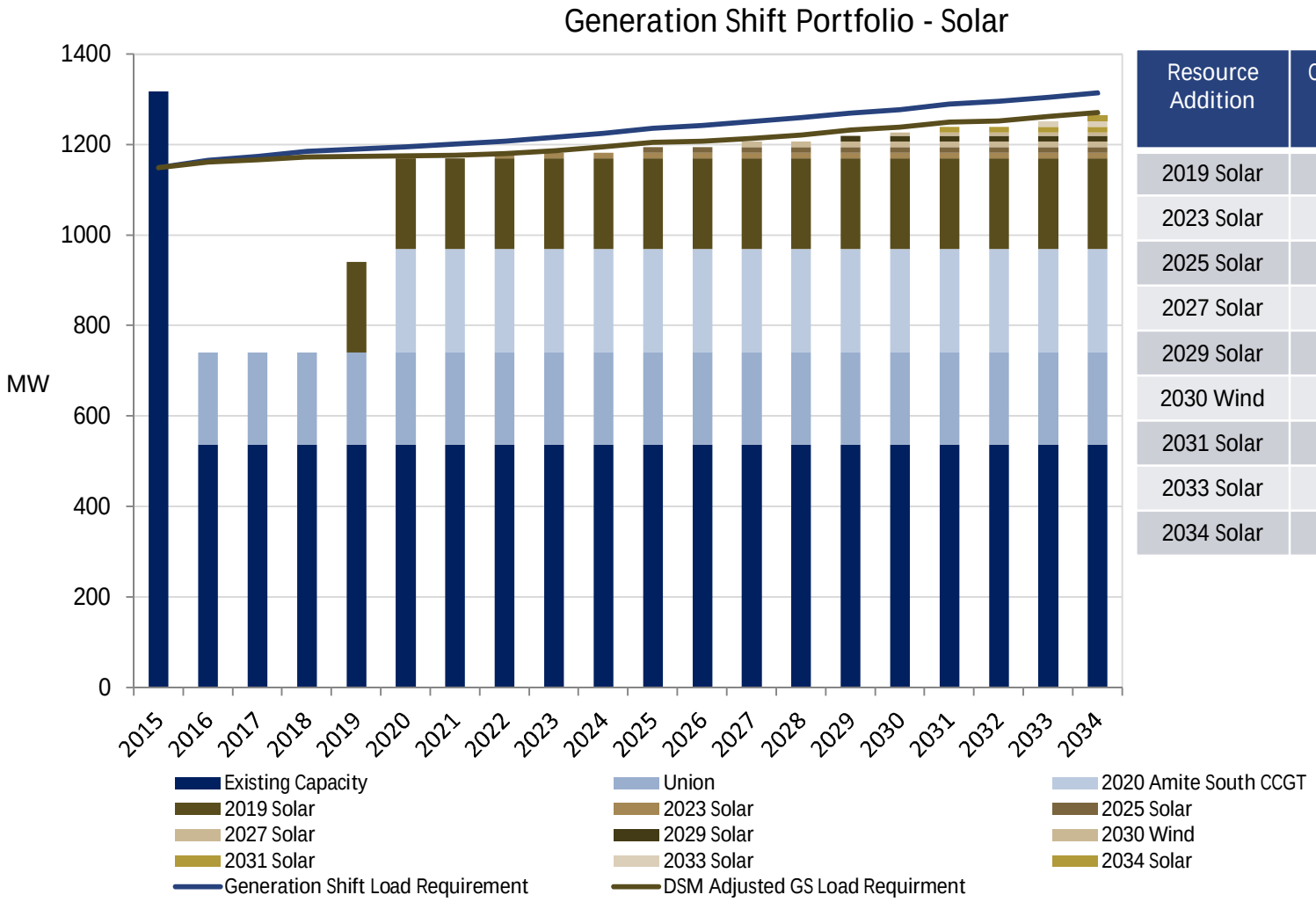


Resource Addition	Capacity (MW)
2019 CCGT	382

*Resources listed in blue are existing and planned resources. Resources additions listed in brown are the resources to be evaluated in the IRP.

Preliminary – Work in Progress

AURORA CAPACITY EXPANSION - SUPPLY SIDE PORTFOLIOS

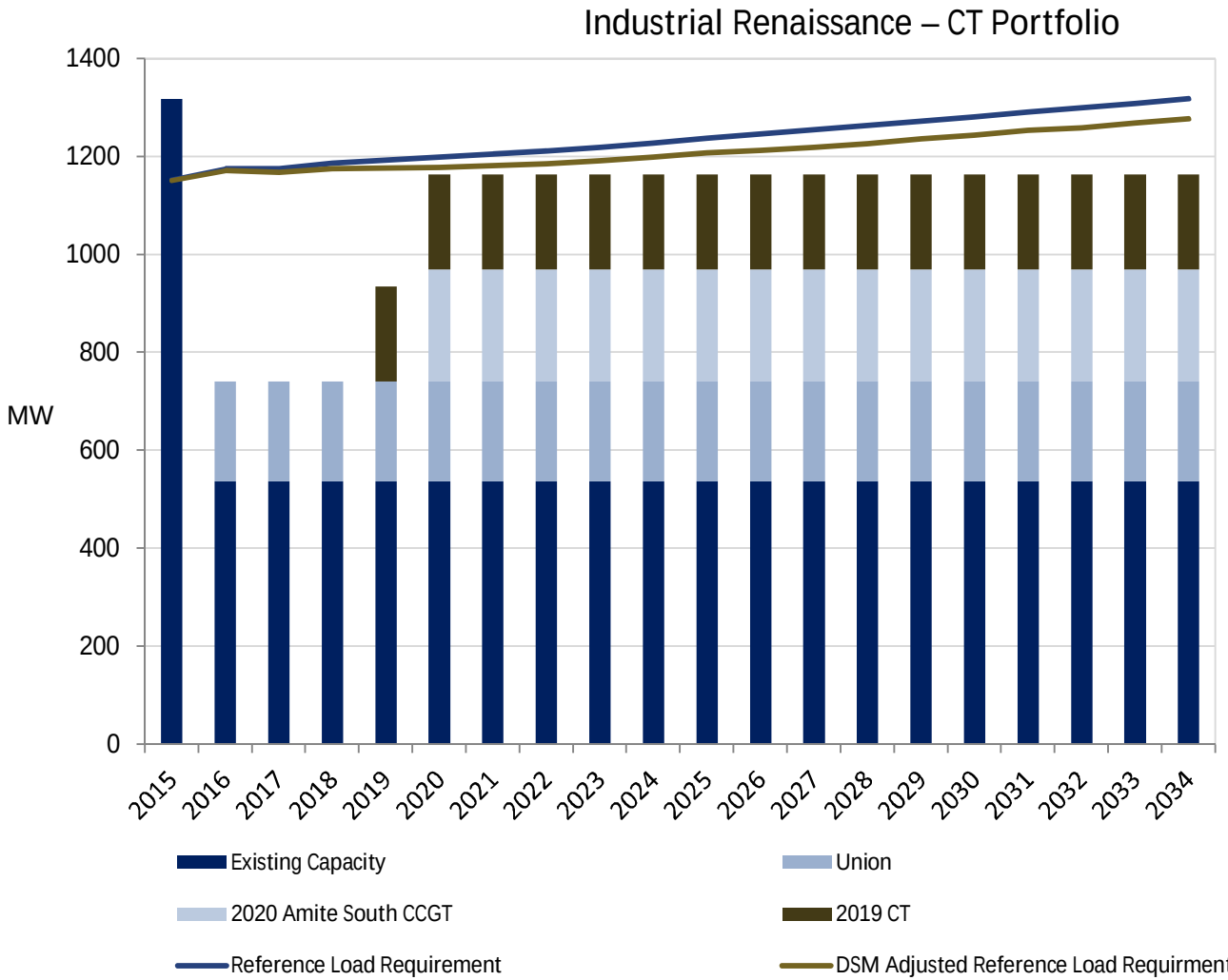


Resource Addition	Capacity (MW)	Effective Capacity (MW)
2019 Solar	800	200
2023 Solar	50	12.5
2025 Solar	50	12.5
2027 Solar	50	12.5
2029 Solar	50	12.5
2030 Wind	50	7
2031 Solar	50	12.5
2033 Solar	50	12.5
2034 Solar	50	12.5

*Resources listed in blue are existing and planned resources. Resources additions listed in brown are the resources to be evaluated in the IRP.

Preliminary – Work in Progress

MANUAL PORTFOLIOS - SUPPLY SIDE PORTFOLIOS

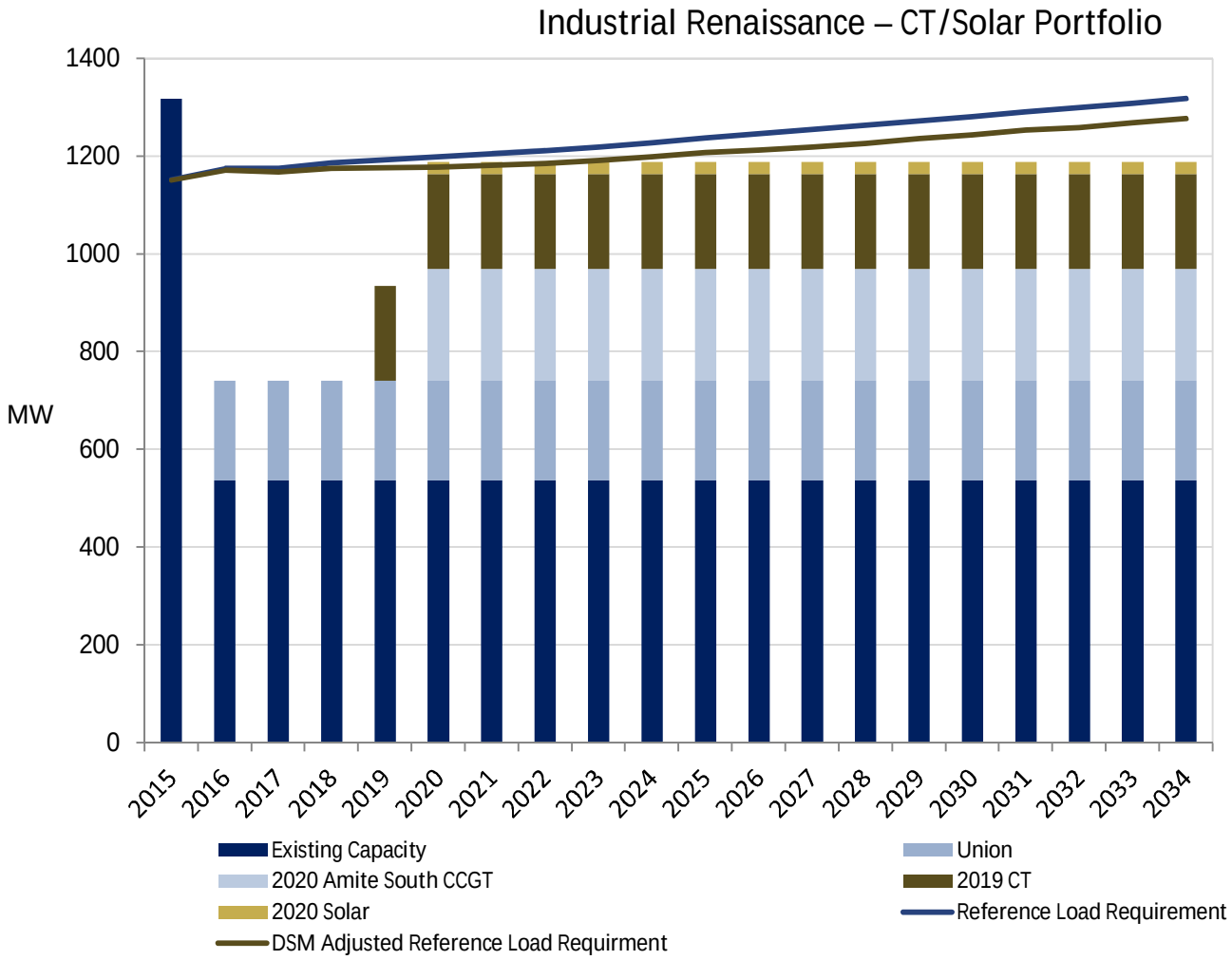


Resource Addition	Capacity (MW)
2019 CT	194

*Resources listed in blue are existing and planned resources. Resources additions listed in brown are the resources to be evaluated in the IRP.

Preliminary – Work in Progress

MANUAL PORTFOLIOS - SUPPLY SIDE PORTFOLIOS

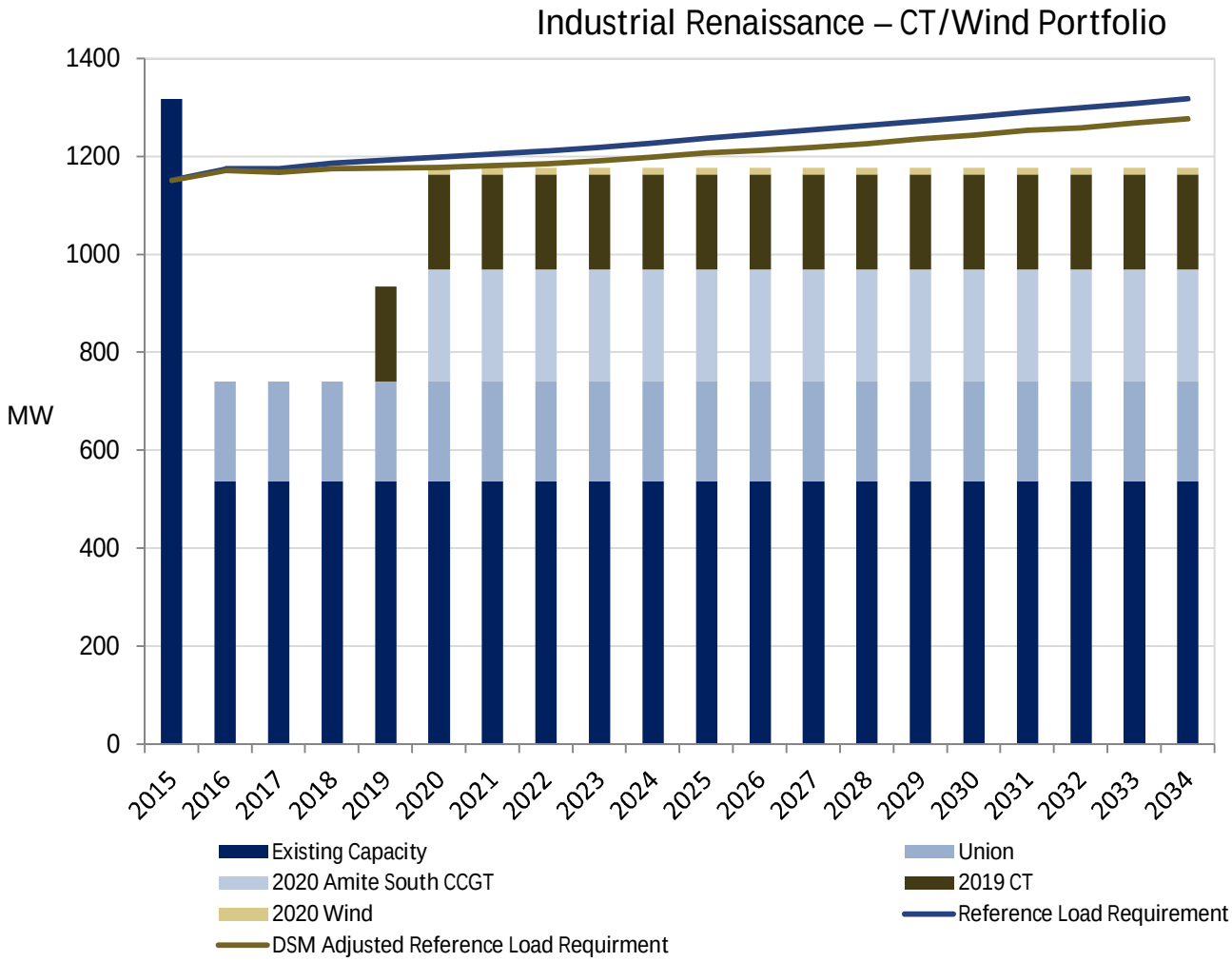


Resource Addition	Capacity (MW)	Effective Capacity (MW)
2019 CT	194	194
2020 Solar	100	25

*Resources listed in blue are existing and planned resources. Resources additions listed in brown are the resources to be evaluated in the IRP.

Preliminary – Work in Progress

MANUAL PORTFOLIOS - SUPPLY SIDE PORTFOLIOS

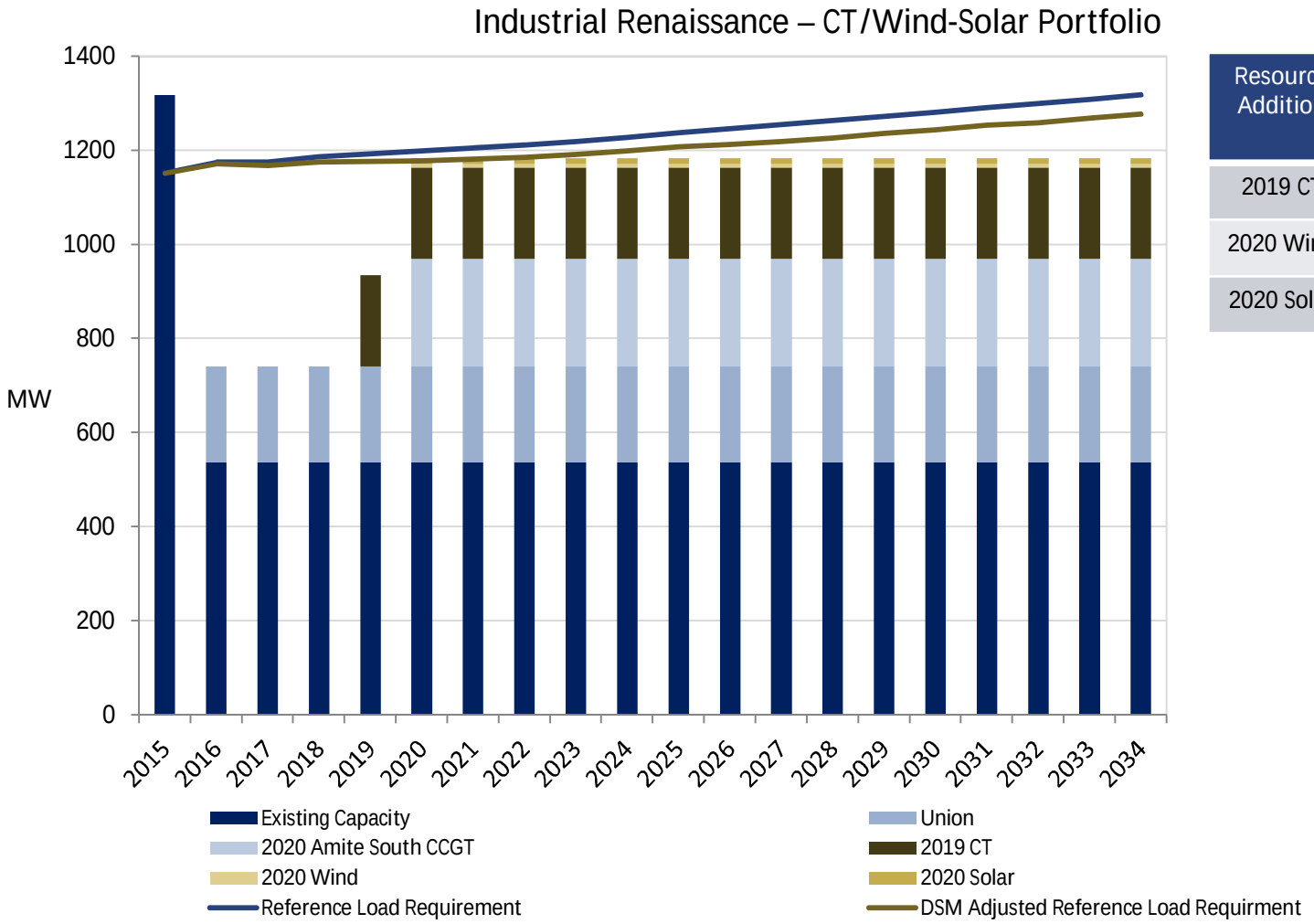


Resource Addition	Capacity (MW)	Effective Capacity (MW)
2019 CT	194	194
2020 Wind	100	14

*Resources listed in blue are existing and planned resources. Resources additions listed in brown are the resources to be evaluated in the IRP.

Preliminary – Work in Progress

MANUAL PORTFOLIOS - SUPPLY SIDE PORTFOLIOS

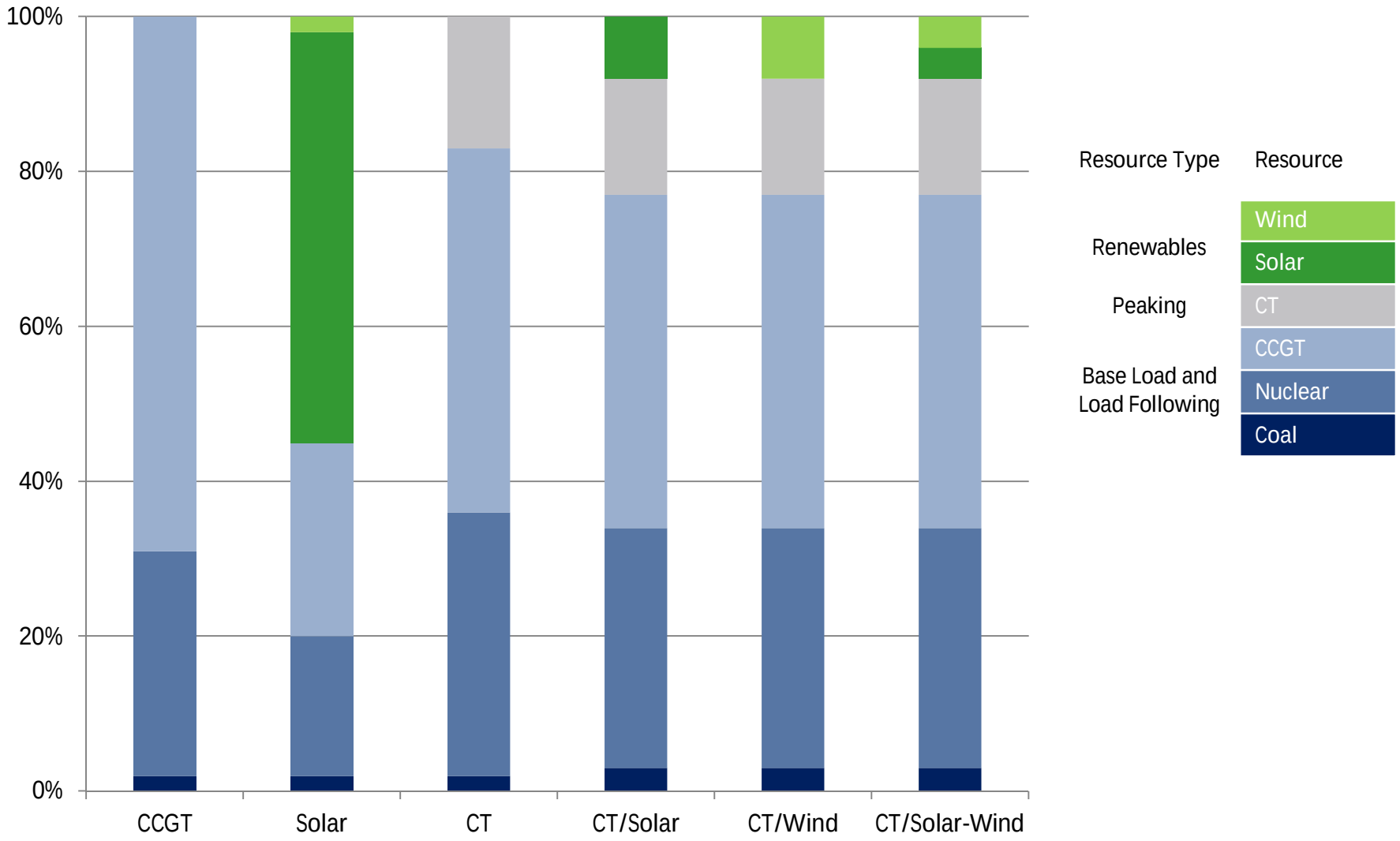


Resource Addition	Capacity (MW)	Effective Capacity (MW)
2019 CT	194	194
2020 Wind	50	7
2020 Solar	50	12.5

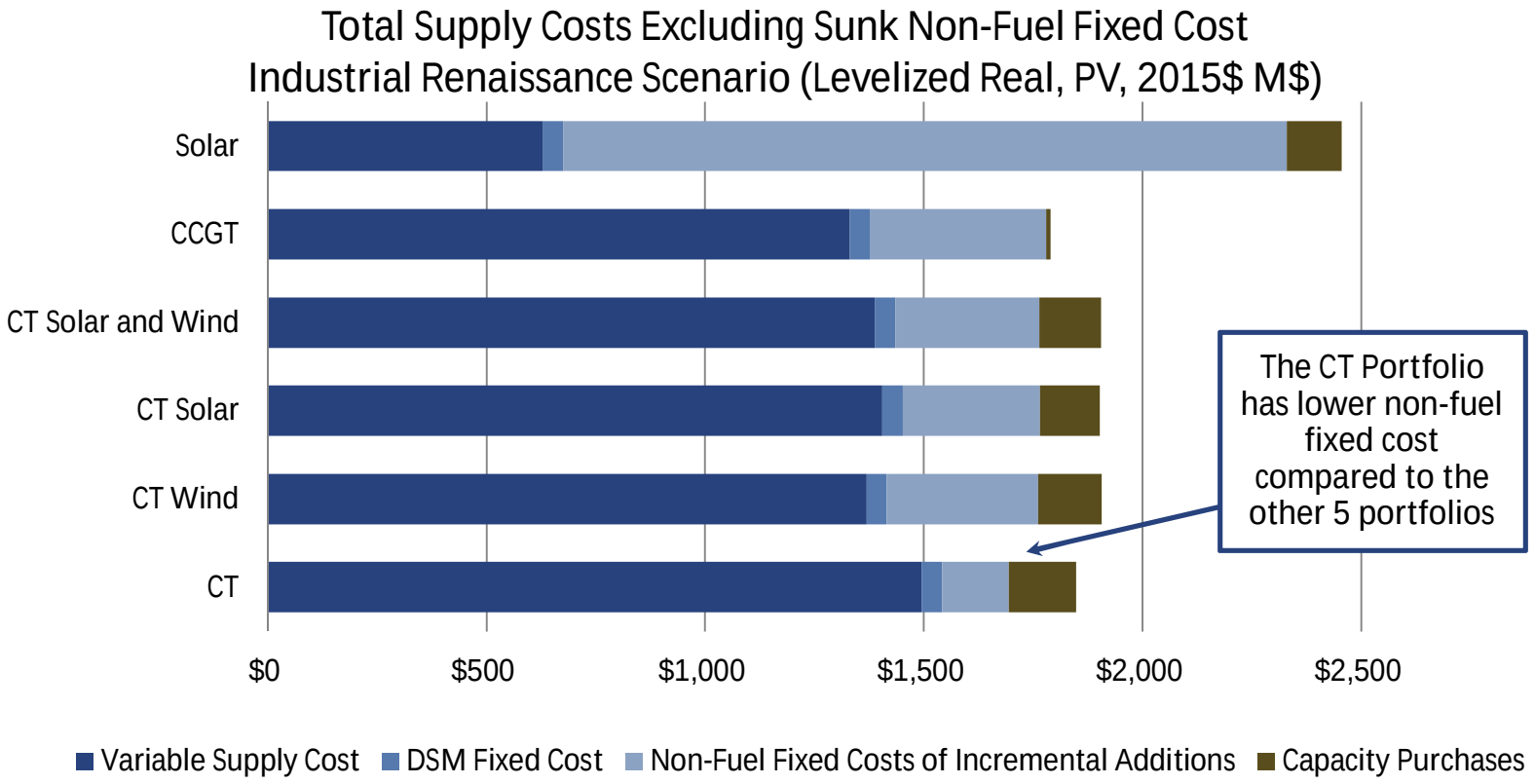
*Resources listed in blue are existing and planned resources. Resources additions listed in brown are the resources to be evaluated in the IRP.

Preliminary – Work in Progress

INSTALLED CAPACITY MIX OF EACH PORTFOLIO IN 2034



TOTAL SUPPLY COST COMPONENTS EXCLUDING SUNK NON-FUEL FIXED COST



Total Supply Costs Excluding Sunk Non-fuel Fixed Costs

Variable Supply Costs
\+ DSM Fixed Costs
\+ Non Fuel Fixed Costs of Incremental Additions
\+ Capacity Purchases
\+ Production Tax Credits (PTC) and Investment Tax Credit (ITC) (only included in the GS Scenario)

PORTFOLIO TOTAL SUPPLY COSTS

The CT Portfolio performs well in most scenarios, has lower risk, and complements ENO's existing portfolio

- The CCGT Portfolio ranks high, but has more risk because of higher fixed cost being offset by uncertain potential variable cost savings
- The Solar Portfolio is highly ranked in the Generation Shift Scenario due to continuation of ICT subsidiaries, high gas prices, and high CO2 prices, but ranks lowest in each of the other scenarios
- The addition of Wind and/or Solar to the CT Portfolio is only beneficial in the Generation Shift Scenario

Total Cost by Scenario
Levelized Real ($M)

Portfolios	Ref - IR	BB	DD	GS
CT	$1,846	$1,675	$1,789	$2,323
CT Wind	$1,905	$1,753	$1,837	$2,259
CT Solar	$1,902	$1,744	$1,840	$2,292
CT Solar_Wind	$1,903	$1,749	$1,838	$2,275
CCGT	*$1,789*	*$1,527*	*$1,705*	$2,177
Solar	$2,454	$2,420	$2,354	*$2,049*

Ranking by Scenario

	Ref - IR	BB	DD	GS
CT	2	2	2	6
CT Wind	5	5	3	3
CT Solar	3	3	5	5
CT Solar_Wind	4	4	4	4
CCGT	*1*	*1*	*1*	2
Solar	6	6	6	*1*

Variance ($M)
relative to highest ranked portfolio

	Ref - IR	BB	DD	GS
CT	$57	$148	$84	$275
CT Wind	$116	$226	$132	$210
CT Solar	$113	$217	$135	$243
CT Solar_Wind	$114	$222	$133	$226
CCGT	*$0*	*$0*	*$0*	$128
Solar	$665	$893	$649	*$0*

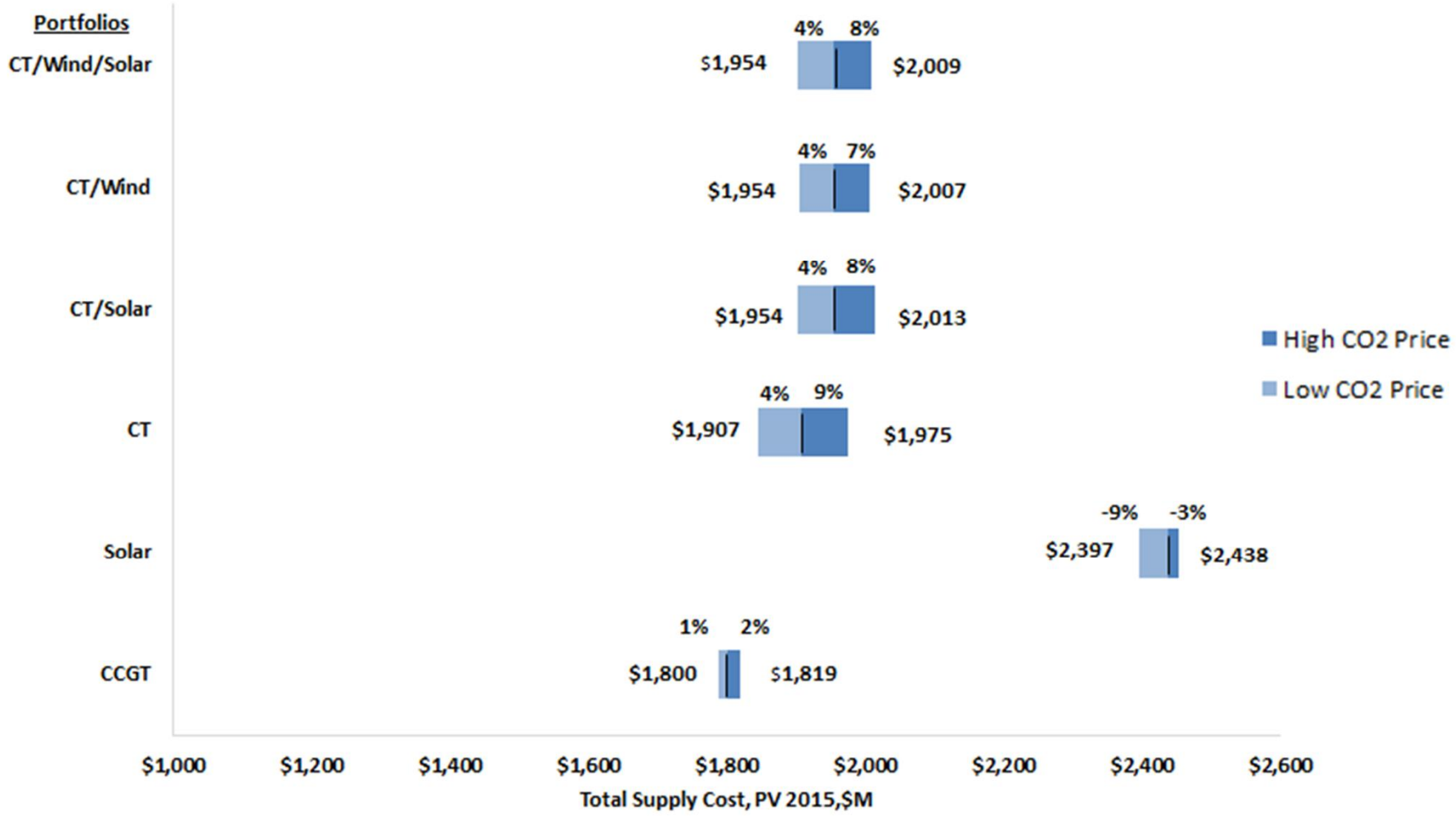
Although the CCGT and Solar Portfolios rank higher on a total cost basis, the CT Portfolio presents less risk while providing good economic performance.

REFERENCE – IR SCENARIO SENSITIVITY: NATURAL GAS (PV $2015, $M)

Although the Solar Portfolio is less volatile, it is more costly than the other portfolios. The CCGT and CT Portfolios are similarly affected by changes in gas price assumptions.

REFERENCE – IR SCENARIO SENSITIVITY: CO_2 (PV $2015, $M)

The CCGT Portfolio is relatively less affected by changes in carbon price assumptions; however, ENO existing portfolio is expected to have adequate Base Load and Core Load Following capacity.



REFERENCE – IR SCENARIO SENSITIVITY: NATURAL GAS AND CO_2 (PV $2015, $M)

Although the Solar Portfolio is less volatile, it is more costly than the other portfolios. The CCGT and CT Portfolios are similarly affected by changes in gas price assumptions.

NEXT STEPS

The following activities are planned:

- Identify reference portfolio plan and action plan
- Draft IRP Report is due in June 2015