Consumer Impact Analysis: 2015/2016 ICAP Demand Curve Reset

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DRAFT – FOR DISCUSSION PURPOSES ONLY

Background

- **Section 5.14.1.2 of the Services Tariff requires that ICAP Demand Curves be established periodically through an analysis by an independent consultant and reviewed with stakeholders, the Market Monitoring Unit and the NYISO**
- **The selected independent consultant, Analysis Group Inc. (AGI) along with Lummus Consultants International (LCI), have made several stakeholder presentations to date regarding various aspects of the parameters for establishing the ICAP Demand Curves and plan to make additional presentations over the coming months**
- **Several stakeholders have requested that the NYISO provide a consumer impact analysis based on potential changes to the ICAP Demand Curves as a result of the ongoing reset process**

Consumer Impact Approach

- The independent consultant provided a Draft Report of its preliminary recommendations and findings on June 23, 2016 and presented an overview of the report at the June 27, 2016 ICAPWG meeting
- AGI will issue a Final Report in August 2016 based on consideration of additional stakeholder feedback & analysis and updated values that reflect the most current available data for LBMPs, reserve prices, fuel and emission prices and escalation factors
- Additionally, the recommended ICAP Demand Curve parameters will be updated using finalized data before filing with FERC on or before November 30, 2016

Consumer Impact Approach, cont'd.

- The Draft Report included preliminary reference point prices for all technologies studied and for the four capacity regions: Rest of State (ROS) [Load Zones C and F], the G-J Locality (Load Zones G [Dutchess and Rockland Counties]), New York City (Load Zone J) and Long Island (Load Zone K)
- The Draft Report also provided preliminary reference point prices for the technologies studied with and without dual fuel capability for ROS and the G-J Locality
  - *In response to a request from stakeholders at the June 27, 2016 ICAPWG meeting, AGI subsequently provided preliminary reference point prices for a gas-only F Class frame unit without selective catalytic reduction (SCR) emissions control technology in ROS and Load Zone G (Dutchess County)*
- This presentation provides the impact of the preliminary reference point prices calculated by AGI for the F Class frame unit on annual capacity costs for the four capacity regions

Consumer Impact Analysis (IA) Evaluation Areas

- Present the potential impact on all four evaluation areas

RELIABILITY **Excluding dual fuel and /or SCR may have the potential to impact new entry negatively**	**COST IMPACT/ MARKET EFFICIENCIES** **Inclusion of dual fuel capability in ROS and the G-J Locality increases annual capacity costs by approximately $80 million** **Inclusion of SCR in ROS and the G-J Locality increases annual capacity costs by approximately $231 million**
ENVIRONMENT/ NEW TECHNOLOGY **Some potential negative impact if new entry is adversely impacted by excluding dual fuel and /or SCR**	**TRANSPARENCY** **No Impact Expected**

Cost Impact

- To illustrate the annual capacity cost impact of different preliminary reference point prices, simulations of one summer and one winter month spot auction were conducted using the 2016/17 base case
- The 2016/17 base case was based on the most recent available auction data including the relevant Capability Period derating factors, current IRM and LCRs, and the 2016 Gold Book forecasts
- The monthly results were extrapolated to provide the estimated annual impact

Cost Impact, cont'd.

- The consumer impact analysis is not attempting to provide forecasts of capacity prices and/or revenues for future periods or future ICAP Demand Curves
- Rather, the primary focus of the analysis is to provide an estimate of the potential annual capacity cost impact of including or excluding dual fuel capability for the peaking plant in ROS and the G-J Locality based on the preliminary reference point prices provided by AGI in its Draft Report
- Based on stakeholder requests, information is also provided regarding the annual capacity cost impact of gas only units with and without SCR for the ROS and G-J Locality based on preliminary reference point prices provided by AGI

Cost Impact With and W/O Dual Fuel Capability

- AGI and LCI preliminarily recommended including dual fuel capability in all locations based on the market expectation that the peaking unit technology choice they are recommending (SGT6-5000F5) would more often than not be built with dual fuel
- The annual capacity cost impact is based on the preliminary reference point prices calculated by AGI for dual fuel versus gas only configurations for the F Class frame unit
  - *All preliminary reference point prices also include SCR in all locations*
  - *The preliminary reference point value used for each capacity region represents the particular peaking plant location that results in the lowest reference point price*
- Slide 9 shows the total estimated annual capacity costs with and without dual fuel for the ROS and the G-J Locality

Cost Impact With and W/O Dual Fuel Capability

2016/17 Base Auction -- Dual Fuel versus Gas Only						
	ROS Reference Price	ROS Price Summer	ROS Price Winter	ROS Total Cost	Difference (in millions)	
Dual Fuel	$10.99	$5.93	$1.74	**$827.72**		
Gas Only With SCR	$10.44	$5.64	$1.65	**$786.70**		
					$41.02	ROS
	G-J Reference Price	G-J Price Summer	G-J Price Winter	G-J Total Cost		
Dual Fuel	$14.57	$10.70	$4.76	**$458.73**		
Gas Only With SCR	$13.88	$10.19	$4.53	**$436.77**		
					$21.96	G-J
	NYC Reference Price	NYC Price Summer	NYC Price Winter	NYC Total Cost		
Dual Fuel	$18.33	$11.65	$4.76	**$927.95**		
	$18.33	$11.65	$4.53	**$914.36**		
					$13.60	NYC
	LI Reference Price	LI Price Summer	LI Price Winter	LI Total Cost		
Dual Fuel	$11.17	$6.40	$1.74	**$279.14**		
	$11.17	$6.40	$1.65	**$275.92**		
					$3.22	LI

Total Capacity Cost
$2,493.54
$2,413.75
$79.79

Cost Impact Gas Only With and W/O SCR

- AGI and LCI also recommended that the F Class Frame machine include SCR emission control technology across all locations based on permitting and other environmental requirement considerations
- At the June 27, 2016 ICAPWG meeting, some stakeholders requested that AGI provide reference point prices for gas only units with and without SCR for ROS and the G-J Locality and also requested that the NYISO provide the cost impact associated with those preliminary reference point prices
  - *Preliminary reference point prices for the ROS and Load Zone G (Dutchess County) were calculated by AGI for the F class frame unit without SCR*
  - *The preliminary reference point value used for each capacity region represents the particular peaking plant location that results in the lowest reference point price*
- Slide 11 shows the total estimated annual capacity costs for gas only units with and without SCR for ROS and the G-J Locality

Cost Impact Gas Only With and W/O SCR

2016/17 Base Auction -- Gas Only with SCR and W/O SCR in ROS, G-J						
	ROS Reference Price	ROS Price Summer	ROS Price Winter	ROS Total Cost	Difference (in millions)	
Gas Only With SCR	$10.44	$5.64	$1.65	**$786.70**		
Gas Only W/O SCR	$8.78	$4.74	$1.39	**$661.53**		
					$125.17	ROS

	G-J Reference Price	G-J Price Summer	G-J Price Winter	G-J Total Cost		
Gas Only With SCR	$13.88	$10.19	$4.53	**$436.77**		
Gas Only W/O SCR	$11.99	$8.80	$3.91	**$377.13**		
					$59.64	G-J

	NYC Reference Price	NYC Price Summer	NYC Price Winter	NYC Total Cost		
Dual Fuel	$18.33	$11.65	$4.53	**$914.36**		
	$18.33	$11.65	$3.91	**$877.71**		
					$36.65	NYC

	LI Reference Price	LI Price Summer	LI Price Winter	LI Total Cost		
Dual Fuel	$11.17	$6.40	$1.65	**$275.92**		
	$11.17	$6.40	$1.39	**$266.63**		
					$9.29	LI

Total Capacity Cost
$2,413.75
$2,183.00
$230.75

Reliability Impact

- To the degree that AGI and LCI are correct that, "the F Class machine would more often than not be built with dual fuel in all locations," not including these costs in ICAP Demand Curve reference point prices could impact new entry negatively
- Similarly, AGI and LCI stated, "to be economically viable and practically constructible, the F Class Frame machine would be built with SCR emission control technology across all locations"
- Based on AGI and LCI's assessment, not including the cost of SCR emission control technology in the ICAP Demand Curve reference point prices could present additional permitting and environmental compliance risk for new entry and this could potentially also impact new entry negatively

Environmental Impact

- As discussed in the previous slide (Slide 12), excluding dual fuel and/or SCR could potentially impact new entry negatively
- If new entry were adversely impacted, this may have the potential of some negative environmental impact as this could perpetuate the use of less efficient plants that would otherwise have been replaced sooner

Impact on Transparency

- No impact expected

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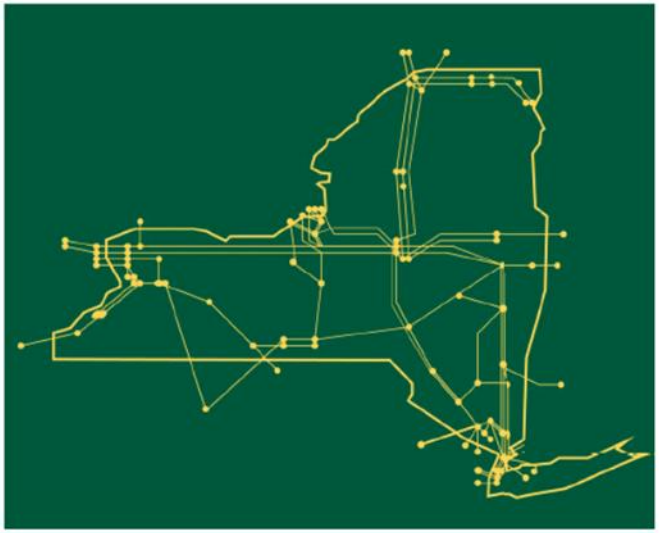

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