Methodology for Consumer Impact Analysis: Alternative Methods for Determining LCRs

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Agenda

- Project Objective
- Background
- Consumer Impact Methodology
- Feedback
- Next Steps

Project Objective for Determining Alternative LCRs

- Evaluate an alternative methodology for determining LCRs based on economic optimization that minimizes the cost of satisfying planning requirements
  - Identify LCRs that provide the least cost distribution of capacity resources amongst NYCA Localities while keeping LOLE<0.1

Background

- The NYISO started this project by first establishing guiding principles (least cost, stable, robust, predictable)
- Next, the proof of concept phase demonstrated how the alternative LCR methodology performs in relation to the guiding principles
- This was followed by Phase 2, which is focusing on refining the methodology to ensure that optimization is based on sound market and engineering principles
- Phase 3 will focus on simulating market situations to demonstrate the performance of the alternative methodology

Consumer Impact Analysis (IA) Evaluation Areas

- Present the potential impact on all four evaluation areas

RELIABILITY	COST IMPACT/ MARKET EFFICIENCIES
ENVIRONMENT/ NEW TECHNOLOGY	TRANSPARENCY

Cost Impact Methodology

- The impact analysis will compare the cost impacts on the three Localities (J, K, G-J) of the alternative LCR methodology with the current methodology for the, short term, intermediate, and long term
- The base case and the sensitivity cases referenced herein are the same as those presented to stakeholders
  - The impact analysis will utilize the results produced after all refinements have been incorporated into the methodology (*i.e.*, final methodology)
- The 2017/2018 Capability Year LCR base case will be solved to an LOLE of 0.1 days/year while using the NYCA Minimum Installed Capacity Requirement
- Both quantitative and qualitative analysis will be discussed

Short term Cost Impact Methodology

- **The short term impact will compare the cost of applying the current methodology and the alternative methodology to the 2017/2018 Capability Year LCR base case**
  - The short-run impact analysis will assume no changes to the generation and transmission

Scenario	Optimized Costs ($)			Current LCR Methodology Costs ($)		
	As found	At Level of Excess	At Generic excess level	As found	At Level of Excess	At Generic excess level
Base Case						
+500 MW in G						
-500 MW in G						

Difference in cost is short run impact (as found system and assumes no changes)

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Intermediate Cost Impact Methodology

- **The intermediate impact will compare the cost of applying the current LCR methodology with the alternative methodology as generation and transmission resources change**
  - This analysis will assume the only change to the system is the change used to perform the sensitivity case
  - For example, the cost impact of a +500 MW Zone J sensitivity case would keep all assumptions constant except for the addition of 500 MW to Zone J
- **The intermediate impact will be performed on a sub-set of simple sensitivity cases (*e.g.*, sensitivities provided at the May 11, 2017 ICAPWG) along with a set of sensitivities that include multiple changes to the system**

Scenario	Optimized Costs ($)			Current LCR Methodology Costs ($)		
	As found	At Level of Excess	At Generic excess level	As found	At Level of Excess	At Generic excess level
Base Case						
+500 MW in G						
- 500 MW in G						

Difference in cost is intermediate impact (as found system with an addition and subtraction of 500 MW to G)

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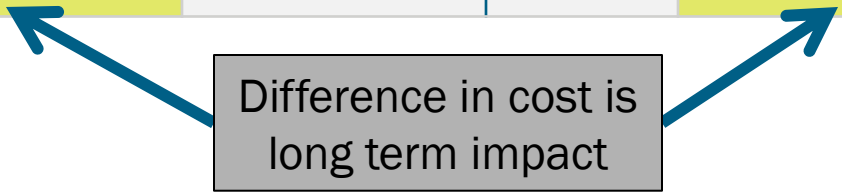
Long term Cost Impact Methodology

- **The long term impact will compare the cost of the current LCR methodology with the alternative methodology at long-run equilibrium**
  - The long-run equilibrium will be modeled at the Level of Excess condition and also at a set of generic excess levels
    - The generic excess level will be based on historic excess experienced in the different Localities

Scenario	Optimized Costs ($)			Current LCR Methodology Costs ($)		
	As found	At Level of Excess	At Generic excess level	As found	At Level of Excess	At Generic excess level
Base Case						
+500 MW in G						
-500 MW in G						



Scenario	Optimized Costs ($)			Current LCR Methodology Costs ($)		
	As found	At Level of Excess	At Generic excess level	As found	At Level of Excess	At Generic excess level
Base Case						
+500 MW in G						
-500 MW in G						

Difference in cost is long term impact

Other Factors to be Considered

- **Stability**
  - Discuss how the alternative LCR methodology affects the stability of the LCRs and its impacts on consumers
- **Intuitive response to system changes**
  - Discuss how the alternative methodology affects the predictability of the LCRs to system changes and its impacts on consumers

Other Impacts

- **Evaluate other impacts:**
  - Reliability Impact
  - Environmental Impact
  - Impact on Transparency

Next Steps

- Communicate any changes to the consumer impact analysis methodology in response to stakeholder feedback
- Present the results of the consumer impact analysis in the September/October timeframe

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Feedback?

- Email additional feedback to:
- deckels@nyiso.com

Questions?

We are here to help. Let us know if we can add anything.

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