Integrating Public Policy: the ICAP Market

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Agenda

- **Overview of the Integrating Public Policy Project and Phase 2**
  - IPP Project Description
  - Phase 2 Market Impact Assessment
- **Proposed Modeling Framework**
  1. Identify characteristics of incremental capacity additions
  2. Identify how incremental renewable resources affect the ICAP market
  3. Model capacity market impacts
- **Stakeholder Input (in addition to that provided during the presentation)**
- **Next steps**

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Background

Date	Working Group	Discussion points and links to materials
08-17-16	Business Issue Committee (BIC)	First discussion of the possibility of an Integrating Public Policy Project
09-12-16	Budget & Priorities Working Group (BPWG)	Presentation of stakeholder feedback, proposed scope of the project
10-19-16	Market Issues Working Group (MIWG)	Presentation providing more detail on the scope and timeline of the project
11-22-16	Market Issues Working Group (MIWG)	Presentation updating project status -- consultant selection and goals of Phases 1 and 2
12-14-16	Market Issues Working Group (MIWG)	Consultant's Project Introduction and solicitation of input (Phase 1)
01-31-17	Market Issues Working Group (MIWG)	Integrating Public Policy Update (Phases 1 and 2)
2-16-17	Market Issues Working Group (MIWG)	Phase 2: Study Description and Assumptions Review
3-28-17	Market Issues Working Group (MIWG)	Phase 2: Study Description and Assumption Update
4-24-17	Market Issues Working Group (MIWG)	Phase 2: Preliminary DAM Results

Overview of the Integrating Public Policy Project

With a focus on the Market Impact Assessment (Phase 2)

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Integrating Public Policy

Integrating Public Policy Project

The Brattle Group Work

PHASE 1: Incorporating the Cost of Carbon Study Study whether incorporating a state policy defined cost of carbon in the wholesale market would improve the overall efficiency of the NYISO energy and capacity markets

NYISO Work

PHASE 2: Market Impact Assessment Study the impacts of decarbonization goals on the current NYISO energy and capacity markets from the high penetration of low carbon or carbon-free resources

PHASE 3: Market Rule Assessment Study whether other market products or changes to the existing market structure will be necessary to meet the anticipated reliability needs

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Phase 2: Market Impact Assessment

- **NYISO's goal is to provide stakeholders with information regarding potential market conditions with the incorporation of renewable resources to meet 50% of the NYCA load**
  - This information will provide insight into what will be needed for the Phase 3: Market Rule Assessment
- **The NYISO will study the impact on today's market of adding sufficient renewable resources to meet the CES goal of 50% renewable by 2030**
  - This study will be looking at how today's market rules and markets would lead to different results if there are sufficient additional renewable resources to reach the State's CES goal, in addition to the existing capacity resources
  - The NYISO will not be making any assumptions on generator retirements or Mothballs, or changes in the level of demand response

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Phase 2: Market Impact Assessment (Cont)

- This study is not a planning study. The question of underlying transmission and distribution upgrades to support CES is an important one but is not part of the scope
- The NYISO will not be making any assumptions new or upgraded transmission etc.
- The study will use existing energy and capacity market tools
- Today's presentation is focused on the capacity market and how the NYISO is expecting to study the effect of incremental capacity additions given today's ICAP market design and market rules

Proposed modeling framework

1. Identify characteristics of the incremental capacity additions

- **Similar to the approach in the energy market:**
  - The primary source of projections for the quantity and location of qualified CES renewable generation is the NYSDPS Final Supplemental Environmental Impact Statement ("Final EIS") in CASE 15-E-0302 using the "Blend Base Case" http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={424F3723-155F-4A75-BF3E-E575E6B0AFDC}
- **Start with nameplate capacity values as ICAP and then convert into UCAP (*i.e.*, the product transacted in the NYISO ICAP market)**
  - Convert based on the NYISO ICAP Manual (e.g., solar and wind tables)
- **The NYISO is evaluating additional assumptions on the characteristics of the incremental capacity additions. These will be presented at a subsequent stakeholder meeting**
  - For example, differences between Winter and Summer Capability Period availability

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2. Identify how incremental resources affect the ICAP market*

- **Intermittent resources may directly affect**
  - Installed Reserve Margin (IRM)
  - Locational Minimum Installed Capacity Requirements (LCRs)
  - NYCA and Locality Translation Factors
- **Distributed resources (e.g., rooftop solar) may also affect**
  - ICAP Load Forecast
- **Additionally, new resources may indirectly affect**
  - Net Energy and Ancillary Services revenues of the Demand Curve peaking unit
  - Winter-to-Summer ratio
- **Other effects?**

*Note: as indicated on slide 6, the NYISO will not be examining the effects on mothballs and retirements, or changes in the level of demand response

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3. Model Capacity Market Impacts

- **Will use the current ICAP market parameters and conditions**
  - 2017 ICAP Reference Points, NYCA Minimum Installed Capacity Requirements, LCRs, ICAP Load forecast, ICAP Demand Curve zero crossing points
  - Winter 2016/17, Summer 2017 translation factors
  - Current MWs of capacity offered into the capacity market, including generation, SCR, UDRs, imports and taking into account exports and unoffered quantities
- **Integrate existing models and leverage previous studies**
  - E.g., previous IRM studies and NYISO filed comments discuss the effect of intermittent resources on the IRM
  - These models and prior studies will reflect current market rules (i.e., consistent with the IPP project principle of placing additional resources in the as-found market)
- **To the extent no such models or studies exist, such models may be developed**

Today's presentation

- **Requesting stakeholder input on the**
  - Proposed scope of the IPP ICAP study
  - Assumptions, proposed modeling framework, and/or the impacts that the NYISO will evaluate

Next steps

- Consider stakeholder input received during today's meeting and sent to IPP_feedback@nyiso.com
- Future presentation on the capacity market impact at an upcoming meeting
  - Assumptions and preliminary results

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