

# 2018 Master Plan

## Wholesale Markets for the Grid of the Future

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Management Committee

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# Agenda

- Background
- Objective
- Enhancing Fuel and Energy Security
- Carbon Pricing
- Revised Project Timelines
- Next Steps

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# Background

- **The NYISO has committed to publishing a “Master Plan” in 2018 that provides one cohesive strategic vision for market design:**
  - Considers the interdependencies of continuing projects, new market design concepts identified in 2017 and 2018, and existing FERC compliance directives.
  - Intended to provide a comprehensive 5-year plan that will enable the NYISO to prepare for anticipated changes to the bulk power system.
  - Does not include all market design initiatives.
    - Focused on projects that contribute to preparing for the evolution of the grid.

# Strategic Themes

- Across the spectrum of current and proposed market design initiatives, three unifying themes have been identified:
  - **Resource Flexibility:**

Incenting resource flexibility, which includes the ability to respond rapidly to dynamic system conditions, provide controllable ramp with fast response rates, and startup/shutdown quickly and frequently, will be a key element to any market enhancements developed by the NYISO.
  - **Grid Resilience:**

The ability to withstand and reduce the magnitude and/or duration of disruptive events, which includes the capability to anticipate, absorb, adapt to, and/or rapidly recover from such an event.
  - **Price Formation:**

In order to provide efficient operational and investment signals to an increasingly diverse mix of supply resources, the markets must continue to evolve to maintain and improve alignment between the design of wholesale markets and the reliability needs of the system.
- The Master Plan describes these themes and how various initiatives fit within them.
- Project efforts are grouped to facilitate logical prioritization.
- Final project prioritization will be subject to stakeholder feedback.

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# Objective

- **The objective of this presentation is to share the NYISO's revised Master Plan, which incorporates stakeholder feedback.**
  - The revised Master Plan is posted under today's MC materials.
  - The first draft is posted under the 5/15/18 MIWG materials.
- **The NYISO has considered both written and verbal stakeholder feedback for this revision.**

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# Enhancing Fuel and Energy Security

- **The NYISO proposes to add one new project to the Master Plan.**
  - The NYISO is concerned that future changes to New York's fuel supply mix as well as the expected increased demands for natural gas may challenge the ability to meet electric system demands under certain stressed system conditions.
- **This project would study fuel and energy security for the New York State grid looking over a ten year horizon and consider opportunities for market design enhancements.**
- **The NYISO recommends that this project be prioritized as a study in 2019 and, if necessary, implementation of market design changes to follow in 2021.**

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# Carbon Pricing

- **In response to the first draft of the Master Plan, stakeholders commented that the NYISO should accelerate the proposed implementation timeline for Carbon Pricing.**
  - NYISO staff considered the implications that an accelerated Carbon Pricing implementation would have on other strategic initiatives.
  - The revised Master Plan timeline accommodates Carbon Pricing implementation in 2021.
  - Implementing carbon pricing in 2021 would require the delay or removal of a number of other strategic initiatives, which will be discussed in this presentation.
- **The NYISO also considered whether it would be possible to implement carbon pricing in 2020.**
  - To accommodate this timeline, many more efforts within the Master Plan would be impacted.
  - The NYISO would consider this alternative plan if all stakeholders scored the Carbon Pricing project as their top priority.

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# 2021 Carbon Pricing

- This version of the Master Plan timeline reflects the NYISO's current recommendation and is published in the Revised Master Plan draft with today's MC materials.
- The proposed addition of the Enhancing Fuel and Energy Security project and acceleration of Carbon Pricing implementation to 2021 necessitate significant changes to project timelines.

Strategic Initiative or Project	Impact	Change from First Draft
Reserve Procurement for Resilience	Implement in 2022	+ 1 year
More Frequent Interchange Scheduling	No work planned	Removed from Master Plan
Mitigation of 100+ kV Transmission Constraints	No work planned	Removed from Master Plan
Constraint Specific Transmission Shortage Pricing	Implement in 2023	+ 1 year
RTC-RTD Convergence Improvements	No work planned	Removed from Master Plan

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# 2020 Carbon Pricing

These changes to Master Plan project timelines would be necessary to implement Carbon Pricing in 2020:

Strategic Initiative or Project	Change from 2021 Carbon Pricing	Change from First Draft
Renewable and Storage Aggregation	+ 2 years	+ 2 years
Reserve Procurement for Resilience	+ 2 years	+3 years
More Granular Operating Reserves	+ 2 years	+ 2 years
Ancillary Services Shortage Pricing (SOM)	+ 2 years	+ 2 years
Flexible Ramping Product	+ 2 years	+ 2 years
Dynamic Reserve Requirements (SOM)	+ 2 years	+ 2 years
More Frequent Interchange Scheduling	-	Removed
Solar on Dispatch	+ 1 year	+ 1 year
Mitigation of 100+ kV Transmission Constraints	-	Removed
Constraint Specific Transmission Shortage Pricing	-	+ 1 year
RTC-RTD Convergence Improvements	-	Removed

# Next Steps

- **June 13, 2018**
  - Present Master Plan at MIWG.
- **June 15, 2018**
  - Stakeholders receive final project prioritization survey.
- **June 26, 2018**
  - Deadline for stakeholders to submit project prioritization survey.
- **Update 2018 Master Plan as necessary, pending stakeholder project prioritization scores**
- **Going Forward**
  - Develop annual Master Plan with stakeholder input

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# Questions?

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

# The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefits to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policy makers, stakeholders and investors in the power system



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