



# **Distributed Energy Resources Roadmap Update**

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**MIWG**

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# Agenda

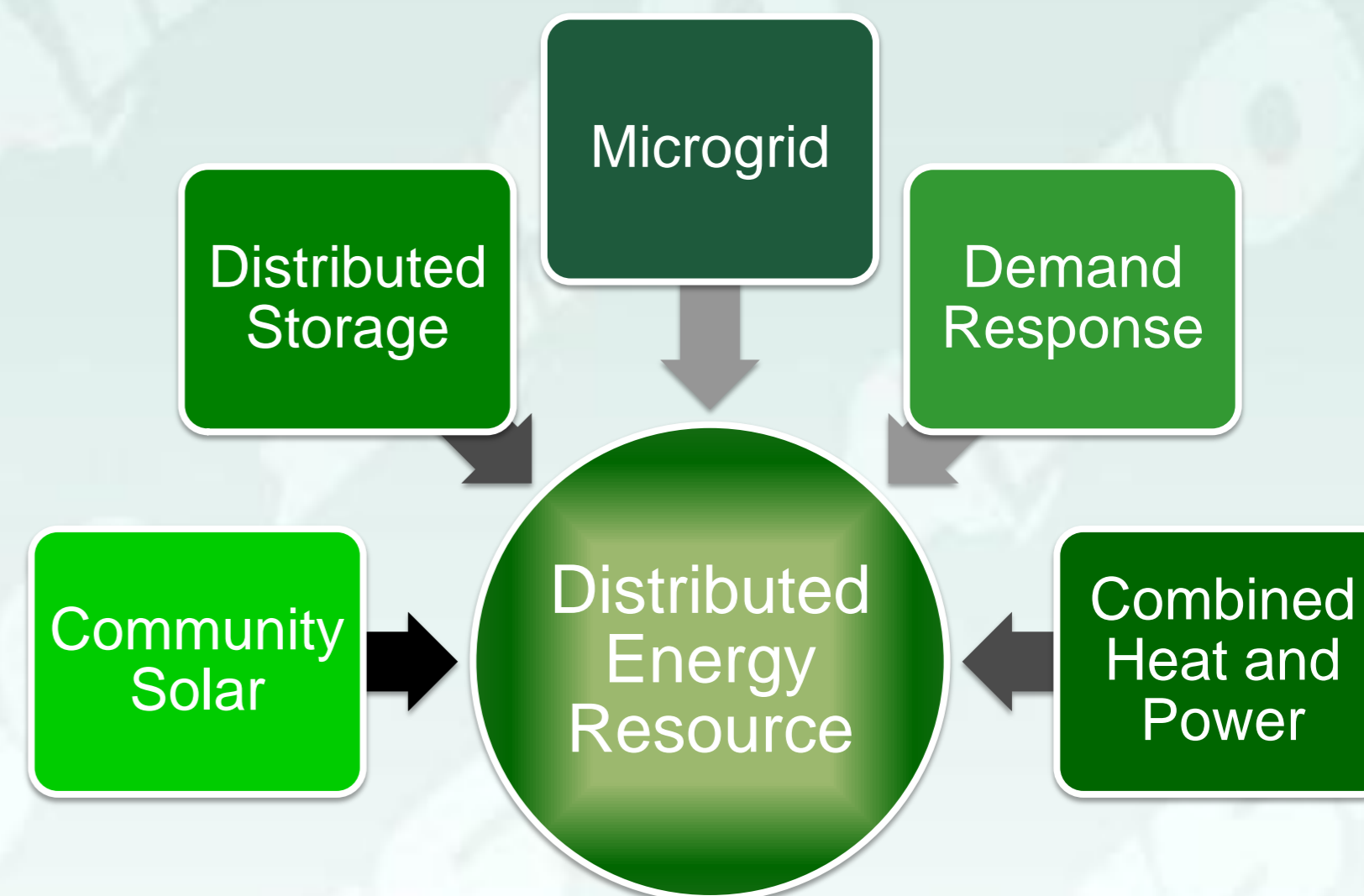
- **Purpose of Today's Meeting**
- **Initiative Scope and Key Objectives**
- **DER Roadmap Development Process, Discussion, and Timeline**
- **Stakeholder Presentations**
- **Summary of Feedback Received**
- **Next Steps**

# **Purpose of Today's Meeting**

- **Stakeholder presentations**
- **Review feedback received between 11/15/16 and 11/29/16 and feedback remaining from prior meetings**

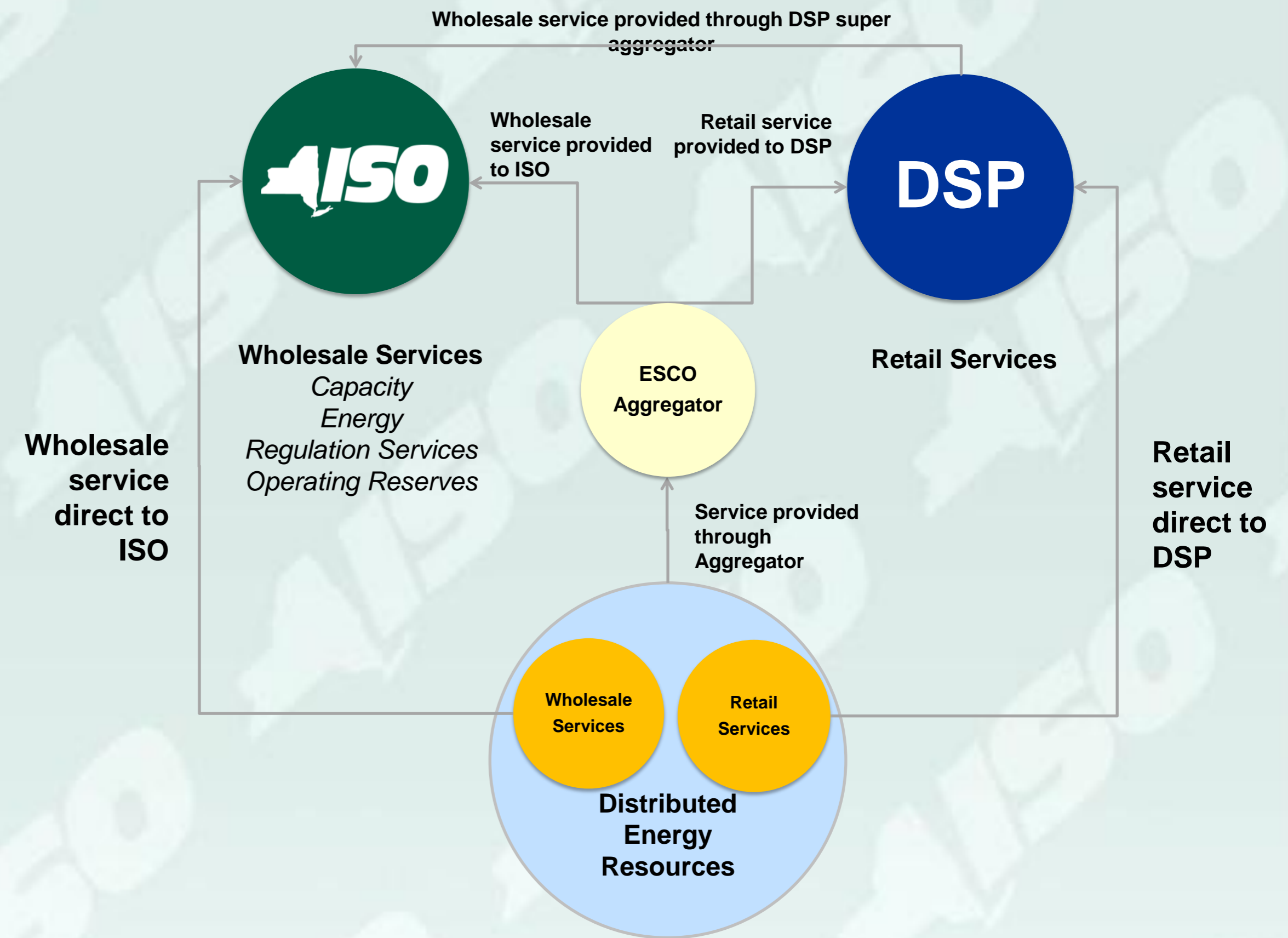
# Initiative Scope

- Roadmap for next 3-5 years for integration of DER and evolution of current Demand Response programs
- DER is a resource or set of resources
  - *typically located on an end-use customer's premises and operated for the purpose of supplying customer electric load -- that seeks to provide NYISO wholesale market services*
- *Curtailable load, generation, storage, or various combinations*
- *Individual resources or aggregations*
- *Net load or net generation*

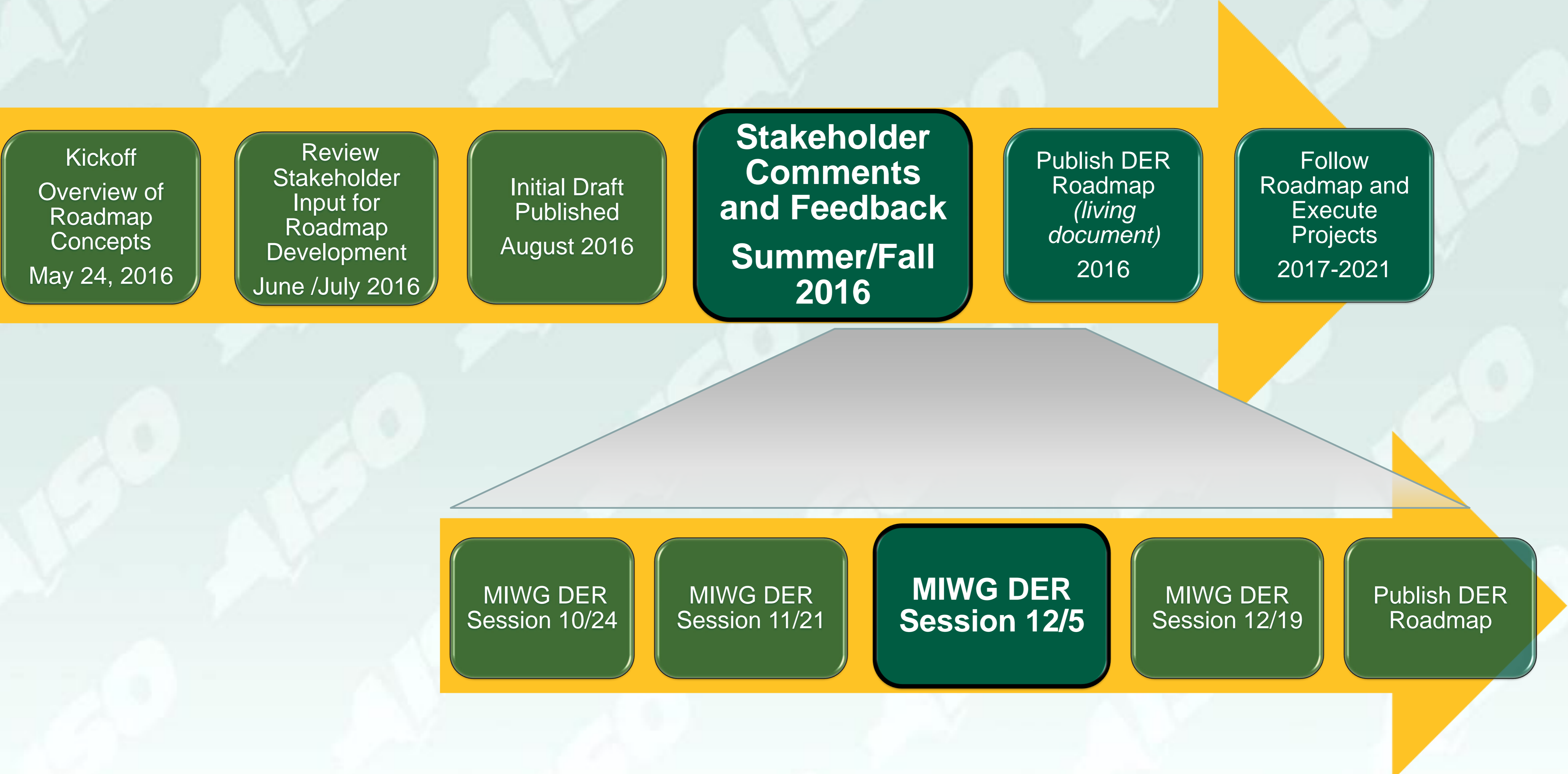


# Key Objectives

- Integrate DER into energy, capacity, and ancillary services markets
  - *Ability for real-time scheduling*
  - *Minimize out-of-market actions*
- Align with goals of NYS REV
- Appropriate measurement and verification
- Align payments with performance
- Focus on wholesale market



# DER Roadmap Development Process



# DER Roadmap Development & Discussion

- MIWG DER Session 10/24
  - *Review of Feedback, Updated Schedule, Discussion: Measurement and Verification, Stakeholder presentations*
- MIWG DER Session 11/21
  - *Stakeholder presentations, Review of Feedback, Updated Schedule, Discussion: Aggregations, Dual Participation and Performance Obligations*
- **MIWG DER Session 12/5**
  - ***Stakeholder presentations, Review of Feedback***
- **MIWG DER Session 12/19**
  - ***Overview of Updates to the DER Roadmap***
- **Publish DER Roadmap**

# FERC Notice of Proposed Rulemaking

- Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators
  - *Docket Nos. RM16-23-000; AD16-20-000*
  - *Issued November 17, 2016 (Comments due 60 days after publication in Federal Register)*
- NYISO is currently reviewing and will provide comments at a later date



# **Stakeholder Presentations**

# **Summary of Feedback Received**

# Feedback Received

## Measurement & Verification & Communications

- **NYISO should:**
  - *Consider guidelines by a body like NAESB for M&V requirements*
  - *Address Meter Data Service Provider (MDSP) issues:*
    - MDSPs are not audited by the NY PSC; these need to be auditable
    - NY State no longer registers new MDSPs
  - *Ensure all data from 3<sup>rd</sup> parties is verifiable*
    - Ensure data integrity is maintained throughout the process
  - *Specify minimum cyber-security and technical requirements for communications between end resource and aggregator*
  - *Require the MSP to be the TO*

# Feedback Received

## Measurement, Verification & Communications (cont'd)

- **NYISO should:**
  - *Not use sampling measurement and verification methods for small aggregations; it does not work for small aggregations*
  - *Carefully consider if sampling is appropriate in any aggregation, telemetry should not be sacrificed*
    - Remember that telemetry and settlement data quality are very different
    - Remember accurate metering shouldn't be sacrificed
  - *Consider potential data inconsistency issues with parallel telemetry to NYISO and DSP*

# Feedback Received

## Measurement, Verification & Communications (cont'd)

- **Small customer loads are weather sensitive – capacity to reduce load is variable, but predictable and reliable**
- **Match performance measurement and payment to the character of the resource**
- **Existing baselines do not work well for residential / small customers**
  - *Control group protocols work better for these types of resources*
- **M&V should be consistent between NYISO and utility programs**
- **NYISO should allow sub-metering at the resource level**

# **Feedback Received**

## **SCR**

- **Is NYISO looking to change SCR baselines as well?**
- **Why not allow resources that can inject to participate in the SCR program?**
- **Are payments going to change for the SCR program?**

# Feedback Received

## Dual Participation

- **NYISO should:**
  - *Think about how dual participation may need to include “dual transmission services participation”*
  - *Review the CAISO FERC order for dual participation*
  - *Consider the participation of NWAs in the DER Roadmap*
  - *Protocols and procedures will be needed to coordinate day-ahead and hour-ahead dispatch as well as for real-time operation between NYISO and DSPs*

# Feedback Received

## Operations

- **What is the sequence for calling Dispatchable DER compared to the SCR in the stack for the reliability calls?**
- **NYISO should clarify the roadmap on RT obligations for DER**
  - *Will all DER be treated the same?*
- **If solar is aggregated with storage, is the resource still considered an intermittent resource?**



# **Feedback Received**

## **Aggregations**

- **Reduce minimum size of aggregations to 100 kW to reduce barriers for participation**
- **Aggregation data should be available to the DSPs**
- **Clarify the Roadmap on limits on resource size vs aggregation size**
- **Compliance risk should be on the aggregators**
- **NYISO should review CAISO's aggregation model**
- **Will aggregations consisting of multiple technologies (e.g., injections and load reductions) work?**
- **Granularity of aggregation needs to be balanced with market and operational needs**

# Feedback Received

## DER

- **NYISO should:**
  - *Consider resources that have dispatchability that is somewhere in between NYISO's current DSASP and SCR programs*
  - *Look at the small generator interconnection definitions when looking into definitions for DER*
- **Where do limited energy resources with shorter run durations fit in?**
  - *NYISO answer: This will be determined in the development of Dispatchable DER program*
- **When would DADRP and DSASP be retired?**
  - *NYISO answer: Not until the Dispatchable DER program is functional*

**Did we miss any of your feedback?**

# Next Steps

- **MIWG DER Session 10/24**
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# Comments & Questions

**DER\_Feedback@nyiso.com**

[August 2016 Draft DER Roadmap](#)

- **The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefit 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*

- ***[www.nyiso.com](http://www.nyiso.com)***