



Distributed Energy Resources Roadmap Presentation Feedback

(Concepts for the Wholesale Market)

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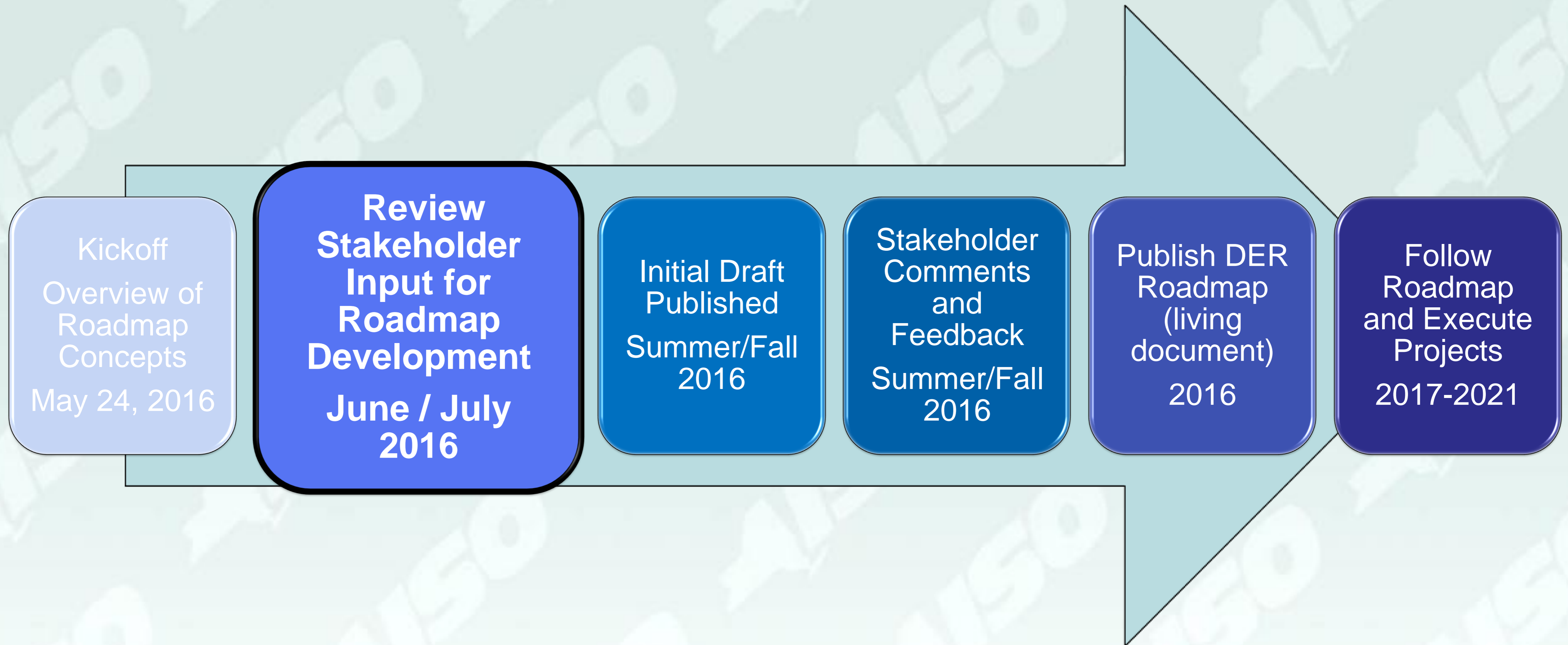
Background

- **Technology advancements and market interest is increasing for Distributed Energy Resources (DER)**
- **NYS PSC REV initiative is stimulating discussion on how DERs will participate in wholesale market**
- **Roadmap and subsequent design aligned with NYS REV, FERC Orders 719 and 745**

Initiative Scope

- **Roadmap for next 3-5 years for integration of DER and evolutionary changes current Demand Response Programs**
- **A 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*

DER Roadmap Development Process



Key Objectives

- **Integrate DERs into energy markets**
 - *Ability for real time scheduling*
 - *Minimize out of market actions*
- **Align with goals of NYS REV**
- **Measurement and Verification**
- **Align payments with performance**
- **Focus on wholesale market**

Feedback

- **Rules for DER participation in NYISO-administered wholesale markets should be:**
 - *Technology agnostic - (4 of 7)*
 - *Broad and focus-on NYISO system needs - (4 of 7)*
 - *Flexible to accommodate future technologies and innovation - (3 of 7)*
 - *Focused on high value market changes and promote resource diversity - (3 of 7)*

Feedback continued

- **NYISO interaction with DSOs needs careful consideration to avoid conflicting DER dispatch / operational requirements - (2 of 7)**
- **NYISO should evaluate recent market design activities and lessons learned from other markets such as CAISO and others (2 of 7)**
- **Existing NYISO market rules related to energy storage should be evaluated in parallel (or as part of) DER Roadmap – (2 of 7)**
- **DERs should be permitted to participate in both the wholesale and retail markets, if the system needs (transmission/distribution) for which the DER is used are different and not conflicting (2 of 7)**

Feedback continued

- **Roadmap should discuss how**
 - *Intermittent resources may participate as a DER - (2 of 7)*
 - *Distribution Grid connected resources may participate as a DER - (2 of 7)*
- **Allowing aggregations of DERs is important**
- **Roadmap should describe**
 - *potential resource size and duration limits*
 - *include options for limited run-time resources of various durations*
 - **Value of limited run time resources should be based on their comparable benefits under peak conditions**

Feedback continued

- **Standardize methodology for measurement and verification**
 - *CBL methodology preferable to ACL methodology*
- **Consider relaxing the \$75/MWhr offer floor for Energy as it applies to DERs**
- **Include flexible communication / telemetry requirements while incorporating appropriate cyber security standards**
- **Single program that allows dispatchable resources to provide Energy, Ancillary Services, and Capacity is a positive**

Feedback continued

- **Leverage existing market applications and proposed projects to support and enable DER participation**
- **NYISO should spend as much upfront time as is necessary to develop a thorough, stakeholder-supported document**
- **NYISO should explain how it will determine the value of DERs to the wholesale Market**

Feedback continued

- **DER Roadmap should:**
 - *be a living document and include periodic review and update*
 - *offer some detail on timeline for rule development and implementation over the next 3-5 years*
- **NYISO should consider revising current BTM:NG Resource market rules to allow multiple resource types to aggregate as a single BTM:NG Resource**
- **Market Rules should allow net injections by DERs**

Feedback continued

- **Consider names other than Distributed Energy Resource Program (DERP)**
 - *NYISO is soliciting suggestions for renaming this initiative*

DER Roadmap Development and Input

- **Additional comments welcome throughout process**
- **Please provide suggestions on naming the initiative by July 15th**
- **Draft DER Roadmap to be released summer/fall**
- **DER Workshop, following publication of draft 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***