Platform Technology Working Group
Draft Outline
May 20, 2014

Overall objective: Identify infrastructure needed to enable the DSPP to integrate, monitor and control DER in real time while ensuring system reliability, increasing system resilience and efficiency, maintaining system security, maximizing energy efficiency, promoting fuel diversity, and empowering customer choice and third party participation in newly-formed markets.

Guiding Principles:

- Promote greater penetration and integration of DER to support system efficiency
- Ensure continued system reliability, resilience, safety and security
- Encourage open system architectures to maximize customer and third party participation
- Promote standardization of the interfaces to the DSPP platform standardization across utility service areas
- Achieve desired functionality while minimizing costs
- Maximize system benefits with consideration of stranded costs
- Employ scalable and flexible technologies

Identify Functionalities Needed: (subject to further discussion via sub-team formed on 5-14-14)

- Bi-directional power flows
- Real time communications and control
- Real time balancing of DER
- Maximize system efficiencies and market participation
- Preserve system reliability
- Preserve system security against cyber threats
- Increase system resiliency
- Interoperability between DSPPs and the NYISO
- Data management including data analytics, measurements and metrics services

Survey Existing Utility Distribution Systems and Capabilities

- Identify existing utility distribution systems and capabilities.
- Describe what current systems and methods are being employed to handle increases in DER.

Survey of standards/protocols

- Identify relevant industry standards and protocols applicable to distribution systems, including efforts related to increased DER penetration.

Survey of technologies available to achieve needed functionalities

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- Identify technologies, both hardware and software, available to achieve functionalities needed for DSPP.
- Identify characteristics of technologies including (1) cost; (2) ability to achieve desired functionalities; (3) compatibility with existing infrastructure; (4) flexibility/upgradability; (5) interoperability; (6) security.

Topic Areas:

Commonality and/or interoperability among service territories, DSPPs, and NYISO

- What, if any, standard protocols and/or requirements should be considered to enable customer and third party access to multiple DSPPs platforms?
- What, if any, standard protocols and/or requirements should be considered to facilitate data accuracy and information transparency between the DSPP and the ISO?

Communications Infrastructure

- What communications infrastructure and approaches are needed for the DSPP to balance supply with load in real time, and forecast load and dispatch resources in near-real time?
- What communications networks are needed to support the integrated grid?
- How will the DSPP protect cyber security of the integrated distribution system?

Distribution Management Systems

- What system infrastructure and approaches will be needed for the DSPP to:
  - serve as the local balancing authority?
  - forecast load and dispatch resources in real time to meet customer needs?
  - balance supply with load in real time to maintain reliability?
- What system infrastructure and approaches will be needed to allow the DSPP to model and control customer-sited DER?
- Should the planning and development of advanced distribution management systems be completed in phases?
- What back side utility system operation programs and controls will be needed?

Data Management

- What data, including data analytics, measurements and metrics services will be necessary to enable new markets and facilitate customer engagement and third-party participation?
- What infrastructure and approaches will be necessary to capture and disseminate data to market participants?

Implementation

- How could the implementation of the functionalities of the DSPP be staged?

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- What is a reasonable and realistic sequence?

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