



The Distributed Systems Platform

Thoughts from New York REV

PNNL Valuation of Transactive Energy Systems

July 7, 2015

BRIDGE's work in New York REV

- Ongoing support for the Joint Utilities
 - Central Hudson Gas & Electric
 - Consolidate Edison Company of New York
 - Iberdrola USA
 - National Grid
- Platform Technology Working Group

Reforming the Energy Vision in New York



“This initiative aims to align electric utility practices and our regulatory paradigm with technological advances in information management and power generation and distribution.”

State of New York Public Service Commission

New York Policy Objectives

- Customer knowledge and tools that support effective management of their total energy bill
- Market animation and leverage of ratepayer contributions already made
- System wide efficiency
- Fuel and resource diversity
- System reliability and resiliency
- Reduction of carbon emissions

Key Capabilities



Customer
Empowerment



Intelligent Load
Management



DER
Integration



Integrated
Planning



Market
Enablement



Distributed Systems Platform (DSP)

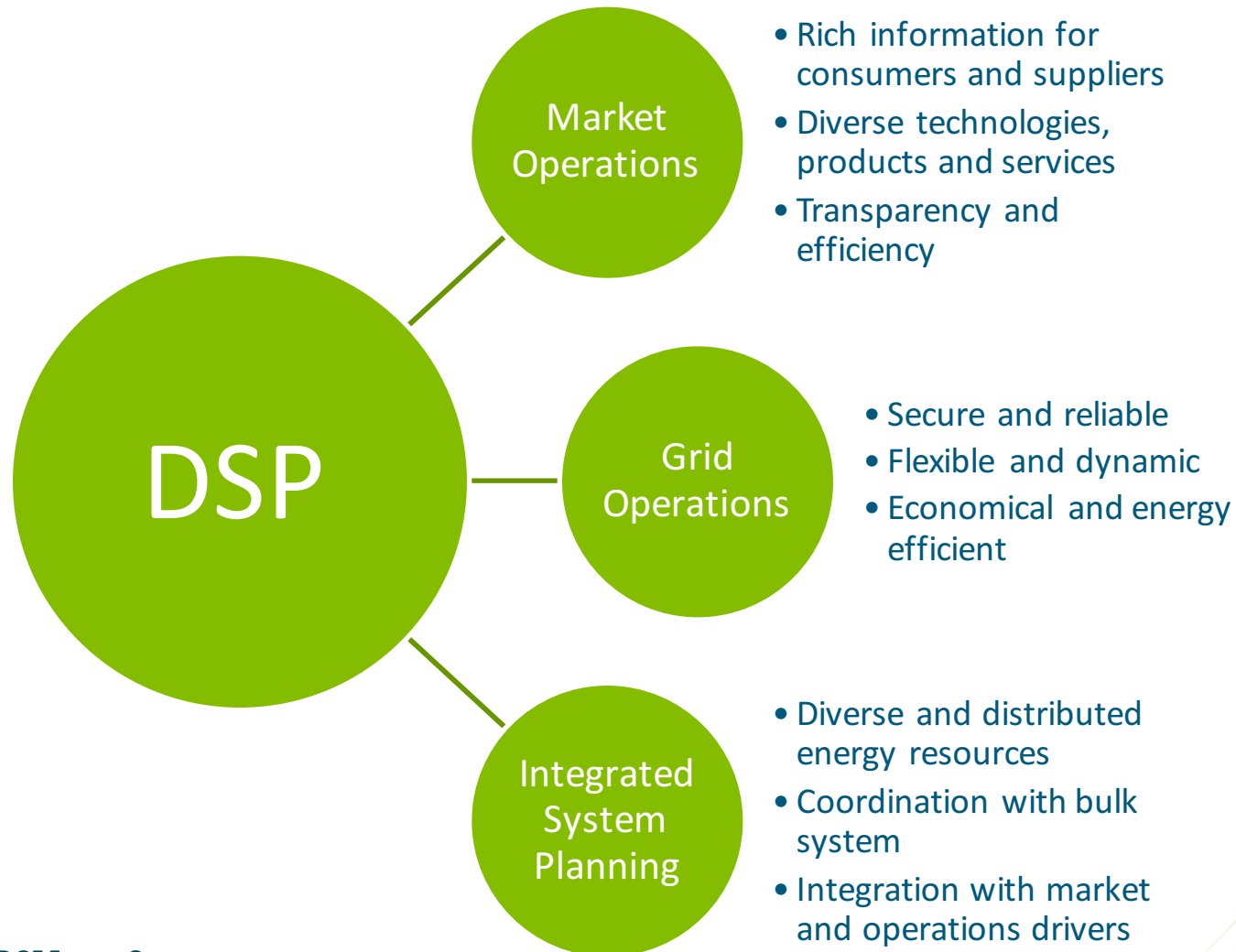
“The DSP is an intelligent network platform that will provide safe, reliable and efficient electric services by integrating diverse resources to meet customers’ and society’s evolving needs. The DSP fosters broad market activity that monetizes system and social values, by enabling active customer and third party engagement that is aligned with the wholesale market and bulk power system.”

*DPS Staff Straw Proposal
August 22, 2014*



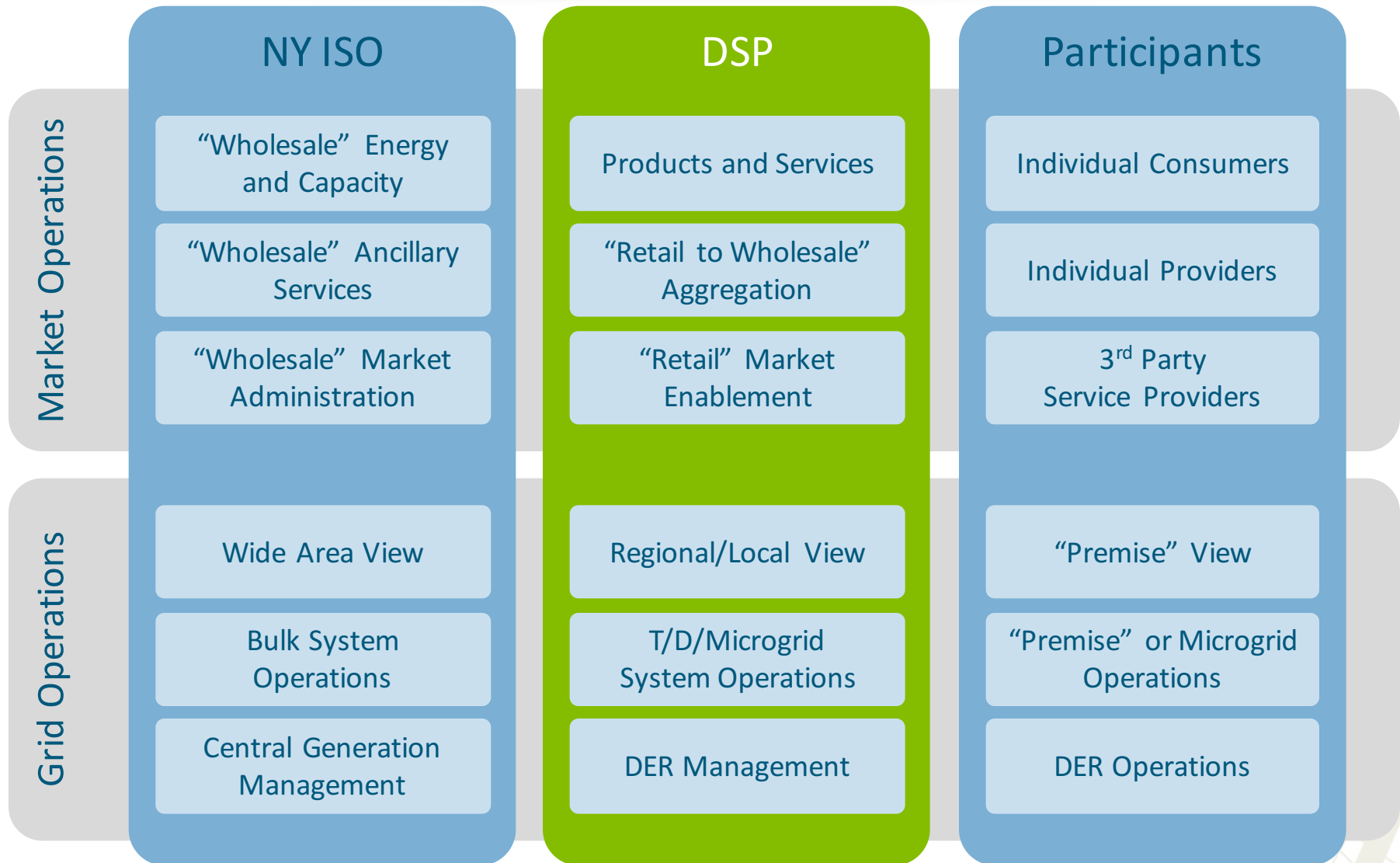
Source: BRIDGE Energy Group

DSP Requirements by Domain



Source: BRIDGE Energy Group

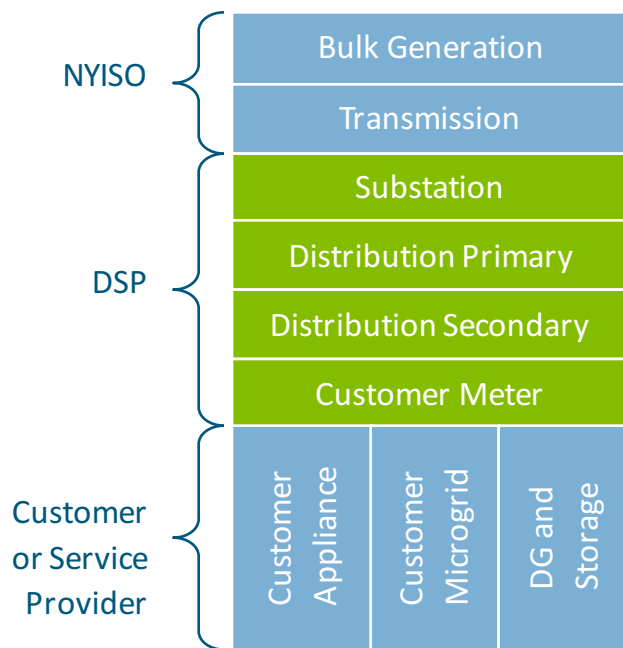
Market and Grid Operations



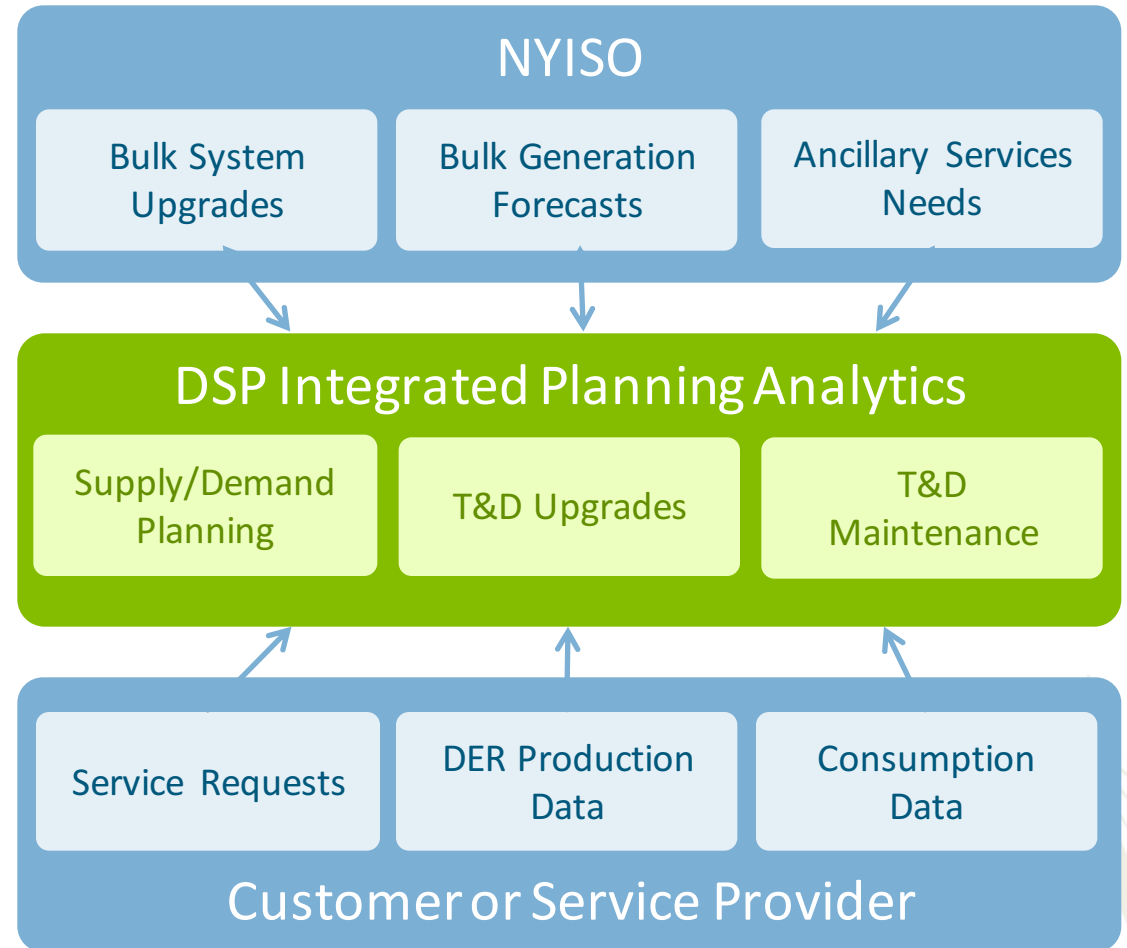
Source: BRIDGE Energy Group

Integrated System Planning

Electric Network Levels



Integrated System Planning



Source: BRIDGE Energy Group

Value and Required Information

Value we want

- Lower energy costs for customers
- Less wasted energy
- Better reliability and resilience
- Lower environmental impact
- Better utilization of grid infrastructure

Information we need

- Voltage, current, consumption and production data throughout the distribution system
- Distribution hosting capacity
- DER penetration forecasts
- Dynamic DER production forecasts
- Parametric values of DER by type and location
- Locational pricing

Contact

Forrest Small

Vice President, Grid Optimization Strategy

BRIDGE Energy Group

603.475.4460

FSmall@BridgeEnergyGroup.com

www.BridgeEnergyGroup.com

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