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# Distribution Planning: What's Going On? New York: Reforming the Energy Vision

Presented to the Mid-Atlantic Distributed Resources  
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# Regulatory Assistance Project (RAP)

RAP is a global, non-profit team of experts focused on the long-term economic and environmental sustainability of the power sector.

We provide assistance to government officials on a broad range of energy and environmental issues.

# New York's Reforming Energy Vision (REV)

- Comprehensive look to the future
- Big picture: DER, RES, carbon reduction,
- Focus on consumers -- active load, DER & DG
- Launched April 2014, Track 1 order released Feb 2015 (on roles of wires companies, 3<sup>rd</sup> parties, consumers, and generators)
  - Regulated utility will become a Distributed System Platform Provider, with limited roles w/ end users
  - Generation: open to competition
  - Customer services (eg, energy mgt, DR, PV) open to new entrants
- Track 2 – regulatory reforms – staff proposal due early summer
- Rocky Mountain Institute and the Regulatory Assistance Project provided assistance to the NYDPS on REV

See New York State, Reforming the Energy Vision webpage at:

<http://www3.dps.ny.gov/W/PSCWeb.nsf/All/26BE8A93967E604785257CC40066B91A?OpenDocument>

# Business-As-Usual is No Longer an Acceptable Option for New Yorkers

## CHALLENGES:

- Aging infrastructure and rising costs
- Poor system efficiency
- Flat load growth
- Climate change

## OPPORTUNITIES:

- Rapidly falling technology costs
- Rise of the digital economy and new capabilities from IT
- Proliferation of new business models to create customer value

*Historical regulatory approach and utility business models are not well adapted to address challenges and capture opportunities*



# From the REV Policy Order:

*“Utilities, and this Commission, could respond to [the challenges facing the industry] by clinging to the traditional business model for as long as possible, relying on protective tariffs, regulatory delay, and other defenses against innovation.*

*Alternatively, we can identify and build regulatory, utility, and market models that create new value for consumers and support market entrants and this new form of intermodal competition—in other words, embrace the changes that are shaking the traditional system and turn them to New York’s economic and environmental advantage.*

*We decisively take the latter approach.”*



# REV's Objectives & Principles

# Policy Objectives of NY REV

**In the face of these trends, the PSC has set out several policy objectives for the future of NY's electricity system**



- Enhanced customer knowledge and tools to support bill management
- Market animation and leverage of customer contributions
- System wide efficiency
- Fuel and resource diversity
- System reliability and resiliency
- Reduction of carbon emissions

# Key Principles of NY REV

**Five core principles should guide future decision-making to achieve the PSC's policy objectives**



- Collaboration
- Transparency
- Standardization
- Non-discrimination
- Action-orientation

# The Times They are a Changing

**In implementing REV, the statutory responsibility of the PSC is not changing, but several aspects of how it implements that responsibility are**

## **WHAT'S NOT CHANGING:**

- Physics of the grid
- Commitment to reliability
- Commitment to affordability
- Commitment to customers
- Commitment to the environment
- Commitment to universal service

## **WHAT IS CHANGING:**

- Vision of how the grid operates
- Role of the utility as integrator
- Demand as an integral resource in managing the grid
- DER providers as utility customers and partners
- Regulation to align utility business model with REV's objectives



# REV's Major Elements

# Foundational Building Blocks of REV

1. Establishing the Distributed System Platform (DSP)
2. Engaging customers
3. Animating the market
4. Meeting environmental objectives
5. Reforming regulation & rate-making

# Establishment of a Distributed System Platform

DSP	DSP Responsibilities	DSP Provider
<ul style="list-style-type: none"><li>• Intelligent network platform</li><li>• Obligation and incentive to support DER</li><li>• DER providers as customers and partners</li><li>• Fair, open, and transparent <u>transactive</u> markets</li></ul>	<ul style="list-style-type: none"><li>• Integrated system planning</li><li>• Grid operations</li><li>• Market operations, structure &amp; products</li></ul>	<ul style="list-style-type: none"><li>• Utilities will be the DSP providers</li><li>• Represents an expansion of existing obligation</li><li>• Will be supported through Track 2 business model changes</li></ul>

# Engaging Customers

- Create a vibrant digital marketplace (e.g., Amazon for power products) to inform and transact
- Support low and moderate income customers
- Ease interconnection
- Increase the informational value of customer bills
- Implement key customer protections

# Animating the Market

**Goal: create market confidence and build the DER asset base in the near-term**

System Data	Market Power	Early Actions
<ul style="list-style-type: none"><li>• DSIPs will provide system planning information</li><li>• DSP will provide system data at granularity and timeliness appropriate for market</li><li>• Utilities can charge fees for value-added data analysis</li></ul>	<ul style="list-style-type: none"><li>• Utilities cannot own DERs except in very limited cases</li><li>• Consider functional separation</li><li>• PSC monitoring &amp; recourse</li><li>• Create market oversight committee</li></ul>	<ul style="list-style-type: none"><li>• Demand response tariffs</li><li>• Demonstration projects</li></ul>

# Meeting Environmental Objectives

## **Energy efficiency**

- Goal is to create a framework for investment in clean DER
- 2015 targets are a minimum for 2016
- Increased flexibility and responsibility for utilities
- Focus on market transformation curve
- REV best practices guide to be created

## **Large-scale renewable energy**

- New REV track (LSR track) to create options paper by June 1

# Reforming Regulation (No Decision Yet)

**Goal: align utility regulation with REV's objectives**

## **New Revenue Model**

- Align interests among market participants
- Shift cost recovery burden away from captive customers
- Enable utilities to respond to evolving markets and opportunities

## **New Performance-Based Outcomes & Metrics**

- New Earnings Impact Mechanisms (EIMs)
- Reconsideration of how to implement EIMs

## **New Rate Designs**

- Align pricing to better reflect value
- Revise commodity mechanisms, delivery charges, and standby rates



# What is the DSP and what will it do?

# Role of DSP

## The Distributed System Platform (DSP) will create a market for distributed energy resources

*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.*

From Order Adopting Regulatory Policy Framework and Implementation Plan, Issued February 26, 2015

## **Creating the DSP implies several different approaches and perspectives need to be taken:**

- DERs seen as an integral system resource
- DSPs obligated and incentivized to support use of DERs
- DER providers are customers and partners, not competitors
- Shift to a transactive relationship where both the DSP and DER providers/customers are compensated for the value they provide
- Fair, transparent, and open markets

# The Role of the DSP

**The DSP provides functionality in addition to that already provided by the distribution utility**

## **Integrated System Planning**

- Continued responsibility for distribution system planning
- Must be transparent to support identification of DER alternatives
- Distributed System Implementation Plans (DSIPs) as planning mechanism

## **Grid Operations**

- Integrate DERs into delivery system to optimize operations
- DERs used on “blue sky” days, not just significant system events
- Platform technology needed to manage the system to be defined

## **Market Operations**

- Transact a variety of products & services that value the attributes of all types of resources
- Market will likely evolve from RFPs and tariffs to auction approaches
- Need for a standardized market across the state so user experience is consistent



# Who will be the DSP provider?

# New York's Distribution Utilities Will Serve as DSPs

## PROS:

- DSP functionality is an expansion of existing utility responsibility
- Solidifies DERs as a core part of the system
- Speed of implementation
- Supports goal of changing utilities' motivations and business value proposition
- Better supports integrated operations
- Utility has superior knowledge of real time system conditions

## CONS:

- Historical reluctance of utilities to embrace DERs
- Utilities do not currently have experience of skill sets around DERs and DER markets
- Utilities may exercise market power in their own interests and suppress innovation

*“Requiring the utilities to serve as DSPs under our regulatory authority and supervision is in the best interests of New York consumers.”*

# Adding DSP Functionality Has Significant Implications for Utilities

- **Open not closed** - Mindset shift towards transparency and integrated system optimization
- **Customers not competitors** - DER providers as customers and partners
- **Outcomes not costs** - Success requires fundamental changes to the regulatory model to change utility behavior
- **Proof in performance** - Options to allow other entities to serve as DSP may be considered if DSPs fail to meet REV's objectives
- **Need to gain experience and add new skill sets**

# Managing Market Power

**The Commission must establish clear expectations and monitor performance to create market confidence**

1. <b>Utilities cannot own DERs</b> where a market participant can and will provide those services	4. The Commission will develop an expedited <b>dispute resolution mechanism</b>
2. Basic ratemaking reforms will center utility <b>earning opportunities on success of REV markets</b>	5. Consider <b>functional separation</b> of DSP from standard utility operations
3. Utilities' performance will be <b>closely monitored</b> by the Commission	6. If utilities fail to meet REV's objectives, <b>allow other entities to serve the DSP function</b>

# Utility DER Ownership Could Undermine Markets Rather Than Accelerate Market Growth

General rule: Utility ownership of DER will not be allowed unless markets have had an opportunity to provide a service and have failed to do so in a cost-effective manner

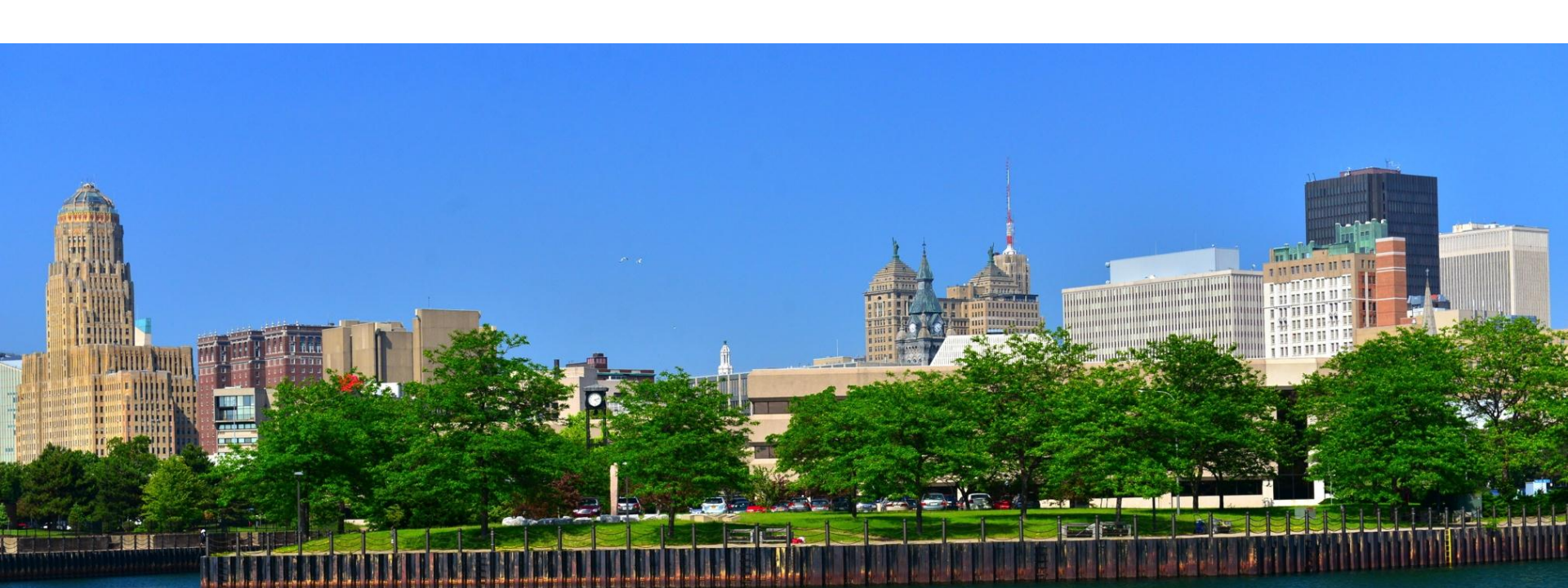
## **EXCEPTIONS:**

1. Energy storage on utility property that is directly integrated into distribution service
2. Where there does not appear to be a developing market for DER and public interest warrants utility investment, such as for low or moderate income customers
3. Demonstration projects

# More Effectively Engaging Customers is the Linchpin of REV

- Increase the educational value of customer bills
- Enable aggregators
- Understand & reflect different customer needs
- Create a vibrant digital marketplace
- Others?





# What does it take to animate the market?

# Customer and System Data Must be Made Transparent While at the Same Time Maintaining Security

## **CUSTOMER DATA:**

- Provided on an opt-in basis via the digital DER marketplace
- Allows DER providers to tailor service offerings to meet customer preferences
- Must maintain customer privacy

## **SYSTEM DATA:**

- System planning information provided in DSIPs
- Other system data must be made available at a degree of granularity and timeliness consistent with the market it operates
- Must be consistent with data security standards
- Further clarification to be provided by the MDPT working group
- Key electric infrastructure information to be kept confidential

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## About RAP

The Regulatory Assistance Project (RAP) is a global, non-profit team of experts that focuses on the long-term economic and environmental sustainability of the power and natural gas sectors. RAP has deep expertise in regulatory and market policies that:

- Promote economic efficiency
- Protect the environment
- Ensure system reliability
- Allocate system benefits fairly among all consumers

Learn more about RAP at [www.raonline.org](http://www.raonline.org)

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