

## NEW YORK'S "REFORMING THE ENERGY VISION" (REV): REGULATORY POLICY FRAMEWORK AND IMPLEMENTATION PLAN

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### SIX OBJECTIVES, TWO TRACKS

New York's Public Service Commission (PSC) initiated a public proceeding for its "Reforming the Energy Vision" (REV) initiative and identified six policy objectives:

1. enhanced customer knowledge and tools for bill management;
2. developing robust, sustainable markets and benefiting ratepayers;
3. system-wide efficiency;
4. fuel and resource diversity;
5. system reliability and resiliency; and
6. reduction of carbon emissions.

The REV proceeding has two tracks. Track 1 examines the role of utilities (the order summarized in this report is part of Track 1).

Track 2 examines changes to incentive structures and regulatory, tariff, and market designs, including ratemaking.

### ISSUE

This report summarizes [the regulatory policy framework and implementation plan](#) ordered by New York's Public Service Commission (PSC) as part of its "Reforming the Energy Vision" (REV) proceeding, the state's recent initiative to reform its energy industry and regulatory practices.

### SUMMARY

PSC's order on the regulatory policy framework and implementation plan adopts a model in which utilities act as distributed system platforms (DSP) that, among other things, compensate distributed energy resource (DER) providers and their customers for the value they provide to the grid. The order convenes additional working groups and orders several existing groups to continue work. It also adopts guidelines to govern market design and issues several other orders related to, among other things:

1. utility planning requirements (Distributed System Implementation Plans),
2. utility ownership of DER, and
3. transition from existing utility energy efficiency programs.

## **HISTORICAL AND CURRENT CONTEXT**

New York's regulatory framework for electricity is similar in some ways to Connecticut's. The state's electric utilities generated, transmitted, and delivered power until the 1990s, when the state restructured the industry by deregulating the supply sector, allowing retail suppliers to compete. The utilities continue to provide distribution services as a regulated monopoly.

In 2013, PSC announced it would begin work to reform retail and wholesale electricity market designs. In April 2014, PSC initiated a public proceeding to examine and evaluate regulatory reforms and ordered that it take place on two tracks:

1. Track One to examine the role of distribution utilities in creating or facilitating a market for DER to promote system efficiency and load management (i.e., methods to reduce power demand at peak load times or to shift some of it to off-peak times); and
2. Track Two to consider changes in regulatory, tariff, and market designs and incentive structures that would better align utility interests with REV policy objectives.

PSC argues that the current regulatory system emphasizes capital use (i.e., utilities charge rates largely based on their capital costs) and, in this context, distributed energy (e.g., solar panels) competes with utilities because it supplies and delivers power. PSC states that the utilities' behavior, which sometimes does not embrace DER, is a response to the regulatory structure, and reforms to the regulatory model will change utility behavior.

This report summarizes the PSC order that adopts the regulatory policy framework and implementation plan as part of the REV proceeding and includes its major provisions. The order largely concerns work completed on Track One of the REV proceeding.

## **DISTRIBUTED ENERGY RESOURCES (DER)**

The order defines DER as resources typically located on customer premises but they may also be located on distribution system facilities (i.e., utility facilities). Among other things, they include:

1. end-use energy efficiency (e.g., products that use less energy);

2. demand response (e.g., load management programs in which customers agree to limit their demand for electricity within a specified period and are paid for doing so at rates that may depend on how quickly they can respond);
3. distributed storage, which includes various methods of storing electricity (e.g., distributed batteries, batteries providing backup power, and thermal storage); and
4. distributed generation, including combined heat and power and distributed renewable energy (e.g., solar panels).

## **DISTRIBUTED SYSTEM PLATFORM**

### ***Definition***

In its order, the PSC adopts a Distributed System Platforms (DSP) model, which the staff proposal defines as an intelligent network platform that (1) provides safe, reliable, and efficient electric services by integrating diverse resources to meet customer's and society's evolving needs, and (2) fosters broad market activity by (a) including system and social values in product pricing and (b) aligning customer and third party participation in the retail market with the wholesale market and bulk power system.

Under this model, the DSP (1) offers services such as information, interconnection, or dispatch services at prices and terms regulated by the PSC and (2) compensates DER providers and their customers for the value they provide to the grid. The order states that the DSP market structure must exchange DER services in fair and open markets.

### ***PSC Orders on DSPs***

***Working Groups.*** As part of its adoption of the DSP model, PSC ordered its staff to continue a stakeholder process to identify necessary functional and business architecture for the DSP and DSP markets. An existing group, the Market Design and Platform Technology group, must issue a report by July 1, 2015. PSC also formed several new working groups:

1. a market and tariff development group to continue market design efforts and develop DSP offerings;
2. a contract group to advise on standardized contracts for DSP markets and interconnections;

3. a technology group, to address communication signaling and protocols, interoperability, and conjunction with Independent System Operator (ISO) standards, which govern the bulk or wholesale power market; and
4. a market group to address (a) near, middle, and long term market mechanisms; (b) planning and real-time data and information needed by DER providers and DSPs; (c) DER scheduling requirements; (d) DER product measurement and verification; (e) settlement protocols (i.e., matching purchases to sales); (f) data security; (g) services provided by DERs and DSPs; (h) ISO interface; and (i) product and price standardization.

**Additional Orders.** During the proceeding, some participants cautioned that energy, capacity, or other services purchased by DSPs that are either repackaged for sale in ISO markets or resold directly to utility customers could trigger jurisdiction of the Federal Energy Regulatory Commission (FERC) over DSP activities. The PSC ordered that utilities not purchase power in a way that would trigger FERC jurisdiction.

Proceeding participants also expressed concern that encouraging distributed generation could result in concentrating emissions from these resources in urban areas. The PSC directed its staff to cooperate with New York's Department of Environment Conservation to develop rules to avoid or mitigate harmful local emissions.

**Guidelines.** The PSC adopted the following guidelines to govern market design:

1. transparency, through timely and consistent access to relevant information by market actors, as well as public visibility of market design and performance;
2. uniformity, through uniform, statewide market rules and technology standards to encourage liquidity and participation;
3. customer protection, by balancing market innovations and participation with customer protections;
4. customer benefits, by reducing volatility and system costs and promoting bill management and choice;
5. minimizing market power of DSPs by developing procurement tariffs;
6. reliable service, through maintaining and improving service quality, including reduced outage frequency and duration;
7. resilient systems, through enhancing their ability to withstand unforeseen shocks without major detriment to social needs;

8. fair and open competition, by designing “level playing field” incentives and policies;
9. minimum barriers to entry, by reducing data, physical, financial, and regulatory barriers to participation;
10. flexibility, diversity of choice, and innovation, by promoting diverse products and program options with financing mechanisms that increase their value;
11. fair valuation of benefits and costs, including broad assessments and societal analyses with credible monitoring and verifications;
12. coordination with wholesale markets, through aligning DSP market operations and products with the wholesale market to reflect the full value of services;
13. economic and system efficiency, by promoting investments and market activity that provide the greatest societal values;
14. avoidance or mitigation of emissions, through PSC policies considering the local impacts of distributed generation and emission regulations; and
15. consistency with regulatory objectives and requirements by keeping market design under PSC’s jurisdiction to the extent possible to avoid overlapping regulatory regimes.

## **UTILITIES AS DSP**

While some proceeding participants argued that other entities (e.g., an independent non-profit organization) should serve as DSPs, PSC concluded that requiring utilities to serve as DSPs under its regulatory authority and supervision is in the best interests of New York’s consumers. The PSC argues that expanding the role of utilities to include DSP functions will encourage them to embrace DER through regulatory requirements and economic incentives.

### ***PSC Orders on Utilities as DSPs***

Proceeding participants expressed concerns that utilities as DSPs will exercise market power for their own interests and suppress innovation at the expense of customers and market participants. In response, PSC ordered the following:

1. utilities will not participate as DER owners in a market where others will provide DER services, and DER will remain a non-utility service provided by the competitive market;

2. ratemaking changes (considered on Track 2 of the REV proceeding) will reward utilities for outcomes that benefit customers and are aligned with REV policy objectives, and utilities' earnings will depend on the success of REV markets rather than increasing their investment base;
3. PSC will closely monitor the utilities' performance as DSPs, with PSC staff in regular contact with market participants, consumer advocates, and other stakeholders;
4. PSC will develop a dispute resolution mechanism to expedite review and action on activities that deter DER investments;
5. the Market Design and Platform Technology group will examine whether specific functions of the DSPs could or should be separated from utilities; and
6. PSC will consider options to allow other entities to serve as DSPs if the utilities fail to meet REV objectives.

### ***Distributed System Implementation Plan (DSIP)***

Currently, each utility annually files with PSC a five-year capital plan that includes the utility's plans to meet system needs. Under the REV framework, utilities will file a DSIP as a multiyear implementation plan that includes system planning information to allow service providers and customers to develop products and marketing plans to meet system needs with DER services. The utilities will file DSIPs with PSC and update them annually. PSC requires use of transparent assumptions and methodologies in the DSIP and that its results are publically available, subject to security protections. According to the PSC, the contents of the DSIP will depend on staff guidance and stakeholder efforts, but will at least include:

1. actual and forecast system loads;
2. capital spending projections specific enough to inform market planning and participation by third parties;
3. actual and forecast levels of DER including detailed analysis of those system needs DER may be able to meet;
4. plans for encouraging market development of DER;
5. plans for increasing DER deployment in underserved markets;
6. specific plans including cost estimates for building DSP capabilities; and
7. a description of the internal organization of DSP and traditional utility functions.

PSC ordered its staff, in consultation with utilities and other parties, to issue detailed guidance on DSIP content by the later of August 3, 2015, or 30 days after the report of the relevant stakeholder group. It also ordered utilities to file their initial DSIPs by December 15, 2015.

## **OTHER DSP ISSUES**

### ***Information and Customer Engagement***

**System Data.** PSC required utilities to provide system information to markets through both the DSIP process and by releasing system data in a timely manner to facilitate market participation. The Market Design and Platform Technology working group must develop details on the types of data required and the timelines for its release. The PSC ordered that any utility that withholds information beyond existing standards to maintain security and protect critical infrastructure must file that information with PSC, along with a justification for treating it as confidential.

**Customer Requirements, Product and Price Information.** PSC directed its staff to consult with utilities, energy service companies (ESCOs), DER providers, and other experts to explore how to design, own, and operate a platform to facilitate sales of DER or other services to a customer. Generally, ESCOs are companies that develop projects and services related to energy efficiency, including performance contracting.

**Billing.** PSC directed its staff to (1) consult with utilities, ESCOs, DER providers, and consumer advocates to develop a proposal to increase the informational value of energy bills to enhance customer engagement in decisions on energy purchase and use, and (2) collaborate with utilities, ESCOs, and other parties to investigate and evaluate how to construct consolidated ESCO billing (CEB) consistent with PSC rules and regulations. CEB allows for customer-specific messages on utility bills and may also allow ESCOs to use a portion of the utility bill to promote DER products. PSC staff must report on both billing initiatives by September 1, 2015.

### ***Utility Engagement in DER***

**Permissible Circumstances.** Proceeding participants expressed concern that utilities could exercise excessive market power if they owned DER. PSC stated that in the limited situations in which it will permit utilities to own DER, it will restrict the utilities to recovering only their actual costs. PSC will allow utilities to own DER:

1. when procurement of DER has been solicited to meet a system need and the utility demonstrates that competitive alternatives are inadequate or costly,

2. for an energy storage project integrated into the utility's distribution system,
3. for a project to enable low- or moderate-income residential customers to benefit from DER where markets are not likely to satisfy that need, or
4. for demonstration projects.

**Consumer Protections.** PSC stated that the market will not use bid-based auctions at first but instead rely on tariffs, which PSC argues will protect customers against market power abuses. PSC also required utilities to hire independent experts who will monitor utility procurements and report to PSC staff. Finally, PSC directed its staff to initiate, by April 1, 2015, a process to address and refine utility and affiliate codes of conduct to prevent misuse of inside information.

### ***Utility Energy Efficiency Programs***

The utilities currently implement energy efficiency programs funded by a dedicated surcharge on customer bills. The programs, implemented through the Energy Efficiency Portfolio Standard (EEPS), have efficiency targets and have not generally been integrated into utilities' distribution level planning functions.

PSC notes that the EEPS program will continue for 2015, but in 2016 utilities must design new energy efficiency programs using market-based approaches. PSC states that such programs will be integrated into utilities' businesses and the utilities will recover their costs through rates like other revenue components, rather than funding the programs through surcharges.

PSC directed its staff to develop a REV Energy Best Practices Guide and file an initial version by February 1, 2016. It also required the utilities to implement a program that would allow large commercial and industrial customers to fund their own energy management efforts with funds that would otherwise support the utility's portfolio of energy efficiency programs. The program would also allow utilities to claim the customers' energy savings toward the utilities' goals. The utilities must include the program in their energy portfolios by January 1, 2017.

PSC issued a number of orders regarding the transition from surcharge-supported efficiency programs to market-based programs, including establishing a three-year rolling cycle for its approval of energy efficiency funding and directing utilities to submit Efficiency Transition Implementation Plans. PSC directed staff, the utilities, and the New York State Energy Research and Development Authority (NYSERDA) to develop guidance on the transition plans, which must at least require:

1. information on energy efficiency programs and initiatives proposed for implementation during a three-year program period;
2. a plan and schedule for evaluation, measurement, and verification; and
3. an analysis of the benefits and costs of each program and the entire portfolio.

### ***Large-Scale Renewable Resources***

The PSC stated that, while customer-side solar investment is growing, grid-scale renewable resources must also be developed to diversify the energy supply mix, hedge the volatility of fossil fuel prices, and decrease greenhouse gas emissions. The PSC instituted a REV large-scale renewables track in which PSC staff must prepare and issue a paper for public comment by June 1, 2015.

### ***Low- and Moderate-Income Customers***

In addition to several ongoing proceedings, PSC:

1. will permit utilities to partner with community groups or invest directly in DER projects on the premises of low- and moderate-income customers;
2. will subject DER providers, if they participate in data access platforms or DSP markets, to consumer protection rules to prevent abuses;
3. declared a policy of maintaining energy efficiency programs for low-income customers where market participation is not available;
4. requires measures to avoid or mitigate potentially harmful emission concentrations in environmental justice areas; and
5. directed its Office of Consumer Services to coordinate with the Consumer Advisory Council to provide direct input related to REV implementation, integrated with other regulatory matters pertaining to low- and moderate-income customers in particular and mass-market customers in general.

### ***Interconnection***

PSC argued that in order for distributed generation to be competitive, there must be safe, expeditious, and efficient technical rules and processes to connect it to the grid. According to the order, PSC already established standardized requirements for connecting distributed generation projects of two megawatts or less to the grid. PSC intends to require improvement in utilities' ability to process applications and perform various technical analyses related to approving connections to the grid in two phases. Phase one will focus on streamlining approval processes for small

distributed generation projects (e.g., residential solar) and phase two will focus comprehensively on integrating interconnection processes into system planning and operations.

In the order, PSC directed its contract working group to develop standardized contract terms for projects that do not presently have such terms. It also directed its staff to initiate a process to extend the threshold for New York's standardized interconnection requirements to five megawatts.

PSC also intends to address linking the utilities' earning potential to the timeliness and frequency of successful interconnections in Track Two of the REV proceeding. It also stated that following the implementation of reforms in this order, the PSC will institute a formal review to determine needed additional measures to achieve standardized, predictable, and efficient interconnection practices.

### ***Platform, Communication, and Metering Technology***

Generally, PSC (1) endorsed the list of DSP functions adopted by the working groups, which include dynamic pricing, dynamic electricity consumption and production forecasting, and historical DER performance monitoring and (2) directed the working group to continue.

While PSC stated that some form of advanced metering would be needed to implement REV, it did not choose a specific technology. It directed the Market Design and Platform Technology group to provide a detailed description of the advanced metering features necessary for DSP markets and directed staff to incorporate this effort into its guidance on DSIPs.

### ***Security***

PSC refrained from adopting or developing a set of cyber security standards specific to New York and instead announced it would continue to require utilities to demonstrate that they have staff and organizational structures commensurate with the threat of cyber-attacks.

## **CONSUMER PROTECTIONS**

PSC determined that DER providers are electric corporations and therefore subject to PSC's jurisdiction, but not subject to rate regulation. Therefore, PSC will not regulate all transactions involving DER providers, but only (1) the sale of DER services on DSP markets and (2) transactions that acquire customer data by means established under PSC's authority. PSC stated that its supervision of DER providers will at least include certification of any provider (1) requesting consumer data or (2)

selling services through the DSP. PSC directed its staff to develop additional requirements and propose a rule for public comment by July 1, 2015.

## **MICROGRIDS**

A “microgrid” generally refers to a group of interconnected loads and DER with clearly defined electrical boundaries that acts as a single controllable entity with respect to the grid. It can connect and disconnect from the grid to operate in grid-connected or island mode.

In the order, PSC discussed existing regulation for microgrids and stated that it intends to establish and define several configurations that will be presumptively permissible, without prohibiting other configurations. PSC defined five attributes for its microgrid policy:

1. ability to optimize system efficiency within the microgrid and advance REV objectives;
2. interconnection with the larger utility system, assuming a DSP market that incorporates mutual benefits and services into pricing;
3. resilience and ability to function in island mode during outages;
4. providing reliable power at just and reasonable rates within the microgrid; and
5. consumer protections for residential customers.

PSC invited comment on the framework until May 1, 2015 and directed its staff to issue a more detailed proposal for additional comment.

## **DEMONSTRATION PROJECTS**

PSC adopted a resolution in December 2014 to encourage utilities and others to partner in demonstration projects to inform the continuing development of REV markets and policies. PSC’s order further directs utilities to file initial demonstration projects consistent with the guidelines by July 1, 2015, unless they have already proposed projects in a rate filing. The PSC permitted utilities to defer, until their next rate plan, certain costs associated with demonstration projects. PSC also imposed a quarterly report requirement on such projects until project costs are incorporated into a rate order. The report must include (1) revenue requirement amounts, (2) project details, (3) incremental costs incurred, (4) tax benefits, and (5) grants and all other benefits. Finally, PSC required that utilities make the results of projects publicly available.

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