STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

CASE 20-M-0082 - Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data.

ORDER IMPLEMENTING AN INTEGRATED ENERGY DATA RESOURCE

Issued and Effective: February 11, 2021

TABLE OF CONTENTS

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

At a session of the Public Service Commission held in the City of Albany on February 11, 2021

COMMISSIONERS PRESENT:

John B. Rhodes, Chair
Diane X. Burman, dissenting
James S. Alesi
Tracey A. Edwards
John B. Howard

CASE 20-M-0082 - Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data.

ORDER IMPLEMENTING AN INTEGRATED ENERGY DATA RESOURCE

(Issued and Effective February 11, 2021)

BY THE COMMISSION:

INTRODUCTION

New York is transforming its electricity system into one that is cleaner, more resilient, and more affordable. Effective access to useful energy data will play a critical role in this transformation, unleashing the power of integrated energy customer data and energy system data to speed the deployment of clean energy solutions. This will attract investment, enable analytics, help identify operational efficiencies, promote innovation, and encourage new business models, which will in-turn create value for customers and the State's energy system. The creation of an Integrated Energy Data Resource (IEDR) will provide New York's energy stakeholders with a platform that enables effective access and use of such integrated energy customer data and energy system data.

On May 29, 2020, Department of Public Service Staff (DPS Staff) filed the "Department of Public Service Staff Whitepaper Recommendation to Implement an Integrated Energy Data Resource" (the Whitepaper),[1] which describes the current state of access to energy-related data for New York State and recommends an approach for the creation of an IEDR that would provide a platform for access to customer and system data. The Whitepaper also includes an analysis of energy data initiatives in other jurisdictions and specific recommendations for stakeholder engagement, data resource design, data resource use cases, implementation, and operation.

Broadly, the Whitepaper recommends that the IEDR collect and integrate a large and diverse set of energy-related information on one statewide data platform. To advance the development of a statewide IEDR, the Whitepaper details specifics related to the IEDR's purpose, scope, capabilities, program management, and governance for the Public Service Commission's (Commission) consideration.

By this order, the Commission adopts the recommendation to establish a statewide IEDR and adopts the detailed path as described in the Whitepaper, with modifications. As discussed below, the Commission directs the implementation of an IEDR that securely collects, integrates, and provides useful access to a large and diverse set of energy-related information on one statewide data platform. The types of information and tools made accessible through the IEDR should provide useful insights related to the provision and use of

[1] Case 20-M-0082, Department of Public Service Staff Whitepaper Recommendation to Implement an Integrated Energy Data Resource (filed May 29, 2020) (the Whitepaper).

electricity and natural gas in New York State. While numerous data-related initiatives exist in New York, encompassing both customer and system data access, the Commission's actions will accelerate efficient and expanded useful access to useful energy data, for all types of users, including Energy Service Entities (ESEs), utilities, governmental agencies and academics. To enable implementation, this Order directs the development of the IEDR's design and adopts the necessary frameworks for funding, program management, and governance.

SUMMARY OF THE WHITEPAPER

The Whitepaper provides relevant background information on recent regulatory actions in New York State, including the Pilot Data Platform,[2] and a summary of the Distributed Energy Resource (DER) Industry Group Initiative.[3] It then describes the existing energy information framework in New York, emphasizing that while the volume and variety of accessible utility data has increased since 2014, the current status and rate of progress does not meet Commission expectations due to several issues that are preventing useful

---

[2] The Storage Deployment Order directed DPS Staff and the New York State Energy Research and Development Authority (NYSERDA) to lead coordination efforts with the Joint Utilities, Long Island Power Authority (LIPA), New York Power Authority (NYPA), and other stakeholders to develop and implement a Pilot Data Platform (Pilot Data Platform) with the assistance of a third party platform provider. See, Case 18-E-0130, Energy Storage Deployment Program, Order Establishing Energy Storage Goal and Deployment Policy (issued December 13, 2018) (Storage Deployment Order), p. 84.

[3] Case 16-M-0411, In the Matter of Distributed System Implementation Plans, Summary Report: Distributed Energy Resource Market Enablement Data Needs (filed as a Public Comment January 6, 2020).

access to useful data. These issues include availability, accessibility, and usefulness of information. The Whitepaper identifies notable energy data initiatives in other states, including California, Illinois, New Hampshire, and Texas. While each state initiative has one or more goal and characteristic that informed the recommendations, none of the other state initiatives match the scope and depth of the IEDR proposal.

Next, the Whitepaper proposes a detailed path forward to develop and operate an IEDR that will collect, integrate, and make useful a large and diverse set of energy related information on one statewide data platform to materially improve stakeholders' ability to understand and affect the provision and use of electricity and natural gas in New York State. The detailed path assumes that the IEDR evolves in a sequence that begins with a "minimum viable data set" closely aligned with use-case priorities. The execution of the path begins with the assignment of a Program Sponsor role, for which DPS Staff recommended NYSERDA. The Program Sponsor would first select the Program Manager. Once retained, the Program Manager would determine and recommend a team structure that would be best suited for each course of action, including Stakeholder Engagement, Architecture, Design, Implementation, and Operation. The Program Sponsor and Program Manager's work would be overseen by way of a Steering Committee and Advisory Group.

The Whitepaper also describes DPS Staff's effort working with NYSERDA to issue a Request for Information (RFI) to obtain the information needed to inform the Commission of the expected expenditures necessary to build and operate the IEDR. The Whitepaper suggests that the Commission use such information, as well as information obtained through the comment process, to set an overall budget cap to be managed by the

Program Sponsor and to understand the sequence and timing of work and expenditures by all program participants.

Lastly, the Whitepaper delineates the roles and responsibilities of each of the relevant entities involved. In addition to the Commission, other State agencies and entities would have a role in implementing the IEDR, including NYSERDA, NYPA, LIPA, the New York Independent System Operator, Inc. (NYISO), and the New York State investor-owned electric and gas utilities (IOUs).[4]

PUBLIC NOTICE

Pursuant to the State Administrative Procedure Act (SAPA) §202(1), a Notice of Proposed Rulemaking (Notice) was published in the State Register on June 24, 2020, [SAPA No. 20-M-0082SP2]. The minimum time period for submission of comments pursuant to the SAPA Notice expired on August 24, 2020. In addition, on June 30, 2020, the Secretary to the Commission (Secretary) issued a Notice of Stakeholder Meeting and Soliciting Comments (Secretary's Notice), which invited stakeholders to submit written initial comments by August 24, 2020, and reply comments by September 11, 2020. The Secretary's Notice also invited interested stakeholders to a technical conference held by DPS Staff on July 22, 2020, and conducted via

[4] New York's electric and gas IOUs are: Consolidated Edison Company of New York, Inc. (Con Edison), Orange and Rockland Utilities, Inc. (O&R), Central Hudson Gas & Electric Corporation (Central Hudson), Niagara Mohawk Power Corporation d/b/a National Grid (National Grid), New York State Electric & Gas Corporation (NYSEG), Rochester Gas and Electric Corporation (RG&E), National Fuel Gas Distribution Corporation (National Fuel), St. Lawrence Gas Company, Inc. (St. Lawrence Gas), Keyspan Energy Delivery New York (KEDNY), and Keyspan Energy Delivery Long Island (KEDLI).

WebEx. In response to the SAPA Notice and the Secretary's Notice, comments were filed by several organizations and individuals. A complete summary of these comments is included in Appendix A, and they have been considered and addressed in the discussion below.

LEGAL AUTHORITY

The Public Service Law (PSL) provides the Commission with broad jurisdiction and authority related to the "[m]anufacture, conveying, transportation, sale, or distribution of … electricity … ."[5] Furthermore, PSL §5(2) instructs the Commission to "encourage all persons and corporations subject to its jurisdiction to formulate and carry out long-range programs … with economy, efficiency, and care for the public safety, the preservation of environmental values and the conservation of natural resources." The Commission's supervision of electric corporations includes the responsibility to ensure that all charges made by such corporation for any service rendered shall be just and reasonable.[6] PSL §66 empowers the Commission to "[p]rescribe from time to time the efficiency of the electric supply system." The Commission may exercise this broad authority to direct regulatory standards to execute the provisions contained in the PSL. Additionally, the Commission has the authority to direct the treatment of DER by electric corporations.[7]

---

[5] PSL §5.

[6] PSL §65.

[7] PSL §§5(2), 66(1), 66(2), 66(3), 66-c, 66-j, and 74.

DISCUSSION

I. The Need for a Statewide Integrated Energy Data Resource Whitepaper Recommendations

The Whitepaper notes that since 2014, as part of the Commission's Reforming the Energy Vision (REV) efforts, each utility has independently implemented a portfolio of stakeholder-facing online resources that provide access to various types of system-related information.[8] Those resources are summarized in Appendix A of the Whitepaper. DPS Staff provides an evaluation of the current portfolio of utility-provided data access resources by examining the availability, accessibility, and usefulness of customer and system data provided by the utilities. Overall, DPS Staff opines that the development of utility-provided resources to-date represents notable progress that should generally be maintained until the IEDR can replace and surpass those tools. However, DPS Staff's analysis concludes that IOU progress falls short of timely providing the State's energy stakeholders with useful access to useful energy-related data.

DPS Staff recommends that the Commission direct the planning, design, implementation, and operation of a statewide IEDR that will collect, integrate, analyze, and manage a wide variety of standardized energy-related information from the State's utilities and other sources. DPS Staff asserts that integrating such information in one location would enable DER providers, utilities, energy consumers, government agencies, and others to more readily develop valuable technical and business

---

[8] Case 14-M-0101, Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision, Order Adopting Regulatory Policy Framework and Implementation Plan (issued February 26, 2015) (REV Track One Order), p. 92.

insights by using queries and other functions to filter, aggregate, analyze, and generate useful information. The Whitepaper suggests that those insights will, in turn, lead to faster and better policy, investment, and operational decisions that will accelerate the realization of New York State's REV and Climate Leadership and Community Protection Act (CLCPA) goals. Furthermore, DPS Staff asserts that the proposed IEDR strategy is the least-cost approach to drive progress toward improved information access and usefulness. To achieve that result, DPS Staff provides detailed recommendations for the elements of a comprehensive IEDR program framework comprising program sponsorship, program oversight, program management, system architecture, system design, system implementation, system operation, and stakeholder engagement.

Comments

The Joint Utilities[9] agree with Staff that, properly developed, a standardized platform has the potential to facilitate investment and community planning that will accelerate the deployment of clean energy solutions throughout New York State. The Joint Utilities also state that the IEDR development should be nimble, able to respond to evolving market needs and technological capabilities in a timely and cost-effective manner, while providing upfront value that third parties and developers need to design and launch products.

Logical Buildings agrees with the need for a central repository for all the information that may be utilized for providing energy management services. They also agree that material relevant to educate third parties as to which

[9] The Joint Utilties are: Central Hudson, Con Edison, NYSEG, National Grid, O&R, and RG&E.

geographic areas may have the highest need for certain services should also be made available to DER developers.

While Logical Buildings asserts that the process for companies trying to access data is currently overly complicated and needs simplification, a number of commenters including the Association for Energy Affordability (AEA), Advanced Energy Economy (AEE), Flux Tailor and the Retail Energy Supply Association(RESA), agreed that the provision of data under existing Commission rules and existing utility practices should continue without interruption while the proposed IEDR is developed and adopted.

Determination

The Commission finds that the current state of energy stakeholders' access to energy information provided by New York State's utilities is inadequate and inefficient. It is clear that the utilities' existing and currently planned data access resources and practices will likely fall short of the State's needs. Further, the Commission agrees with comments asserting that the current processes for gaining access to utility-provided data is burdensome.

Consequently, the Commission affirms that it is necessary to expeditiously implement the IEDR as recommended by DPS Staff in the Whitepaper.

DPS Staff's proposal for implementing a centralized, statewide IEDR provides a comprehensive and coherent vision to move beyond the current landscape's serious shortcomings. The Commission agrees with DPS Staff's assertion that the proposed IEDR will provide New York State's energy stakeholders with useful access to useful energy-related information and tools in a manner that will most efficiently accelerate progress toward achieving the State's clean energy and climate goals.

Furthermore, the Commission finds that DPS Staff's detailed recommendations for program structure and execution will effectively address the commenter concerns regarding program governance, goals, milestones, timeframes, and stakeholder involvement.

The Commission notes that several programs have been initiated relating to various aspects of accessing and using energy customer and energy system data. The actions directed by this Order specify the next steps to substantially increase useful access to useful energy-related data through the IEDR, while not prematurely transitioning away from data access tools and resources that are already operational. Considering the time needed to implement all the IEDR capabilities, it will be necessary and reasonable for the utilities to maintain existing data access resources and to continue developing currently planned resource enhancements and additions that would provide stakeholders with earlier access to more data.

II. IEDR Program Parameters

A. IEDR Program Scope

Whitepaper Recommendations

Staff proposes that the statewide IEDR would collect, integrate, analyze, and manage a wide variety of standardized energy-related information from the State's electric and gas utilities and other sources. In addition to collecting and housing the data, the IEDR would provide a collection of analytic tools that would enable users to design and run useful queries and calculations that operate across all the data types in the system and be a trusted resource for the State's energy stakeholders. The number and functionality of those tools should increase over time to align with the various use cases

that develop. In addition, to comply with the data privacy and protection framework adopted by the Commission, the users' access to the IEDR's various tools would be governed by access controls that align with the legitimate needs of each user type while also preventing unwarranted access to information that does not serve those legitimate needs.

The Whitepaper indicates IEDR should also perform other functions to produce additional useful information that is derived from the information acquired from its outside sources. For example, one such function would compensate for the large amount of missing consumption interval data (due to the lack of widely implemented smart metering) by synthesizing estimated customer interval data based on the customer's monthly consumption and the generic load profile for the customer type. Another example is users' ability to obtain calculated monthly bill estimates based on a customer's energy usage data and digitized tariff parameters.

In addition, the design, operation, and management of the IEDR should readily accommodate adding new information sources, information types, and functions as new market and utility needs emerge. Over time, the IEDR should evolve to include useful information and functions related to weather, demographics, zoning, building attributes, land attributes, property taxes, real estate values, locations of environmental justice areas, Electric Vehicle (EV) registrations, EV charger types and locations, EV charger loads, localized grid load-serving capacity, DER aggregations by operator, DER aggregations by grid service, and power quality measurements.

According to DPS Staff, relational information that describes the relationships among the various information elements in the IEDR must also be included since it would

materially affect the users' ability to find, analyze, and generate useful information. The IEDR should also be able to continually analyze its various data sets to generate additional relational information that is not obtainable from outside sources.

To address the standardization of data, DPS Staff recommends that all information providers should fully align each provided data element's attributes with standards for the attributes required to meet the needs of the use cases enabled by the IEDR. Important attributes that significantly affect a data element's usefulness - including temporal granularity, spatial granularity, precision, accuracy, age, and uniformity – should all meet or exceed minimum levels of adequacy for each use case that employs that data element.

DPS Staff recognized that the Commission is also considering the establishment of new state policies for a uniform and comprehensive Data Access Framework to govern the means and methods for accessing and protecting all types of energy-related information. DPS Staff recommends that all aspects of implementing and operating the proposed IEDR must comply with the policies comprising any future new Data Access Framework.

Finally, DPS Staff includes, as Appendix B of the Whitepaper, a table listing the recommended data items to be acquired, integrated, managed, analyzed, and made accessible by the proposed IEDR. That list includes both structured data (organized and sortable numbers, letters, words, and phrases) and unstructured data (documents, diagrams, images, and video items that are characterized by metadata). Recognizing the need to approach the execution of the IEDR in phases, DPS Staff indicates which data items should be implemented in Phase 1 and

which should be implemented in Phase 2, based on use case priorities.

Comments

As discussed above related to the need for the statewide IEDR, several stakeholders support the general scope of the IEDR. The Joint Utilities state that the proposed scope is ambitious from a technical perspective and will take many years to be fully realized and recommend that the Commission direct DPS Staff to work with stakeholders to develop a comprehensive scoping phase before continuing further IEDR development. Several commenters specifically supported evolving the platform from an initial set of core use cases, for which the City of New York, as well as Mission Data, provided input.

With regard to collecting large and diverse sets of data, Climate Action Associates (CAA) stated that emphasis should be on: standardizing utility-provided data and making it available to third parties; avoiding investment in custom tools for individual use cases; and, an effort by the Joint Utilities to understand and harmonize basic utility data management practices. AEE also recommends first focusing on standardizing data. RESA stresses that utilities must take all necessary steps to ensure that the IEDR contains timely and accurate information.

Determination

The Commission agrees with DPS Staff's recommended scope for a statewide IEDR that will collect, integrate, analyze, and manage a wide variety of standardized energy-related information from the State's electric and gas utilities and other sources. In addition, the inclusion of analytic tools that would enable DER providers, utilities, government agencies, and others to more readily develop valuable technical and

business insights will, in turn, lead to faster and better policy, investment, and operational decisions that will accelerate realization of New York State's clean energy goals. In addition, the Commission notes that the IEDR will enable entities that would like to perform their own data analytics and services by having access to the various data sources.

Furthermore, the Commission agrees with the proposed development approach that is centered around identifying and prioritizing IEDR use cases that provide the most value to New York State's energy stakeholders. To enhance stakeholder value over the long-term, the IEDR's design, operation, and management shall readily accommodate adding new information sources, information types, and analytic functions as new beneficial use cases emerge. A use case will be particularly beneficial if it materially improves or accelerates investment, operational, or regulatory decisions related to DERs, energy efficiency, environmental justice, or electrification strategies for transportation and buildings, thereby facilitating faster fulfillment of one or more of New York State's REV and CLCPA objectives.

The Commission also agrees with DPS Staff's assertion that much of the IEDR's value will depend on the extent to which the State's energy stakeholders trust the IEDR as a reliable source of accurate information. Consequently, to establish and maintain that trust, the IEDR must be designed, implemented, and operated in a manner that ensures the integrity and accuracy of data stored within the IEDR.

In a closely related part of this proceeding, the Commission is considering new state policies for a uniform and comprehensive Data Access Framework to govern the means and methods for accessing and protecting all types of energy-related

information.[10] Consequently, all aspects of implementing and operating the proposed IEDR must comply with any future policies adopted under a new Data Access Framework.

B. IEDR Program Schedule

Whitepaper Recommendations

The Whitepaper suggests that the Program Manager should be required to submit to the Program Sponsor detailed budgets and schedules for each aspect of building the IEDR. Such budgets and schedules should reflect an IEDR development approach that is centered around identifying and prioritizing IEDR use cases that provide the most value to New York State's energy stakeholders. DPS Staff further notes that the IEDR's design, operation, and management should readily accommodate adding new information sources, information types, and analytic functions as new market and utility needs emerge.

Comments

The Joint Utilities believe it is essential that the IEDR development schedule accurately reflect each utility's varying timelines and their investments in information systems and data sharing capabilities, as data flowing from and across these foundational systems will dictate what information can be made available to third parties in the IEDR. The Joint Utilities agree that the platform should evolve from a set of baseline or core use cases and system requirements that are prioritized based on cost-effectiveness and stakeholder value. RESA states that an implementation schedule that identifies goals and milestones, recognizes dependencies between goals and

[10] Case 20-M-0082, Data Access Framework Whitepaper (filed May, 29, 2020).

milestones, and establishes each activity's timing is an essential feature to the successful implementation of the IEDR.

Determination

DPS Staff defined a two-phase schedule in both the RFI to the market and information requests to the utilities as part of DPS Staff's efforts to obtain the best possible cost information to inform the Commission determination on the IEDR budget. Since the budget caps we adopt below are based on those assumptions, we adopt that approach for the IEDR program schedule. Therefore, Program Phase 1, the initial IEDR implementation, shall enable at least five of the highest priority use cases with the expectation that there could be ten or more achieved. Program Phase 2 shall expand and enhance the initial IEDR to enable approximately an additional forty use cases incrementally, by building upon the success of Phase 1. The total duration for enabling approximately 50 IEDR use cases shall be about 60 months. Phase 1 shall be completed in 24 – 30 months. Phase 2 shall be completed in 30 – 36 months. Operation of the utility's IEDR data feeds shall persist for the life of the IEDR (multiple decades). The Commission notes that the prioritization and implementation will reflect technical conditions and stakeholder input and shall be based on the Project Manager's recommendations after consultation with the Advisory Group and Steering Committee.

Noting that the Joint Utilities recommend that the schedule should take into account the varying timelines of each utility's current capabilities as it relates to collection and provision of the various data elements, the Commission defers decision of any phased implementation at the utility level to the design and development process to be carried out by the Project Manager. The Commission expects those processes to

consider the different data readiness levels at each utility and consider such criteria as advanced metering infrastructure (AMI) implementation status, overall size of customer base, DER market activities, and smart grid implementation status.

C. IEDR Program Budget Cap and Cost Recovery

Whitepaper Recommendations

DPS Staff proposes that the Program Budget should encompass all Commission-directed expenditures related to planning, designing, building, administering, and operating the central IEDR. Following the Initial Program Schedule's approval, the Program Manager, working with the Program Sponsor and other appropriate entities, should develop an Initial Program Budget that describes the type, purpose, predicted timing, and estimated amount of all significant expenditures. As the program progresses, program expenditures' scope and timing will come into better focus; consequently, the Program Manager and Program Sponsor should regularly meet to review actual and predicted program expenditures and determine whether budget and/or scope modifications are needed.

DPS Staff recommends that funding should be provided from all jurisdictional electric and gas ratepayers. This includes the initial funding needed to implement the IEDR, as well as ongoing funding for operating and enhancing the IEDR. DPS Staff anticipates that LIPA and NYPA will engage in the IEDR development and implementation process. This would allow LIPA and NYPA to align the various energy-related data activities under their control with the statewide IEDR ultimately directed by the Commission to maximize benefits of the resource to New York State.

To get information related to cost, DPS Staff worked with NYSERDA to issue a RFI to obtain information from a number of solution providers to inform the Commission on the expected expenditures necessary to build and operate the central IEDR. DPS Staff also sought comment from each utility pertaining to its anticipated IEDR-related work and expenditures needed to provide the data items listed in Appendix B of the Whitepaper.

Comments

The Joint Utilities requested clarification on the cost recovery mechanism for implementing the IEDR, believing that NYPA and LIPA should share a portion of the cost for development. The Joint Utilities believe that in Appendix B there are aspects of DPS Staff's request that are not detailed to the point that the Joint Utilities can prepare a cost estimate.

Determination

Given the multi-year and methodical approach to designing, developing, and implementing the statewide IEDR, the Commission finds it necessary to determine funding for Phase 1, as defined above, in this Order. Furthermore, funding for Phase 1 is determined for those efforts that shall be undertaken and competitively procured by the Project sponsor which include:

- Managing the IEDR Program
- Developing the IEDR Architecture
- Developing and Integrating Detailed IEDR Designs and Specifications
- Deploying and Integrating IEDR Components and Services
- Testing and Commissioning IEDR Use Cases
- Operating the IEDR

In parallel to the efforts to be carried out by the Project Sponsor, funding for Phase 1 is determined for the gas and electric utilities that will need to perform the following:

- Managing the utility's Internal IEDR Data Sourcing

Program
- Developing the Architecture for the utility's IEDR Data Sourcing Resources and Processes
- Developing and Integrating Detailed Designs and Specifications for the utility's IEDR Data Sourcing Resources and Processes
- Deploying and Integrating the utility's IEDR Data Sourcing Resources and Processes
- Testing and Commissioning IEDR Use Cases
- Operating and Managing the utility's IEDR Data Sourcing Resources and Processes

Based on the efforts of DPS Staff to obtain cost information from the results of the RFI, as well as the stakeholder comments and replies to information requests submitted to the utilities from DPS Staff, the Commission establishes a budget cap of $13.5 million for the Program Sponsor's efforts for Phase 1, including $12 million for procured resources and $1.5 million for the NYSERDA administrative costs as Project Sponsor.

While both gas and electric customers in New York State will benefit from the IEDR, recovering these costs from only electric customers will simplify the recovery and is equitable since all gas customers are also electric customers. We also agree with the Joint Utilities that NYPA and LIPA should share a portion of the Phase 1 development costs given the anticipated statewide benefits of the IEDR Program, and accordingly request that each contribute an amount based on their respective portions of total electric load for 2019, subject to approval by NYPA and LIPA's governing boards. The remaining costs shall be allocated and collected from the jurisdictional electric utilities in the same manner as the current authorized costs are being allocated and collected via the existing Bill-As-You-Go agreements that NYSERDA has with each utility. This should simplify the administration and help

to avoid cash flow issues between collections and expenditures. Collections for the IEDR Program are incremental to any collection schedule already approved in the Commission's Clean Energy Fund Order, which utilizes the existing Bill-As-You-Go agreements.[11] To document and effectuate this decision, NYSERDA is directed to file an updated Bill-As-You-Go Summary with the Commission within 60 days of the issuance of this Order and make any necessary changes to the funding agreements with the individual utilities.

Each of the utility's budget caps to complete the data sourcing efforts for Phase 1 shall be as follows. Con Edison, Central Hudson and National Grid shall be subject to a $12 million cap each. O&R, NYSEG, and RG&E shall be subject to a $6 million cap each. These budget caps shall cover the data sourcing efforts for the electric and gas businesses of each respective utility, with the exception of Con Edison that shall also include the steam business. All efforts shall be made to maximize efficiencies by the use of shared services to enable such data sourcing across the businesses of each IOU. National Fuel Gas, St. Lawrence Gas, KEDNY and KEDLI, shall each be subject to a budget cap of $1 million. Each IOU shall defer applicable costs, up to their individual cap, for future recovery in their next rate case filing after Phase 1 is completed. Applicable costs shall include incremental operation and maintenance expenses, net of related savings, and carrying

[11] Case 14-M-0094, et al., Order Authorizing the Clean Energy Fund Framework (issued January 21, 2016), p. 98 (Clean Energy Fund Order). The Clean Energy Fund Order authorized the Bill-As-You-Go approach to better match collections with expenditures, where collections are retained in utility accounts and transferred to NYSERDA at a specified frequency based on actual program expenditures.

costs on capital expenditures, which includes the “return-on” and “return-of” the investment, net of related incremental savings. The deferral balance shall accrue carrying costs at the rate specified in each IOU’s existing rate plan.

Since several IOUs are already in the process of planning and/or implementing certain information technology (IT) projects that would enable the collection and transfer of the data elements required under Phase 1 of the IEDR Program, the budget caps and deferral authority provided in this Order are for incremental projects and expenditures above and beyond those already in each utility’s current five year IT budgets and plans.

The Commission anticipates that LIPA and NYPA will actively engage in the IEDR development and implementation process and therefore will align their various energy-related data activities under their control to enable the transfer of the same data elements as those being provided by the jurisdictional utilities to maximize benefits of the resource to New York State. This engagement should include LIPA and NYPA participation in the Utility Coordination Group described later in this Order.

Several commenters note the importance of having access to technical expertise; for example AEE recommends that the Commission seek outside expertise to supplement DPS Staff’s capabilities. The Commission agrees with this comment, particularly as it relates to understanding the efforts and investments needed at each utility to enable the assembling and transfer of data to the IEDR. While we are setting budget caps on each utility, the expectation is that the actual investments needed will be revealed and more fully understood as we move through the design and implementation process of the IEDR.

During these tasks, DPS Staff will require a dedicated resource to oversee and provide guidance on the utility data sourcing efforts and investments. Therefore, NYSERDA, as Project Sponsor, shall include in its implementation plan, the provision of such resources.

Funding for Phase 2 of the IEDR will be the subject of future Commission action that will be informed by the Project Sponsor reports due in 2023, as described later in this Order.

III. IEDR Program Governance

A. IEDR Program Sponsor

Whitepaper Recommendations

In the Whitepaper, DPS Staff proposes establishing a Program Sponsor as the entity responsible for defining, initiating, overseeing, and facilitating the IEDR Program on behalf of the State. Staff identifies and recommends NYSERDA as the most appropriate candidate for this role. DPS Staff further recommends that the Program Sponsor's principal duties should include:

1) creating the IEDR Program Charter to formally establish the program's purpose, scope, guiding principles, objectives, participants, roles, and responsibilities;
2) organizing the membership and initial meeting schedule for an IEDR Steering Committee comprising five members of DPS Staff and four members of NYSERDA Staff;
3) organizing the membership and initial meeting schedule for an IEDR program Advisory Group comprising representatives for all significant stakeholder categories;
4) specifying, procuring, and administering the services provided by a professional Program Manager;
5) providing the program's participants with the means and methods for accessing and expending the funds allocated to the program by the Commission;

6) ensuring robust stakeholder engagement throughout the life of the IEDR program;
7) monitoring adherence to the Program Charter by all program participants; and,
8) helping the Program Manager investigate and resolve issues that could negatively affect the program's costs, schedule, or benefits.

Comments

There was a general consensus that the Sponsor should have access to resources who can provide: all necessary technical expertise; experience in identifying and procuring applicable software; experience in developing and integrating similar information systems; experience enabling and managing user access to secure data; strong cybersecurity acumen; and, an understanding of how energy solution providers can effectively apply integrated energy data. Logical Buildings and NYSERDA agreed that NYSERDA would be a good fit for the Program Sponsor role. CAA stated its concerns about the potential lack of participation by experts without compensation.

Determination

The Commission recognizes the need for an effective IEDR Program Sponsor and assigns the role to NYSERDA. In this role, NYSERDA will be responsible for defining, initiating, overseeing, and facilitating the IEDR Program on behalf of the State. NYSERDA's principal duties as Program Sponsor shall include:

1) creating the IEDR Program Charter to formally establish the program's purpose, scope, guiding principles, objectives, participants, roles, and responsibilities;
2) organizing the membership and initial meeting schedule for an IEDR Steering Committee comprising five members of DPS Staff and four members of NYSERDA Staff;

3) organizing the membership and initial meeting schedule for an IEDR program Advisory Group comprising representatives for all significant stakeholder categories;
4) specifying, procuring, and administering the services provided by a professional Program Manager;
5) providing the program's participants with the means and methods for accessing and expending the funds allocated to the program by the Commission;
6) ensuring robust stakeholder engagement throughout the life of the IEDR program;
7) monitoring adherence to the Program Charter by all program participants; and,
8) helping the Program Manager investigate and resolve issues that could negatively affect the program's costs, schedule, or benefits.

Given the multi-stage process that the Project Sponsor is expected to carryout, the Commission shall require NYSERDA to file an initial Implementation Plan within 30 days of the effective date of this Order, detailing how it will carry out its duties as the Program Sponsor up to the commencement of the Program Manager. The Implementation Plan shall then be updated and filed by August 10, 2021, following the procurement of the Program Manager, to reflect all of the subsequent tasks to be carried out to complete implementation of Phase 1 of the IEDR Program. Staff shall review the Implementation Plan filings to ensure compliance with this Order and provide any feedback to NYSERDA as necessary. NYSERDA, as the Program Sponsor, shall continue performing its duties as needed throughout the life of the IEDR.

B. IEDR Program Steering Committee

Whitepaper Recommendations

In the Whitepaper, DPS Staff states that the launch and progress of the proposed IEDR program should be overseen by

well-qualified persons who are tasked with effectively and timely monitoring program execution while providing guidance to the Program Sponsor and Program Manager as needed to help ensure program success. To that end, DPS Staff proposes that the Program Sponsor should convene an IEDR Steering Committee comprising five members of DPS Staff and four members of NYSERDA Staff. DPS Staff proposes that the Steering Committee should begin its work by selecting the members of the IEDR Advisory Group and should then meet regularly to timely review and, when necessary, act on: 1) program issues that require Steering Committee awareness and possible actions or decisions; 2) significant program risks that require management and mitigation; 3) planned and unplanned deviations from the program scope, schedule, or budget; and, 4) upcoming program milestones – especially those that depend on Steering Committee actions or decisions. DPS Staff states that the Steering Committee should also timely review all Advisory Group inputs and ensure that the Program Manager appropriately incorporates those inputs into the program's various workstreams. Finally, DPS Staff recommends that the Steering Committee should continue functioning over the life of the IEDR.

Comments

There was broad support for the creation of a Steering Committee from the commenters. NYSERDA asserts that the Steering Committee will ensure direct DPS Staff involvement throughout the duration of the process, and notes that a flexible regulatory construct should be in place to ensure full compliance by the jurisdictional entities to meet the needs of the IEDR as those needs are identified. RESA also supports the Steering Committee, adding that it should meet as frequent as

needed and that members should be chosen through experienced-based qualifications.

Determination

The Commission directs the Program Sponsor to convene an IEDR Steering Committee comprising five members of DPS Staff and four members of NYSERDA Staff who have the necessary experience, knowledge, and skills, to carry out the tasks as described in the Whitepaper. At its core, the Steering Committee will address policy, schedule, and budget issues based on the Project Sponsor's recommendations to be developed in consultation with the Project Manager.

The Program Sponsor shall schedule the Steering Committee's first meeting to occur within 60 days of this Order's issuance. In the early stages of the IEDR program, the Steering Committee shall meet monthly, with remote participation enabled by a virtual meeting technology such as WebEx or Microsoft Teams. As the program matures and stabilizes, Steering Committee meetings' frequency could decrease to bi-monthly and then to quarterly. Further, Steering Committee members are expected to participate personally in the committee's activities - substitutions or proxies should be prohibited. Finally, the Steering Committee shall function over the life of the IEDR.

C. IEDR Program Advisory Group

Whitepaper Recommendations

In the Whitepaper, DPS Staff states that the Program Sponsor should convene an IEDR Advisory Group to enable stakeholder groups to timely provide informed commentary and guidance to the program team. DPS Staff further states that the Advisory Group's members should be selected by the IEDR Steering

Committee and should represent all relevant stakeholder groups including, but not limited to: DER developers; electric and gas utilities; energy consumers; state and local government entities; and interested industry groups. DPS Staff also notes that the number and diversity of Advisory Group members should ensure adequate representation across stakeholder groups while remaining manageable.

DPS Staff recommends that the scope of Advisory Group activities includes timely reviews and guidance related to: 1) IEDR use cases and their respective requirements; 2) priorities and schedules for enabling use cases; 3) planned IEDR capabilities; 4) required stakeholder capabilities; 5) user interfaces and experience; 6) IEDR development and testing; 7) program governance; and, 8) upcoming program milestones – especially those that depend on Advisory Group guidance. DPS Staff also recommends having Advisory Group members act as testers whenever user acceptance testing (UAT) is performed. Furthermore, appropriate Advisory Group members shall be included as participants in any IEDR stakeholder surveys, focus groups, feedback sessions, or workshops.

In addition, DPS Staff states that the Program Sponsor should: 1) schedule the Advisory Group's first meeting to occur as soon as possible after its members are determined by the Steering Committee; 2) enable remote participation in Advisory Group meetings through a virtual meeting technology such as WebEx or Microsoft Teams; and, 3) schedule the Advisory Group's meetings to occur midway between the Steering Committee's scheduled meetings to ensure enough time for transfers of information to and from the Steering Committee. DPS Staff notes that, as the program matures and stabilizes, the Advisory Group's meetings' frequency should decrease to align with the

Steering Committee's shifts to bi-monthly and then quarterly meetings. DPS Staff further advises that the Advisory Group's members should be expected to participate personally in group activities - substitutions or proxies should be prohibited. Finally, Staff recommends that the Advisory Group should function over the life of the IEDR.

Comments

There was broad support for the creation of an Advisory Group from the commenters, including specific backing from NYPA who would like to see its Grid Flexibility and Clean Energy Advisory Service group be included as an initial member. RESA and Logical Buildings support the creation of an Advisory Group that represents all stakeholder interests as no single stakeholder can represent the varying interests in the energy market. CAA believes that the Advisory Group should have a more active design role and recommends establishing an Advisory Services Fund to support it.

Determination

The Commission directs the Program Sponsor to convene an IEDR Advisory Group to enable stakeholder groups to timely provide informed commentary and guidance to the program team and carry out the activities as described in the Whitepaper. The Commission notes that in addition to the Advisory Group, the Project Sponsor, together with the Program Manager, shall create opportunities for broad stakeholder engagement as described in the Program Execution section below. The Advisory Group is an essential source of expertise that will provide comments and recommendations on issues and decisions that will be considered by the Program Manager and Project Sponsor but does not hold any decision-making authority. The Advisory Group's members shall be selected by the Steering Committee and shall represent all

relevant stakeholder groups including, but not limited to: DER developers; electric and gas utilities; energy consumers; state and local government entities; and interested industry groups. The number and diversity of Advisory Group members should ensure adequate representation across stakeholder groups while remaining manageable.

IX. IEDR Program Execution Whitepaper Recommendations

The Whitepaper details the major components necessary to accomplish the IEDR. Those include Program Management, Solution Architecture, System Design, System Implementation, and System Operation.

In the IEDR White Paper, DPS Staff recommends that the Program Sponsor should acquire and oversee the services of a highly-qualified professional Program Manager to be responsible for organizing, administering, and reporting on the day-to-day activities required for IEDR implementation. DPS Staff notes that the program management services specified by the Program Sponsor and performed by the Program Manager should include: 1) developing and managing a detailed budget for all IEDR program execution costs related to the central IEDR platform; 2) developing and managing a detailed work breakdown and schedule for all program execution tasks related to the central IEDR platform; 3) specifying, procuring, and overseeing all of the professional technical services needed for all program execution tasks related to the central IEDR platform (architecture, design, implementation, and operation); 4) procuring all equipment, software, facilities, and services required to build and operate the central IEDR platform; 5) rigorously and timely identifying, reporting, and mitigating risks that could increase

the funds and/or time needed for any program execution activities related to the central IEDR platform; 6) regularly preparing and presenting program status reports that fully detail all program execution tasks completed, in-progress, and planned; 7) developing, implementing, facilitating, and documenting a rigorous process for IEDR Advisory Group engagement and communication to inform and guide all program life cycle phases; and, 8) coordinating the specification, timing, and execution of work related to the IEDR data feeds provided by the utilities and other data sources.

The Whitepaper describes that the Solution Architecture would provide the information needed to specify the complete IEDR design requirements. To ensure realization of the IEDR's potential value, a Solution Architect should employ an approach structured to identify, understand, and prioritize potential IEDR use cases. In addition, the Solution Architect should rigorously identify and comply with all applicable requirements concerning confidentiality and system security, as would be established in a Data Access Framework for Strategic Use of Energy-Related Data.

Before developing the detailed IEDR design requirements, the Whitepaper states that the Solution Architect should prepare a Preliminary Design Plan that describes the elements, structure, timing, deliverables, and estimated cost of the design effort. Following the Preliminary Design Plan's approval, the Solution Architect, assisted by other entities as needed, should specify the detailed requirements for fully designing the IEDR. The complete IEDR design would comprise descriptive text, specifications, tables, diagrams, configuration parameters, data definitions, data schemas, computer code, operating procedures, and other work products

that describe and explain all aspects of the IEDR's composition, configuration, and operation. The complete design scope should encompass the IEDR and all the other entities (systems and people) that will interact with the IEDR. The finished design should provide all the information needed to specify, procure, and execute all necessary IEDR implementation services. The Program Manager should procure the necessary design services based on the requirements specified.

The Whitepaper explains that IEDR System Implementation comprises full deployment, integration, and activation of all elements needed to fully implement the IEDR. Working within the Advisory Group engagement process managed by the Program Manager, DPS Staff recommends that the Implementation Contractor should obtain implementation-related inputs from the utilities, third-party data sources, providers of system components and services, and the System Operator. The System Implementation Contractor - with guidance and assistance provided as needed by the Program Manager, Solution Architect, Design Contractor, and System Operator - should acquire, deploy, test, and commission all IEDR elements as designed and in accordance with the Implementation Schedule.

Finally, IEDR System Operation comprises all the planning, scheduling, system administration, process control, monitoring, maintenance, access control, problem detection/resolution, change management, user support, and reporting activities needed to effectively manage the functionality and performance of operational IEDR capabilities.

Comments

Many commenters agreed with the necessary responsibilities delegated to the Program Manager, but there were concerns raised about their authorities and intents.

Mission Data advised the Commission to be wary of other entities that could serve in this role while not having the public's best interest in mind. Regarding a similar concern, RESA believes the task of selecting the Program Manager should not be assigned exclusively to the Program Sponsor. According to RESA, members of the Steering Committee and Advisory Group should have experience and knowledge to guide selection of the Program Manager. RESA also believes that the Commission should require the Solution Architect to provide the opportunity for, and take into consideration, input from all stakeholders, not just specific stakeholders in regard to the preliminary design plan describing the elements, structure, timing, deliverables, and estimated cost of the design effort. Alpha Struxure (ASX) recommends that the Program Manager should explicitly report to the Program Sponsor (NYSERDA). CAA expressed concerns regarding conflicts of interest and the role of Program Manager. They suggest an alternative governance model that organizes roles into separate design and implementation tracts. They also agree with AEA, AEE, the Joint Utilities, and RESA that more information, in part from stakeholders, as well as clear goals, milestones, and timeframes should be established to guide progress.

The Joint Utilities stress the importance of using lessons learned in the Pilot IEDR when addressing the work required to implement something similar or greater on a statewide scale. CAA believes the Solution Architect should either be NYSERDA staff or an ombudsman contractor. NYSERDA emphasizes the need for strong market engagement, agreeing with a detailed implementation and verification process. The U.S. Environmental Protection Agency (EPA) recommends integrating their Portfolio Manager web services within the IEDR

functionality, allowing building owners and operators to request the automated delivery of data directly from the IEDR. Flux Tailor believes that DPS Staff, NYSERDA, the utilities, and stakeholders should collaborate on technical work outside of this proceeding.

Determination

Within six months from this Order's issuance, the Program Sponsor shall acquire the services of a highly qualified Program Manager to carry out the activities as described in the Whitepaper. The Program Sponsor's acquisition of a Program Manager shall be informed by the Steering Committee. Guiding principles for the IEDR's procurement strategy include obtaining the best overall value for New York State and involved stakeholders, accelerating implementation timelines, reducing initiative costs and risks, and protecting the robust scope through sourcing high-quality components to be deployed during the IEDR implementation. The Commission expects that the Program Manager will identify opportunities for obtaining economies of scale and/or scope from any contracting required to obtain the needed professional services for the Solution Architecture, System Design, System Implementation, and System Operation in order to afford the decision-making flexibility that enables best possible procurement execution. Each functional need or project phase or service provider need not be a different entity or contracted for separately, even though the Whitepaper described the work to be done in bucketed groups.

The Commission directs the Project Sponsor to be accountable for stakeholder engagement and to meet those responsibilities through the support of, and the defined tasks of, the Program Manager. To address several commenter's suggestions that additional stakeholder engagement is necessary

prior to implementation of the IEDR, the Commission determines that NYSERDA, as Project Sponsor, shall include a near-term process to solicit stakeholder comments addressing, at a minimum, initial use case prioritization along with the rationale supporting that use, prior to selection of the Program Manager and seating of the Advisory Group. This widespread stakeholder outreach should result in a valuable information resource for the Program Manager and Advisory Group.

The Commission reiterates and affirms that data is owned by ratepayers and not the utilities. Nonetheless, management of data and providing useful access to useful information is a core business activity of New York's utilities. For these reasons, the Commission directs NYSERDA to form a Utility Coordination Group as a necessary component of the IEDR Program execution. The Utility Coordination Group shall include members of the Steering Committee (DPS Staff and NYSERDA) or designees, Project Sponsor, Program Manager, Staff Resource for Utility Data Systems, and the senior-level leader of each utility IEDR implementation team, which the Commission directs be formed at each utility. The Utility Coordination Group will also be used to assure alignment of implementation schedules and policies of the IEDR and the potential Data Access Framework. NYSERDA, as Project Sponsor, shall include the formation of the Utility Coordination Group in its Implementation Plan.

X. Accountability and Reporting

Whitepaper Recommendations

The Whitepaper describes that the Program Manager should implement and maintain a program reporting framework that includes: (1) monthly production and publication of reports that address all aspects of the IEDR program; (2) ongoing maintenance

of a program dashboard that presents an at-a-glance summary of program status; and, (3) frequent briefings to the Program Sponsor, Steering Committee, and Advisory Group. DPS Staff suggests that program reports should, in the context of the program schedule and budget, describe and explain (where necessary) the program's accomplishments and expenditures to date, current work and expenditures in progress, the latest program risk assessment and mitigation plan, and upcoming work and expenditures.

Comments

No party commented specifically on the reporting requirement recommendations in the Whitepaper.

Determination

Given that the Commission has selected NYSERDA to be the Program Sponsor directly responsible for defining, initiating, overseeing, and facilitating the IEDR Program on behalf of the State, it is NYSERDA that shall work with the Steering Committee, Advisory Group, and the Program Manager to monitor the program schedule and budget and have the responsibility to report to the Commission. The Commission recognizes that regular accountability and reporting measures are necessary for large, multi-year projects like the IEDR Program. Therefore, the Commission adopts the recommended reporting requirements from the Whitepaper and directs NYSERDA to file quarterly reports in this proceeding, with reports being filed at the end of April, July, October, and January for the prior quarter, including information from the Program Manager monthly reports, addressing all aspects of the IEDR program. In addition, NYSERDA shall create a publicly accessible program dashboard that presents an at-a-glance summary of the IEDR program and shall maintain the dashboard on an ongoing basis.

In addition to the quarterly reports, the Commission

shall also require two additional reports from the Project Sponsor that will inform the Commission's future directives regarding the IEDR Program. At the end of Phase 1, after the initial use cases have been implemented and are operational, NYSERDA shall file a IEDR Phase 1 Status and Summary Report, on or before July 30, 2023, which is twenty-four months after the Program Manager is expected to begin its work. The second report shall be an IEDR Phase 2 Proposal, filed on or before January 15, 2023, six months prior to end of end of Phase 1, that addresses the remainder of the use cases to be implemented by July 30, 2026. This report shall include any information necessary to support Phase 2 funding and authorization, for efforts of the Project Sponsor and of the utilities, and shall be informed by the design and implementation process to date. Given the need for the IEDR Phase 2 Proposal to include details on the efforts and investments necessary at each utility to implement Phase 2, the Utility IEDR Implementation Teams shall provide such input to NYSERDA to be incorporated into the report, through the Utility Coordination Group process.

Given the extensive engagement expected from the utilities to enable the IEDR Program, the Commission directs each electric and gas utility to establish an IEDR Implementation Team. Each utility implementation team shall be led by a member of the company's senior management team. The utility IEDR Implementation Team leader shall have an obligation to actively engage with the IEDR Program Manager on all aspects of the IEDR Program execution, and have the specific obligation to share information and data as necessary within the timeframes to be established by the process. The utility IEDR Implementation Teams shall have the obligation to continually identify opportunities where the IEDR can provide value to the

respective utility's planning, operations, and Distributed Energy System Implementation Plan (DSIP)[12] data obligations in the most effective and efficient manner. To monitor the utility's obligations related to the IEDR Program, each utility shall file a quarterly report on IEDR enablement project planning and investments, with reports being filed at the end of April, July, October, and January for the prior quarter. Also included in these quarterly reports shall be any prospective economies of scope or scale identified for existing utility planning, operations, and DSIP data responsibilities that can be achieved as a result of the IEDR implementation.

CONCLUSION

The need to provide useful access to useful energy data to enable achievement of the State's energy policy goals is apparent. The timing to provide such access has become urgent with the recent adoption of the CLCPA. Evolving the existing fragmented framework will not meet New York State's energy industry stakeholders' needs most efficiently and effectively. The Commission's adoption of an IEDR, and associated development, build, and implementation processes, will meet those needs efficiently and effectively by taking advantage of economies of scale, minimizing the duplication of implementation and operating costs, reducing the costs to implement, and maintaining data quality and uniformity.

The Commission orders:

1. Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State

[12] See, Case 16-M-0411, In the Matter of Distributed System Implementation Plans.

Electric & Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., Rochester Gas and Electric Corporation, National Fuel Gas Distribution Corporation, St. Lawrence Gas Company, Inc., KeySpan Energy Delivery New York, and KeySpan Energy Delivery Long Island are directed to work with the Department of Public Service Staff and the New York State Energy Research and Development Authority to implement a statewide Integrated Energy Data Resource Program, as discussed in the body of this Order.

2. Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., Rochester Gas and Electric Corporation, National Fuel Gas Distribution Corporation, St. Lawrence Gas Company, Inc., KeySpan Energy Delivery New York, and KeySpan Energy Delivery Long Island shall establish an Integrated Energy Data Resource Implementation Team, led by a member of the company's senior management team.

3. Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., Rochester Gas and Electric Corporation shall file tariff amendments necessary to effectuate the recovery of costs associated with the Integrated Energy Data Resource Program, on not less than 30 days' notice, to become effective on a temporary basis on June 1, 2021, as discussed in the body of this Order.

4. Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State

Electric & Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., Rochester Gas and Electric Corporation, National Fuel Gas Distribution Corporation, St. Lawrence Gas Company, Inc., KeySpan Energy Delivery New York, and KeySpan Energy Delivery Long Island are directed to each file, within 30 days of the issuance of this Order, General Accounting Procedures associated with the Integrated Energy Data Resource implementation cost deferral provisions discussed in the body of this Order.

5. Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., Rochester Gas and Electric Corporation, National Fuel Gas Distribution Corporation, St. Lawrence Gas Company, Inc., KeySpan Energy Delivery New York, and KeySpan Energy Delivery Long Island are directed to each file quarterly reports on Integrated Energy Data Resource enablement project planning and investments, as discussed in the body of this Order, with the first report being due on or before October 31, 2021.

6. The New York State Energy Research and Development Authority shall file an initial Implementation Plan within 30 days of the issuance of this Order, and an updated Implementation Plan by August 10, 2021, as discussed in the body of this Order.

7. The New York State Energy Research and Development Authority shall file an updated Bill-As-You-Go Summary, as discussed in the body of this Order, within 60 days of the issuance of this Order.

8. The New York State Energy Research and Development Authority shall file quarterly reports, as discussed in the body

of this Order, with the first report being due on or before October 31, 2021.

9. The New York State Energy Research and Development Authority shall create a publicly accessible program dashboard that presents an at-a-glance summary of the Integrated Energy Data Resource program by October 31, 2021, and shall maintain the dashboard on an ongoing basis.

10. The New York State Energy Research and Development Authority shall file, as discussed in the body of this Order, an Integrated Energy Data Resource Program Phase 1 Status and Summary Report, on or before July 30, 2023. The New York State Energy Research and Development Authority shall file a second report, as discussed in the body of this Order, regarding the Integrated Energy Data Resource Program Phase 2 Proposal, filed on or before January 15, 2023, six months prior to the end of Phase 1, that addresses the remainder of the use cases to be implemented by July 30, 2026.

11. The requirements of Public Service Law §66(12)(b) and 16 NYCRR §720-8.1, related to newspaper publication of the tariff amendments required by Ordering Clause No. 3, are waived.

12. In the Secretary's sole discretion, the deadlines set forth in this Order may be extended. Any request for an extension must be in writing, must include a justification for the extension, and must be filed at least three days prior to the affected deadline.

13. This proceeding is continued.

By the Commission,

(SIGNED) MICHELLE L. PHILLIPS
Secretary

Appendix A - Comment Summaries

Parties who submitted comments:

Climate Action Associates (CAA)

Flux Tailor

Association for Energy Affordability (AEA)

The City of New York

Joint Utilities

NYSERDA

Mission Data

Logical Buildings

RESA

NYPA

Advanced Energy Economy (AEE)

Utilidata

Alpha Struxure (ASX)

U.S. Environmental Protection Agency

Purpose and Scope

AEE recommends that the efforts to standardize data begin first while a decision on the IEDR is held off until more feedback has been gathered, the proposal has been refined, and that a comprehensive schedule for stakeholder engagement is put in development for the Data Access Framework and IEDR. They also believe that the standardization of data should be considered a “no regrets” step that should take place regardless of the ultimate outcome of the IEDR.

CAA believes IEDR should focus on the standardization of data and making it available to third parties while avoiding investment in custom tools for individual use cases. CAA recommends that the Proceeding be amended with a Joint Utilities (JU) effort to understand and harmonize basic utility data management practices necessary to create IEDR data, although the Joint Utilities disagree with this method

The City of New York would like the Commission to consider its needs to access anonymized or aggregated data as well as the expected increase in energy consumption from EV charging stations when drafting the IEDR. The City utilizes this data to draft climate and energy policy.

Flux Tailor believes that DPS, NYSERDA, the utilities, and stakeholders should collaborate on technical work outside of the DPS Proceeding. They believe there is not enough time for the NYSERDA RFI/RFP process and think that focus should be placed on "minimum viable product" expansions and improvements to existing systems in the near future.

RESA believes there are many benefits that ESCOs can provide that the Whitepaper did not address and would like more attention given to the subject. RESA also believes that an implementation schedule that identifies goals and milestones, recognizes dependencies between goals and milestones, and establishes the timing of each activity is an essential feature to the successful implementation of the IEDR.

ASX is a firm proponent of the minimum viable data set, acknowledging that putting the power of data in just a few hands is not best for innovation, cost savings, and emissions reductions. Once a MVDS is established, then an expansion over time of the IEDR Data can be made with lessons learned from the stakeholder use of MVDS. This creates a much more open, need-based IEDR valuable to a wide base of stakeholders in NY.

Parallel Programs

AEA believes the provision of data under existing Commission rules and existing utility practices should continue without interruption while the new system is being developed and adopted. Flux Tailor strongly agrees with this statement.

AEE believes that utility capabilities, including portals and interfaces that directly serve customers and third parties, should continue apace and parallel with the development of an IEDR to avoid slowing progress or even backtracking while the platform is in the process of development and deployment.

Flux Tailor believes that pausing development of ConEd's ShareMyData portal is not beneficial for near term advancements in the project because waiting for the implementation of IEDR would take too long.

RESA believes that the Commission should not lose sight of the potential for incremental, near-term enhancements and projects that utilities are currently working on.

The Current State of Access to New York State Energy Information

The Joint Utilities believe it is essential that the IEDR development plan accurately reflect the varying timelines of each utility and their investments in information systems and data sharing capabilities, as data flowing from and across these foundational systems will dictate what information can be made available to third parties in the IEDR. The Joint Utilities stress the importance of using lessons learned in the Pilot IEDR when addressing the work required to implement something similar or greater on a statewide scale. The Joint Utilities strongly believe that the Framework and the data access roles require more consideration. Ineffective access controls could place customer and system data at risk of inappropriate disclosure.

Logical Buildings believe that the future process for companies trying to access data, especially via the Green Button Connect process, should be less time consuming and complicated than it is today. They also request that companies that have already gone through this process are not required to do so a second time. However, the Joint Utilities believe this brings unnecessary risk to customers and utility systems.

Mission Data believes the absence of important details regarding problems with permission-based customer energy data exchanges in New York today indicates that the Commission does not yet fully understand the problems it is trying to solve. These include the methods customers are able to authenticate and authorize a third party to access their usage and billing data.

RESA is concerned with the inconsistencies that currently exist between utilities regarding their data reporting. They stress that utilities must take all necessary steps to ensure that the IEDR contains timely and accurate information.

ASX points out that the availability of energy data is not consistent across NYS, partially due to inconsistent implementation of AMI. ASX considers a broader implementation of AMI as very important to the success of integrated energy data resource (IEDR).

Utilidata emphasis three important recommendations to achieve the IEDR’s goals. These include linking development of AMI with

the IEDR to ensure easy collection of customer and system data, recognizing the importance of real-time, grid-edge data for both operations and planning, and requiring key capabilities for new AMI rollouts to ensure that this major investment can provide actionable data to the IEDR platform.

The Path Ahead

AEA believes that more information is needed on how the IEDR will be operationalized regarding the number of providers, future changes, complaint reporting, and future technological advancements.

AEE recommends that the Commission seek more stakeholder input on whether the IEDR should be a centralized system versus a user interface for a more network-based system as it considers the development of the IEDR.

CAA is concerned with the role of the project manager being an independent contractor due to a lack of experience and conflicts of interest. They propose an alternative governance model that organizes roles into separate design and implementation tracts, with both tracts managed by NYSERDA acting as the Program Manager.

The Joint Utilities believe that the IEDR Whitepaper benchmarking discussion lacked acknowledgments of crucial data privacy changes that may impact the Joint Utilities' ability to provide customer information.

RESA believes that the Commission should establish clear goals, milestones, and timeframes to guide progress toward developing and implementing the IEDR in a phased approach with help from highly qualified personnel and input from a full range of stakeholders.

General Recommendations for an Integrated Energy Data Resource

The City of New York currently experiences a gap in its benchmarking building energy usage data when it comes to buildings smaller than 25,000 sq. feet. The City believes this would make a good use case for IEDR. Mission Data strongly agrees with The City of New York's request that building owners receiving monthly whole-building aggregated usage data should not be subject to any eligibility requirements. Mission data also supports the Commission collecting statistics from Energy

Services Entities (ESEs) seeking certification to find out how long it takes to become certified as an accountability measure.

The Joint Utilities agree that the IEDR development approach should be nimble, able to respond to evolving market needs and technological capabilities in a timely and cost-effective manner while providing upfront value that third parties and developers need to design and launch products. They also believe that the platform should evolve from a set of baseline or core use cases and system requirements that are prioritized based on cost-effectiveness and stakeholder value. Additionally, they believe that Staff and the Commission should clearly define limitations on liability for the Joint Utilities following the transmittal of data to the platform. They believe it is crucial that the Joint Utilities not be held responsible for instances which ESEs make improper use of customer or system data.

The Joint Utilities recommend that the cost recovery mechanism for implementation of the IEDR be clarified before development is approved. The Joint Utilities support NYPA's and LIPA's involvement in the IEDR development process, but also believe they should share a portion of the cost for development. They also believe that not all system and customer data should be centralized, as it is not always cost-effective to do so.

RESA believes that if there is any opportunity for the data to vary between EDI and the IEDR (e.g., data is entered manually in the IEDR), the Commission should clarify that, in the event of a discrepancy, the EDI data will be considered the accurate information.

AEE advises against large investments in on-premises hardware and supporting systems to support the IEDR. It would be a nearly impossible task to appropriately size on-premises computing systems up front when the design and user demand are hard to predict and may also vary considerably over time. They believe the capabilities of the system should be prioritized by the use cases they serve.

The EPA recommends integrating their Portfolio Manager web services within the IEDR functionality to capture and house details that will subsequently facilitate meter-to-building mapping and allow building owners and operators to request the automated delivery of data directly from the IEDR, rather than relying on a patchwork of individual utility solutions. This would simplify the process for building owners/operators as they

would only need to manage one process for obtaining customer data and deal with one source of customer questions.

ASX affirms the NY DPS Staff recommendation that a state-wide system described as an integrated energy data resource (IEDR) would become a basis for enabling utilities, customers, distributed energy resource (DER) providers, various agencies, and others who offer energy data assistance for the purpose of moving a new energy landscape forward.

Program Oversight

CAA believes that the Advisory Group should have a more active design role and recommends establishing an Advisory Services Fund to support it.

Logical Buildings agrees that there should be an Advisory group designated to work with stakeholder groups in order to obtain guidance about what information is important for each type of system participant.

NYPA supports the creation of a Steering Committee and Advisory Group and requests that its Grid Flexibility and Clean Energy Advisory Service group be included as an initial member of the Advisory Group. They believe their participation in the Advisory Group can offer stakeholders, the Steering Committee, the Program Sponsor, and the Program Manager with common, effective practices and lessons learned that will allow for the development of an IEDR that is tailored to meet both customer needs and achievement of the CLCPA's clean energy goals. NYPA supports a structure that allows stakeholders and subject matter experts to be directly involved in program development but cautions against prescribing firm outputs from each group at the outset of the program.

NYSERDA supports the proposal in the Staff Whitepaper to employ a Steering Committee to ensure direct DPS Staff involvement throughout the duration of the process, however, a flexible regulatory construct should be in place to ensure full compliance by the jurisdictional entities to meet the needs of the IEDR as those needs are identified. This includes cooperation from the utilities to align utility capital and operations planning and regulatory requirements for the creation and operation of the IEDR. Also, the foundational data access framework issues would need to be resolved prior to developing the IEDR.

RESA believes the Commission should establish experience-based qualification requirements for Steering Committee members. Additionally, the Steering Committee should meet as frequently as necessary to achieve IEDR milestones, even if that is more than once a month. RESA supports an Advisory Group that represents all stakeholder interests as no single stakeholder can represent the varying interests in the energy market.

Program Sponsor

AEE does not recommend a specific project sponsor at this time but does urge the Commission to consider the risks and reward structure associated with IEDR as a vital design component that will determine the program's ultimate success.

CAA believes that the PSC cannot expect experts to substantively engage unless they have an opportunity to be compensated. NYSERDA could issue a PON asking for proposals for IEDR public and private use cases, providing selected proponents resources to join the Advisory Group and to test the IEDR platform as a client.

Logical Buildings agrees that NYSERDA would be an appropriate Program Sponsor.

NYSERDA recommends that any entity serving as Program Sponsor should have access to technical expertise, prior experience in identifying software, and developing solutions for information systems along with experience enabling and managing user access to secure data, cybersecurity acumen, and an understanding of how solutions providers can better utilize grid-related energy data.

Program Manager

Mission Data is concerned with the significant delegation of the Commission's authority to other entities that, unlike the Commission, are not designed to serve the broader public interest.

RESA believes that the task of selecting the Program Manager should not be assigned exclusively to the Program Sponsor. Members of the Steering Committee and Advisory Group will have experience and knowledge that could guide selection of the Program Manager. This program manager should also be responsible for protecting against cybersecurity risks.

ASX recommends the Program Manager (NYSERDA) should explicitly report to the Program Sponsor. ASX recommends the Program Manager could be an external entity skilled in defining and delivering substantial data-based systems for broad stakeholder groups.

Solution Architect

CAA believes the Solution Architect should either be NYSERDA staff or an Ombudsman contractor.

Logical Buildings agrees with the need for a central repository for all the information that may be utilized for providing energy management services. They also agree that material relevant to educate third parties as to which geographic areas may have the highest need for certain services should also be made available to DER developers.

RESA believes that the following should be added to the nonexclusive list of use cases that the Solution Architect should include presented in the Whitepaper: Use cases supporting ESCO functions and Use cases supporting academic/research functions. RESA also believes that the Commission should assign the highest priority level to use cases supporting ESCO functions.

The EPA agrees with the consideration of the “building energy benchmarking” use case and stresses that “building owners and operators” will need to be included in the list of specific “user categories” to be considered. They caution against the owner/operator being treated as a unique category of data requestor with a unique need for streamlined access to the whole-building consumption data in question. They also believe it important to consider a functional distinction between customers, building owners/operators, and other third parties, and to ensure that data access authorization requirements recognize the unique position of the building owner/operator.

IEDR Design, Implementation, and Operation

CAA thinks that NYSERDA, with help from the Solution Architect, can procure a technology contractor to supply these services.

The City of New York, along with ConEd and National Grid, have developed records that match customer accounts to individual buildings. Currently, there is no formally established method in place for the utilities to update the building/account matching

records to ensure that the correct energy consumption values are being submitted for energy benchmarking reports, and the City requests this to be included in the IEDR.

The Joint Utilities believe that in Appendix B there are aspects of Staff's request that are not detailed to the point that the Joint Utilities can prepare a cost estimate.

Mission Data believes that aggregation standards should evolve over time and should be based on a mathematically rigorous framework approved by the Commission. The public release of different aggregated datasets should be tailored to the particulars of the use case; mathematically analyzed; and revisited over time as circumstances change. They propose eight different categories of use cases based on whether or not customer consent is required prior to exchange of the information.

NYSERDA believes that a detailed implementation and verification process with strong market engagement is required. They also believe the Commission should determine the most responsible way to set privacy, cyber and other related standards and the most responsible way to establish accountability and responsibility when it comes to security.

RESA believes that the Commission should require the Solution Architect to provide the opportunity for, and take into consideration, input from all stakeholders, not just specific stakeholders in regard to the preliminary design plan describing the elements, structure, timing, deliverables, and estimated cost of the design effort.

ASX recommends that the Program Sponsor and Program Manager could establish an IEDR deployment plan that starts with what data is available and grows with the subsequent deployment of data infrastructure, such as AMI, hence an iterative release approach.

Appendix B Data Elements

The EPA comments on additional data points for consideration such as a unique building identifier. Many utilities currently do not track the concept of a building or property in their customer information systems, something that could prove useful in meter-to-building mapping for aggregated data provision. EPA suggests the Unique Building Identifier (UBID), which is currently being piloted by the Pacific Northwest National Lab

(PNNL). Additionally, persistent documentation of the mapping relationships for verification of accuracy of the consumption data being reported should be recorded. EPA recommends the IEDR team coordinates with the ENERGY STAR team who are currently in the process of scoping functionality in Portfolio Manager that would allow for the identification and documentation of the "constituent" meters for which consumption values are being combined into whole-building totals for ultimate entry as an "aggregate" or "virtual" meter object in Portfolio Manager Property owners have increasingly including clauses in their lease documents that allow data release authorization. The EPA brings attention to these clauses so that the IEDR can facilitate release of this data upon request. Additionally, for properties with on-site renewables, the IEDR should have data points for gross amount of grid electricity delivered to a building for a given time period or the specific amount of electricity generated onsite and sold back to the grid for that same time period.