

Integrated Energy Data Resource (IEDR) Program Quarterly Report through December 31, 2021

Final Report | January 2022



NEW YORK
STATE OF
OPPORTUNITY.

NYSERDA

NYSERDA's Promise to New Yorkers:

NYSERDA provides resources, expertise, and objective information so New Yorkers can make confident, informed energy decisions.

Our Vision:

New York is a global climate leader building a healthier future with thriving communities; homes and businesses powered by clean energy; and economic opportunities accessible to all New Yorkers.

Our Mission:

Advance clean energy innovation and investments to combat climate change, improving the health, resiliency, and prosperity of New Yorkers and delivering benefits equitably to all.

Integrated Energy Data Resource (IEDR) Program

Quarterly Report through December 31, 2021

Final Report

Prepared by:

New York State Energy Research and Development Authority

Albany, NY

January 2022

Abstract

The Integrated Energy Data Resource (IEDR) Quarterly Report is intended to inform the Public Service Commission (PSC), market participants, and additional parties interested in the progress of the IEDR program. More specifically, this report provides information on progress made in achieving the IEDR program's stated goals and objectives.

Keywords

Integrated Energy Data Resource, IEDR, use case, IEDR Advisory Group, IEDR Steering Committee, Utility Coordination Group

Table of Contents

NYSERDA Record of Revision	i
Abstract	iii
Keywords.....	iii
List of Tables.....	iv
1 Background.....	1
2 Program Status	4
2.1 Completed Milestones.....	4
2.2 Future Milestones.....	5
2.3 Q4 2021 Schedule Deviations and Planned Response Activities.....	5
2.4 Future Potential Schedule Deviations and Planned Response Activities.....	6
3 Stakeholder Engagement	7
3.1 Background	7
3.2 Stakeholder Engagement Status	7
3.3 Advisory Group.....	8
3.4 Utility Coordination Group	8
4 Use and Status of Funding.....	10
5 Program Plans for 2022	12
6 Program Risk Assessment and Mitigation Plan	13
Endnotes	EN-1

List of Tables

Table 1. Completed Milestones—Fourth Quarter 2021	4
Table 2. In Progress Milestones—Fourth Quarter 2021	4
Table 3. Future Milestones.....	5
Table 4. IEDR Cost Allocation.....	10
Table 5. IEDR Budget Allocation for Phase 1.....	10

1 Background

New York State is transforming its electricity system into one that is cleaner and more resilient and affordable. However, effective access to useful energy-related data is required to achieve these energy policy goals. The urgency of providing this data has increased with the recent adoption of the Climate Leadership and Community Protection Act (Climate Act).

On February 11, 2021, the New York Public Service Commission (PSC) issued its order implementing an integrated energy data resourceⁱ (IEDR Order) and directed the implementation of an IEDR to securely collect, integrate, and provide broad and appropriate access to large and diverse sets of useful energy-related information on one statewide data platform. The IEDR Order designated The New York State Energy Research and Development Authority (NYSERDA) as the IEDR Program Sponsor responsible for defining, initiating, overseeing, and facilitating the IEDR program on behalf of New York State.

The IEDR Order directs NYSERDA to file quarterly reports in this proceeding, with reports 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. As directed, these program reports will, in the context of the 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.

In issuing the IEDR Order, the PSC adopted the detailed approach and plan for the establishment of an IEDR presented in a whitepaper published by the staff of the Department of Public Service (DPS) in May 2020.ⁱⁱ

The IEDR Order articulated the foundational principles for the development of the IEDR through the entire life cycle of the initiative and stated that the IEDR will be guided by the policy of obtaining the best overall value for New York State. This involved stakeholders to accelerate implementation timelines, reduce initiative costs and risks, and protect the agreed-upon scope by partnering with high-quality service providers aligning with the State's values.ⁱⁱⁱ

NYSERDA, as the Program Sponsor, has established a process that is based on three commitments:

1. Effective and extensive collaboration with and among stakeholders, including the State's utilities.
2. Procuring the services of individuals and organizations that possess the necessary expertise and experience in the development, implementation, and operation of a data platform of similar scale and scope.
3. Unambiguous regulatory requirements including firm schedules and milestones.

On April 15, 2021, the PSC issued an order to establish a uniform and comprehensive Data Access Framework to govern the means and methods for accessing and protecting all types of energy-related information.^{iv} This order was based on DPS Staff recommendations.^v Accordingly, all aspects of designing and operating the IEDR will comply with any such framework that the PSC may establish.

The IEDR Order designated NYSERDA to assume the role of the IEDR Program Sponsor and assigned responsibility for defining, initiating, overseeing, and facilitating the IEDR program on behalf of the State. The Program Sponsor's principal duties include the following:

1. Creating the IEDR Program Charter to formally establish the IEDR Program's purpose, scope, guiding principles, objectives, participants, roles, and responsibilities.
2. Organizing the membership and initial meeting schedule for an IEDR Steering Committee.
3. Organizing the membership and initial meeting schedule for an IEDR Program Advisory Group.
4. Organizing the membership and initial meeting schedule for an IEDR Program Utility Coordination Group.
5. Specifying, procuring, and administering the services provided by a professional program manager.
6. Providing the means and methods for expending the PSC-directed funding related to the program and reporting of such expenditures and IEDR program progress.
7. Ensuring robust stakeholder engagement throughout the life of the IEDR program through multiple means of communication.
8. Monitoring adherence to the Program Charter by all program participants.
9. Helping the Program Manager investigate and resolve issues that could negatively affect costs, schedule, or benefits.

The IEDR Order establishes the regulatory expectation that the IEDR will enable approximately 50 use cases over Phase 1 and 2 and specific deadlines for achieving minimum performance capabilities. This approach enables the development, implementation, and operation of the IEDR in meaningful and achievable segments. Specifically, the PSC established a two-phase schedule of the development and operation of the IEDR:

- Phase 1: The initial IEDR implementation will enable at least five of the highest priority use cases with an expectation that there could be 10 or more achieved. Phase 1 will be completed within 24 months of the work's commencement by the Program Manager (Q4 2023).
- Phase 2: The initial IEDR will expand and enhance approximately 40 additional use cases, building on the successful implementation and operation of Phase 1. Phase 2 will be completed 36 months after the completion of Phase 1 (on or about July 30, 2026).

The IEDR Order further recognizes that details—associated with the development, design, and implementation of each phase of the IEDR Program—must be preceded by specific activities requiring planning and that will impact the scheduling of subsequent activities and the establishment of milestones. These activities include obtaining:

- Advice and recommendations of stakeholders through workshops and technical conferences.
- The services of a Program Manager, Solution Architect, and other professional resources as described in the IEDR Order.
- A workplan and budget from the Program Manager for each of Phase 1 and Phase 2.
- Recommendations of the Advisory Group.

2 Program Status

2.1 Completed Milestones

Table 1 provides an overview of completed milestones during the fourth quarter of 2021. Milestones are established through the Updated Program Sponsor Implementation Plan (PSIP) which was filed on October 1, 2021.^{vi} A full list of completed milestones retroactive to the beginning of the program is available in appendix B of the PSIP. All Q4 milestones were completed on time as anticipated.

Table 2 provides an overview of milestones that were initiated on schedule and are in progress.

Table 1. Completed Milestones—Fourth Quarter 2021

Milestone	Program Topic	Date Completed
IEDR Program Dashboard operational	Reporting	October 31, 2021
First quarterly report filed.	Reporting	October 21, 2021
Program Charter to be adopted by the Advisory Group.	Charter	October 21, 2021
General Stakeholder Engagement Meeting (Virtual use case stakeholder event).	Stakeholder Engagement	November 15, 2021
Stakeholder Engagement and Communication Plan drafted and finalized.	Stakeholder Engagement	October 29, 2021
Develop draft procurement documentation for IEDR Development team.	Solution Architect + Development RFP	December 31, 2021
IEDR Utility Data Assessment completed.	Utility Coordination Group	December, 2021

Table 2. In Progress Milestones—Fourth Quarter 2021

Milestone	Program Topic	Date Completed
Outreach to organizations that submitted use cases and may be aligned with prioritized use cases.	Stakeholder Engagement	Started Q4, 2021, as anticipated
Use case interviews to assist in user story and user journey development.	Stakeholder Engagement	Started Q4, 2021, as anticipated
Workshops/focus groups for each use case to validate user stories and user journeys.	Stakeholder Engagement	Started Q4, 2021, as anticipated

2.2 Future Milestones

Table 3 provides an overview of near-term milestones including expected dates for completion as established through the PSIP and any expected deviations from such dates.

Table 3. Future Milestones

Milestone	Program Topic	Date Expected	Schedule Deviation
Outreach to organizations that submitted use cases and may be aligned with prioritized use cases (in progress).	Stakeholder Engagement	Q4 2021 (starting)	Not expected
Use case interviews to assist in user story and user journey development (in progress).	Stakeholder Engagement	Q4 2021–Q2 2022	Not expected
Workshops/focus groups for each use case to validate user stories and user journeys (in progress).	Stakeholder Engagement	Q4 2021–Q2 2022	Not expected
Issue RFP for Solution Architect + Development contractor teaming arrangement and related services.	Solution Architect + Development RFP	Q1 2022	Not expected
Contract with Solution Architect + Development team executed, and work commences.	Solution Architect + Development RFP	Q2 2022	Not expected
Sprint cycles focused on converting user stories/journeys for 3–5 use cases into functional IEDR prototypes.	Public Iterations of IEDR	Q2 2022–Q3 2022	Not expected
Final round of data access/security review and User Acceptance Testing of the IEDR’s first public iteration.	Public Iterations of IEDR	Q3 2022	Not expected
First public iteration of the IEDR released.	Public Iterations of IEDR	Q4 2022	Not expected
Sprint cycles focused on converting user stories/journeys for an additional 2–5 use cases into functional IEDR prototypes.	Public Iterations of IEDR	Q4 2022–Q3 2023	Not expected
Phase 2 proposal filed.	Reporting	January 15, 2023	Not expected
Phase 1 summary report filed.	Reporting	July 30, 2023	Not expected
IEDR Platform User Conference.	Stakeholder Engagement	Q2 2023	Not expected
Steering Committee reviews and approves declaration of IEDR MVP.	Public Iterations of IEDR	Q3 2023	Not expected
IEDR MVP declared (5–10 use cases deployed) and end of Phase 1.	Public Iterations of IEDR	Q4 2023	Not expected

2.3 Q4 2021 Schedule Deviations and Planned Response Activities

All Q4 milestones were completed and/or initiated in accordance with the PSIP.

In an effort to ensure IEDR tasks are deployed in accordance with the PSIP, monthly reviews of the Integrated Master Schedule are conducted by the Program Manager. Any deviations to the PSIP will be shared with the broader IEDR team and noted on the IEDR dashboard and in future IEDR Quarterly Reports.

2.4 Future Potential Schedule Deviations and Planned Response Activities

As of December 31, 2021, no schedule deviations are expected for future milestones. This section will be updated in future quarterly reports if schedule deviations become apparent.

3 Stakeholder Engagement

3.1 Background

The IEDR Order articulates policy objectives and establishes venues and processes that are intended to assure the broadest possible opportunity for stakeholder contributions throughout the entire lifecycle of the IEDR initiative. Robust stakeholder engagement is required to insure the centralized platform provided by the IEDR will be a trusted resource that all interested parties and stakeholders can use to efficiently access and analyze pertinent elements of the State's energy system and customer information. Furthermore, stakeholder engagement will play a critical role in defining and prioritizing the many use cases anticipated by the IEDR Order. The IEDR Order provides for the establishment of an Advisory Group that will bring together a broad spectrum of stakeholder perspectives to inform the design and operation of the IEDR. The Program Sponsor will organize, convene, and facilitate the work of the Advisory Group.

Achieving the breadth and depth of stakeholder participation envisioned by the IEDR Order will require meaningful opportunities for broad stakeholder engagement that complements and contributes to the Advisory Group's work. To that end, the Program Sponsor will provide all interested stakeholders with meaningful opportunities to contribute to the development of the IEDR through a robust schedule of workshops, technical conferences, periodic reports, and other formats.

These activities will be designed in consultation with stakeholders, the Advisory Group, Steering Committee, and Program Manager. Overall responsibility and accountability for stakeholder engagement reside with the Program Sponsor which/who will collaborate with and call upon the Program Manager to facilitate stakeholder engagement activities.

3.2 Stakeholder Engagement Status

Interested stakeholders were invited to participate in an initial process to identify, characterize, and prioritize IEDR use cases. Initial use case comments were submitted by stakeholders by July 23, 2021 and are available on NYSERDA's IEDR website.^{vii}

On November 15, 2021, NYSERDA held a virtual general stakeholder meeting to review and solicit additional feedback regarding the definition of a use case, submitted stakeholder use cases, and a prioritization framework for evaluating and selecting Phase 1 use cases.

Broad outreach was conducted to expand the IEDR stakeholder pool, and a new use case template was made available on the IEDR dashboard to facilitate the submission of additional use cases.

3.3 Advisory Group

NYSERDA held three Advisory Group meetings during Q4 2021, which provided the opportunity to work collaboratively and gather commentary from a diverse stakeholder group. Advisory Group meetings have a public segment, which is available to public stakeholders, followed by more in-depth conversations with the Advisory Group itself. The October 21st Advisory Group meeting provided definitions of use cases, shared criteria for prioritizing use cases, and was followed by the private session focusing on use case categorization. The November 18th session reviewed inputs on use case categorization framework and coverage of existing use cases as well as the expected level of engagement for use case development and prioritization moving forward. The last Advisory Group meeting of 2021, held on December 16th, discussed criteria for the prioritization framework and the main use cases and data types identified by organizations, and was followed by breakout sessions to get direct feedback for each use case. Moving forward, the Advisory Group will continue to refine the prioritized use cases and will begin to discuss data needs and expectations from utilities. The list of Advisory Group members is available on the IEDR website.

3.4 Utility Coordination Group

NYSERDA convenes a Utility Coordination Group (UCG) as established by the IEDR Order. The UCG provides a venue for collaboration, coordination, and oversight of utility activities related to the design and implementation of the IEDR and alignment with the schedules and activities of the potential Data Access Framework. The UCG is comprised of members of the Steering Committee or their designees, NYSERDA, the Program Manager, and the senior-level leader of each utility IEDR implementation team that is established in compliance with the IEDR Order. The UCG will meet monthly throughout Phase 1.

In Q4 2021, a UCG meeting was held on November 1st, which touched upon topics including anticipated milestones through Q1 of 2022, stakeholder follow-ups, and workings on the Data Access Framework (DAF), utility data assessments, and utility transfers. The UCG meeting slated for December 4th was canceled to provide time for members to review data surveys and focus on individualized conversations with the utilities about their data systems and data availability.

To further understand utility data needs and data availability, 1:1 interviews were conducted with utility entities throughout Q4 2021. Key insights and takeaways will be shared during the next UCG meeting (scheduled for January 10, 2022).

In Q1 2022, the UCG plans to discuss the use case selections and prioritization methods, review utility interviews and utility data request complications, and determine schedules, activities, and principles of the Data Access Framework and its impacts to IEDR.

4 Use and Status of Funding

The IEDR Order established a budget of \$13.5 million for NYSERDA's Phase 1 efforts. The Order directed recovery of these costs in proportion to the total electric load for 2019 among NYPA, LIPA, and jurisdictional utilities, with the costs allocated among jurisdictional utilities in the same manner as costs allocated and collected through the bill-as-you-go agreements. Based upon 2019 load values provided by DPS staff, costs will be allocated in the following apportionment^{viii}:

Table 4. IEDR Cost Allocation

IEDR Cost Allocation										
IOU	2019				%	74.2%	x	BAYG Allocation%	=	IEDR Allocation%
	Delivery Service Load ¹	NYPA Load Delivered by IOU	IOU Load net of NYPA Load							
Central Hudson	4,962,793	98,360	4,864,433	3.4%			5.5%		4.1%	\$551,000
Consolidated Edison	55,401,075	10,722,982	44,678,093	31.1%			40.5%		30.1%	\$4,057,364
New York State Electric and Gas	17,217,304	1,149,292	16,068,012	11.2%			12.9%		9.6%	\$1,292,346
Niagara Mohawk	33,986,467	4,098,738	29,887,729	20.8%			30.1%		22.3%	\$3,015,473
Orange and Rockland	4,122,410	28,326	4,094,084	2.8%			4.1%		3.0%	\$410,746
Rochester Gas and Electric	7,290,413	123,701	7,166,712	5.0%			6.9%		5.1%	\$691,255
Long Island Power Authority	18,801,000	696,124	18,104,876	12.6%	12.6%				12.6%	\$1,698,947
New York Power Authority	18,999,198		18,999,198	13.2%	13.2%				13.2%	\$1,782,869
	160,780,660		143,863,137	100.0%	100.0%		100.0%		100.0%	\$13,500,000

The following table summarizes the approved budget and cumulative activity through December 31, 2021.

Table 5. IEDR Budget Allocation for Phase 1

Table 1: Cumulative activity through December 31, 2021											
Phase 1	Cumulative Approved		Encumbered (c)	Expended + Encumbered	% of Total Budget	Pre-encumbered Contracts (d)	Pre-encumbered Solicitations (d)	Expended + Encumbered	Pre-encumbered as a % of Total	Uncommitted	
	Budget	Expended (b)									
Administration costs as Project Sponsor	1,500,000	196,200	-	196,200	13.1%	-	-	196,200	13.1%	1,303,800	
Procured Resources	12,000,000	394,000	4,976,902	5,370,902	44.8%	-	-	5,370,902	44.8%	6,629,098	
Total	13,500,000	590,200	4,976,902	5,567,102	41.2%	-	-	5,567,102	41.2%	7,932,898	

(a) 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

(b) Expended funds include contractor invoices processed for payment by NYSERDA.

(c) Encumbered funds include remaining funds obligated under a contract or purchase order.

(d) Pre-Encumbered funds include planned funding for contracts awarded and under negotiation; and planned funding under active development through open solicitations with upcoming proposal due dates.

All IEDR program-related expenditures will be managed by the program sponsor in compliance with NYSERDA's budget and accounting policies and principles.

The IEDR program expects significant growth in expenditures in 2022 as system development costs for software services related to the IEDR's design, build, and operation are incurred. The IEDR program will provide more detail regarding these expenditures against baseline estimates in future reports.

For a full overview of the projected costs of the IEDR, please refer to the Updated PSIP.

5 Program Plans for 2022

The IEDR program's first year was dominated by implementing standardized procedural, technological, and stakeholder engagement mechanisms. These activities included developing the IEDR Program Charter and Program Sponsor Implementation Plan; convening and managing the IEDR Steering Committee, IEDR Advisory Group, and Utility Coordination Group; issuing solicitations for selecting and contracting with an IEDR Program Manager and a Utility Data Advisor; and soliciting stakeholders for the first round of IEDR Use Cases that will ultimately inform and direct the development of the IEDR platform.

As Phase 1 of the program is now underway, the focus over the next year will be on execution and implementation. Priorities over Q1 of 2022 will include: (1) continuing stakeholder engagement efforts to refine and finalize the prioritized IEDR use cases, (2) establish a firm and consolidated use case repository and (3) continue to identify specific utility and non-utility data required to support high-priority Phase 1 use cases.

Q2 efforts will be centralized around further development of the IEDR Program, including: (1) procuring the Solution Architect and Development Team to begin IEDR development and (2) begin developing sprint cycles focused on converting user stories/journeys for 3–5 use cases into functional IEDR prototypes.

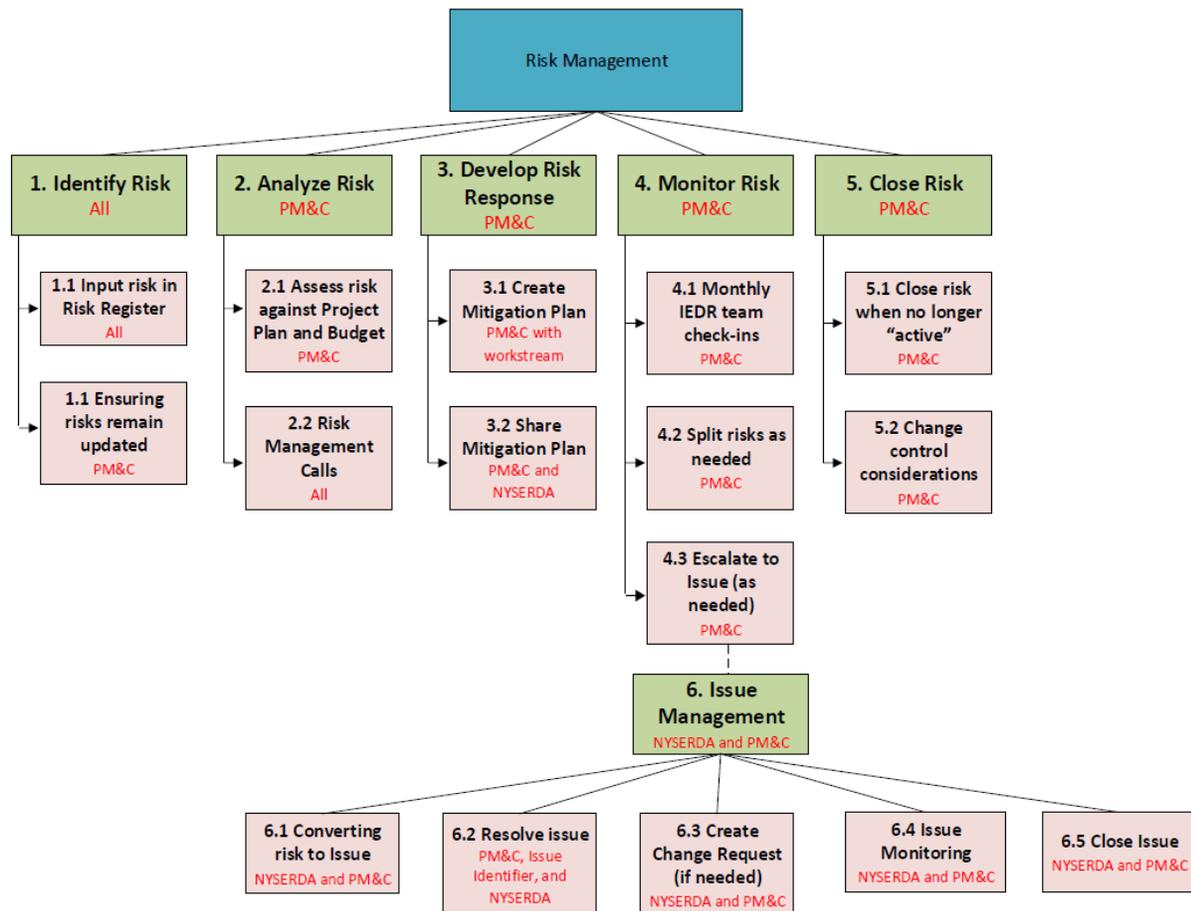
6 Program Risk Assessment and Mitigation Plan

As stated in the PSIP and as outlined in section 5.5 of the IEDR Whitepaper:

“The Program Manager will organize and conduct the activities, including regular consultations with NYSERDA, needed to facilitate the timely anticipation, identification, and mitigation of risks that could hinder or prevent successful IEDR implementation, and provide the approach to enable NYSERDA to provide timely communication of risks with the Steering Committee.”

With the commencement of Phase 1, a comprehensive risk assessment and mitigation plan with extensive tracking has commenced. The Program Manager is actively coordinating with all external partners to capture and mitigate risks in accordance with the Risk Management Plan. At this time, there are no “high” or “critical” severity risks identified. Figure 1 depicts an overview of the Risk Management Plan.

Figure 1. IEDR Risk Management Plan Overview



Endnotes

- i 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.
<http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={3CDC0522-7F50-49E1-A053-EA236B3DED10}>
- ii Case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, Department of Public Service Whitepaper Recommendation to Implement an Integrated Energy Data Resource, May 29, 2021. <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={43298F6A-3CA4-435F-BC9D-6DEF6F575836}>
- iii The IEDR Order, P.33.
- iv Case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, Order Adopting a Data Access Framework and Establishing Further Process, April 15, 2021.
<https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={A228D385-3E0E-41BC-A433-8ABD62F8A6E4}>
- v Case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, Department of Public Service Staff Whitepaper Regarding a Data Access Framework, May 29, 2021.
<http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={0375BBDD-5F71-44E0-A897-9BE2AD5F2A0E}>
- vi Case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, Updated Program Sponsor Implementation Plan October 1, 2021.
<http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={0375BBDD-5F71-44E0-A897-9BE2AD5F2A0E}>
<https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={B9BC09C2-F8F1-43B4-8CF5-D90C10C6AD2C}>
- vii <https://www.nyserda.ny.gov/All-Programs/Programs/Clean-Energy-Standard/Important-Orders-Reports-and-Filings/Integrated-Energy-Data-Resource>
- viii These numbers differ from those originally published in the Integrated Energy Data Resource Initial Program Sponsor Implementation Plan. The update reflected here and in the Updated Program Sponsor Implementation Plan disaggregates NYPA load from the loads of the Investor-Owned Utilities and presents the adjusted Bill As You Go allocation.

NYSERDA, a public benefit corporation, offers objective information and analysis, innovative programs, technical expertise, and support to help New Yorkers increase energy efficiency, save money, use renewable energy, and reduce reliance on fossil fuels. NYSERDA professionals work to protect the environment and create clean-energy jobs. NYSERDA has been developing partnerships to advance innovative energy solutions in New York State since 1975.

To learn more about NYSERDA's programs and funding opportunities, visit nyserdera.ny.gov or follow us on Twitter, Facebook, YouTube, or Instagram.

**New York State
Energy Research and
Development Authority**

17 Columbia Circle
Albany, NY 12203-6399

toll free: 866-NYSERDA
local: 518-862-1090
fax: 518-862-1091

info@nyserdera.ny.gov
nyserdera.ny.gov



State of New York

Kathy Hochul, Governor

New York State Energy Research and Development Authority

Richard L. Kauffman, Chair | Doreen M. Harris, President and CEO