Matter Number 16-00681, In the Matter of the Clean Energy Fund Investment Plan

Clean Energy Fund: REV Technical Assistance Chapter

Portfolio: Market Development

Submitted by:

The New York State Energy Research and Development Authority

Revised May 7, 2021

Clean Energy Fund: REV Technical Assistance Chapter		
Revision Date	**Description of Changes**	**Revision on Page(s)**
May 15, 2016	Original Issue	Original Issue
June 23, 2017	Revised to refine the target market and certain metrics to better align with initial market uptake and stakeholder feedback. Text and Tables 2 and 3 have been revised to reflect these changes and a shift in timing of budget and benefits.	Multiple
November 1, 2017	Edited wording of outcomes in Table 3 to clarify it is measuring outcomes since initiative began.	8
April 19, 2019	Added $500,000 to budget to reflect funding transfer from Market Characterization and Design Chapter (see Appendix B), extended timeframe for ongoing activities and completion of the draft innovation plan, as well as added funding of two new "Innovation Sprints." As part of the Annual Investment Plan & Performance Report (IPPR) process, NYSERDA has updated budget and benefit values to align with actuals for past years and adjusted budget and benefit forecasts for future years, as appropriate, based on experience to date. Budget and benefit tables have been moved to Appendix B of this chapter and output/outcome tables have been moved to Appendix C of this chapter. Updated rounding convention has been applied to budget and benefit tables.	Multiple5-8
February 2020	Added new activities and associated funding.	Multiple
June 5 ,2020	As part of the Annual Investment Plan & Performance Report (IPPR) process, NYSERDA has updated budget and benefit values to align with actuals for past years and adjusted budget and benefit forecasts for future years, as appropriate, based on experience to date.	Multiple including Appendix B
May 7, 2021	As part of the Annual Investment Plan & Performance Report (IPPR) process, NYSERDA has updated budget and benefit values to align with actuals for past years and adjusted budget and benefit forecasts for future years, as appropriate, based on experience to date. The chapter has been updated to provide a bridge between committed and acquired planning. Committed budget and benefits summaries have been added to plan text, while Appendix B has been updated to reflect expenditure & acquired benefits plans.	Appendix B 9, Appendix B

REV Technical Assistance

New York's Reforming the Energy Vision (REV) seeks to promote more efficient use of energy, deeper penetration of renewable energy resources such as wind and solar, and wider deployment of distributed energy resources (DER), such as micro grids, roof-top solar, other on-site power supplies, and storage. By introducing more competitive market incentives, New York seeks to unlock innovative solutions and business models and attract more private capital to modernize its energy system. To facilitate such innovation, NYSERDA will invest to enable utilities, communities, and other market participants to receive guidance, technical support, and other assistance.

The initial initiative described in this Chapter is REV Connect, a means of informing third parties of new opportunities for innovation throughout the State, helping utilities define their needs and identify solutions to meet those needs in the changing REV landscape, and offering customized technical assistance to help move solutions from idea to impact. The initiative was updated in June 2017 to refine the target market segments for REV Connect based on initial stakeholder interviews, update the expected timeframe for achieving key milestones, and clarify certain metrics to better align with the REV Connect facilitation process. The changes also included a reduction in the target number of utility business models to be identified and executed with REV Connect support (from 18 to 14 over the 2017-2018 period) to reflect a more accurate view of what the market could support.

The initiative was updated again in April 2019 to reflect a transfer of funding from the Market Characterization and Design Chapter in the 2019 budget, which enabled an additional year of REV Connect operations and funded two new REV Connect Innovation Sprints, which support new business model development and partnership formation between utilities and market solution providers to test and deploy innovative REV solutions. An additional update in January 2020 added funding for up to four additional years of continued operations, including maintenance of the submission portal and submission screening and partnership facilitation processes. The update also includes an increased budget to provide funding to support market tests of proposals that are not mature enough for a utility partnership. These additional market test funds will be provided through a competitive process administered by NYSERDA, in collaboration with utilities. This process will seek market test proposals that align directly with other NYSERDA Clean Energy Fund programs such as those focused on Low to Moderate Income, Advanced Energy Efficiency, and utility-oriented pilots.

8.1 REV Connect

8.1.1 Overview

Present Situation	As the utilities move beyond the first round of REV Demonstration (REV Demo) projects, the utilities, DER providers[1] and the State have identified a number of barriers and impediments to innovation and collaboration among all market participants that, if eliminated, will lead to more efficient development, implementation and replication of project ideas that advance REV including both REV Demo projects and others. Some of these barriers include: • The mismatch between the large volume of inbound project ideas and limited bandwidth within the utilities for assessing technical readiness • Limited resources at each utility to invest in developing and implementing innovative projects. • Lack of awareness of the points of contact for each utility • Insufficient or untimely feedback to DER providers on proposal concepts • Lack of easy access to information about the numerous opportunities within each utility and throughout the State • Insufficient process for sharing of learning from current projects as they progress as well as sharing learning from other States and countries and introductions to potential partners
Intervention Strategy	"REV Connect" is a structure to advance New York State's Reforming the Energy Vision[2] goals by facilitating the deployment of new technologies and business models in the New York market. REV Connect will help DER providers connect with New York State utilities to advance high quality REV demonstrations, non-wire alternatives and other innovative projects. For companies with a technology, product, service or business model innovation that creates value for energy customers in partnership with the utility, REV Connect will offer a channel to submit project ideas and to receive expert guidance, feedback, facilitation, and matchmaking with New York utilities and other potential market partners. REV Connect also will publicize opportunities, share good practices and convene market participants to enhance the culture of innovation and collaboration in NY State. To help accelerate innovation with utility portfolios, improve programming in the Clean Energy Fund, and to take advantage of high-quality opportunities coming through REV Connect, NYSERDA will also make funding available through a NYSERDA solicitation to support in-field market tests of high value projects. This NYSERDA solicitation will function as a streamlined approach to in-field market tests and will seek innovative projects such as those focused on Low to Moderate Income (LMI), advanced efficiency solutions, and utility-oriented pilots. For a visual representation of this strategy, please reference the flow chart entitled "Logic Model: REV Connect," which can be found in Appendix A.
Goals	REV Connect is envisioned as a platform that will evolve as the innovation ecosystem in the state energy system gains traction and grows. REV Connect will be a proactive catalyst of innovation in New York. It will provide a central venue to engage DER providers around new opportunities for applying innovation throughout the State, with emphasis on New York's distribution utilities. REV Connect will help utilities define their needs and identify solutions to meet those needs in the changing policy

[1] In this Investment Plan, DER provider encompasses companies that offer smart grid services and advanced distributed energy solutions, including energy efficiency, demand response, energy storage, electric vehicles, and distributed generation.

[2] Case 14-M-0101. See http://www.ny.gov/programs/reforming-energy-vision-rev

	and regulatory landscape, as well as provide customized interventions to help move solutions from idea to impact. It will offer DER providers a transparent, efficient path for accessing the New York market for clean energy by identifying potential partners and provide support to develop their ideas into actionable projects that solve real problems for customers and the State. REV Connect will also facilitate "match-making" services to connect DER providers with each other and with utilities and identify particular areas of focus for brainstorming workshops to engage broad input from technology, business, and policy interests on how to meet challenges as they arise.
State Energy Plan/Clean Energy Standard Link	By facilitating innovative business models and new partnerships between utilities, NYSERDA and DER providers, REV Connect has a role to play in helping achieve energy savings goals and greenhouse gas reductions as outlined in the New York State Energy Plan (SEP). Innovative projects ushered in with the help of REV Connect may reduce the need for capital investment in grid infrastructure and help improve affordability. Innovation will also promote increased customer engagement in energy markets including enabling the development of community-based energy systems and on-site energy systems that both improve environmental performance of utility distribution systems and improve choice and value for New York customers. • One of the primary challenges and opportunities cited in the SEP is the need to update the utility business model: "Today's utility business model is not well aligned for the transition to a more distributed energy future; as more consumers adopt distributed energy solutions, utilities' revenue requirements are concentrated on fewer customers, at the same time that load is flattening. This situation has resulted in a need to reform the current utility business model to ensure that it can accommodate, adapt to, and prosper through the integration of advanced technologies and greater levels of distributed energy resources." REV Connect is designed to help utilities evolve by taking advantage of new technologies and market trends to fulfill the new role REV and the State Energy Plan envisions for them. • One of the SEP Guiding Principles is Market Transformation. The SEP notes "In order to accelerate market transformation, REV initiatives will focus on identifying, mitigating, and removing common market barriers to clean energy deployment." REV Connect is designed to remove market barriers for clean energy providers and utilities to help innovative solutions and business models plug into New York's energy system. • Another SEP Guiding Principle is "Innovation and Technology": REV Connect will align energy innovation with market demand.

8.1.2 Target Market Characterization

Target Market Segment(s)	Targeted utility actors include Con Edison, Orange and Rockland, National Grid, Avangrid (NYSEG and RG&E), Central Hudson Gas and Electric, and PSEG-Long Island. Targeted DER providers include privately- and publicly-held entities providing grid services and advanced energy solutions.
Market Participants	• Investor owned utilities looking to partner with DER providers in new ways to meet customer goals and regulatory mandates. • Small, medium and large software solutions providers and original equipment manufacturers with a corporate strategic interest, balance-sheet capability, and human capital to support deployments of broad-based distributed energy resources. • Startup companies introducing cutting edge products and services for the grid.

	• Grid-technology and distributed energy resource deployment companies • New York State (NYS) Regulators
Market Readiness	• REV Connect was awarded the Utility Dive Project of the Year in December 2018 and has over 2019 has been fully embraced by market participants and Utilities alike. Utilities have incorporated the REV Connect innovation platform/process into their internal utility 2.0 and utility of the future organization activities. • Further, the REV Connect program has fostered a tremendously successful stakeholder engagement process across the innovation spectrum, which has accelerated continuous improvement across the both the utility and market solution provider community. • With many existing REV Demonstration projects and significant market interest in additional innovation opportunities, DER providers and utilities are primed to move forward with this initiative. REV Connect activities to date have primed the market for this next phase of the program, as evidenced by 88,000 portal visits, Sprint webinar attendance in the 300-400 participant range and over 350 innovation idea submissions as of 3Q 2019. Additional positive market indicators include: o 5 innovation sprints have been conducted through 2019 attracting 241 companies to submit proposals to the platform. o As of September 2019, we have received 122 submissions from the two sprints conducted in 2019. o There are approximately 8 partnerships that have been completed and 28 potential partnerships under active development and consideration by the utilities. • Continuing REV Connect will allow the State to capitalize on this momentum and offer an opportunity to engage with the market around innovation opportunities that can help solve some of the latest pressing policy and regulatory needs including natural gas energy efficiency and demand response, solutions for low income and disadvantaged communities, and clean heating and cooling solutions. Further, feedback from solution providers and utilities indicate a clear desire and willingness to move forward with REV Connect.
Customer Value	Projected benefits to the various customers include: • Higher quality of inbound projects for utilities • Streamlined process for DER providers interested in partnering with utilities other DER providers, and market participants. Improved understanding of needs and market solutions combined with a facilitated process to match the two • Improved/streamlined utility RFPs • Market impacting partnership opportunities for Utilities and solution providers that provide ratepayer benefits (30 Partnerships in progress as of Sept 2019) • Guidance, oversight and input is provided by the REV Connect Steering Committee and Advisory Committee.

8.1.3 Stakeholder/Market Engagement

Stakeholder/ Market Engagement	• REV Connect, at its core, is designed to be a platform and mechanism for continuous market engagement. REV Connect has been successful in engaging with the utilities to identify well-defined key priority areas that have allowed for targeted submissions aimed at specific identified areas of interest (e.g. low income, grid optimization, etc.). NYSERDA has and will continue to seek input from experts in the field to inform the overall strategy and implementation of REV Connect, including through the REV Connect Advisory Committee. • In 2019the REV Connect team interviewed each utility and a sampling of solution providers regarding areas where REV Connect provides value and

	where it can be improved to provide further value. In Summary, Utilities and market participants were in agreement the REV Connect provides significant value to their innovation initiatives and strongly advocated moving forward with REV Connect in future years.
	• Specific value points include:
	  • Ability to connect with the right people at utilities is very valuable
	  • Market participants appreciate feedback on ideas, and support in refining them
	  • Great networking
	  • Third-party validation of concepts
	  • Facilitating partnerships has been very helpful
	  • Constant influx of new ideas that help shape thinking - this positively impacts future plans, RFPs, etc.
	  • REV Connect improves RFP response and outcomes and shortens overall timeframes
	  • REV Connect creates the opportunity to engage with companies outside the norms
	• Program focus and research activities have been informed by REV proceedings and participating stakeholder viewpoints. Routine engagement with DPS staff will continue to align program focus with current public policy goals.

8.1.4 Theory of Change

Technology Opportunities and Barriers Addressed	• Degree of technical innovation being tested and/or applied is variable across the utilities. Sharing of knowledge and lessons learned is not institutionalized, and resultant pace of innovation and mechanisms to partner with DER providers can be streamlined. • Funding and staffing resources at individual utilities varies widely, and the volume of new ideas and the speed at which these ideas are validated or invalidated is not sufficient to meet the ambitions of REV today. • Validation of technology performance is critical to obtain acceptance by an engineering and standards-based utility culture focused on safety and reliability. • A connection to complementary efforts like AGILe[3], or other REV-related R&D approaches, would ensure an integrated approach to new technology alongside new business models that would deliver maximum value to the State. • Many DER providers have one part of a broader solution but may have difficulty finding partners and complementary solution providers to deliver the full value required by a customer.
Testable Hypotheses	• If utilities, along with NYSERDA< can promote their needs / problems via both a digital and physical channel, then adoption of innovation with respect to new utility business models can be accelerated. • If there is leveraging of knowledge and common screening mechanisms, then there will be accelerated adoption of promising grid modernization technologies/practices.

3 The proposed New York Power Authority (NYPA) Advanced Grid Innovation Lab for Energy (AGILe) is slated to be a versatile research and development (R&D) center oriented towards applied research in the areas of next-generation advanced energy management systems, electric power systems protection and control, smart grid technologies, and power electronics applications. The lab's goal is to promote industry and university collaboration, both from the public and private sector, in the area of electric energy. EPRI has teamed with NYPA in a requirements exercise to develop specifications for the AGILe.

	• If DER provider solution providers believe the process of connecting to customers is efficient, effective, and transparent then they will invest in a sustained presence in New York.
Activities (Resources)	**Identify a partner to operate REV Connect.** The program will secure a partner to operate REV Connect. **Establish platform, structure, and processes for REV Connect.** In pursuit of the overall objective, the partner will be expected to manage and evolve the platform, structure and processes to deliver the REV Connect functions in an expedited manner (that may be phased) within a four-year funding window. These functions should include: • Help develop "areas of interest"; create and maintain information resources; coach DER providers on ideas; host workshops on interest areas; summarize best practices. • Design, implement and maintain a central mechanism for submitting project ideas; develop evaluation criteria; evaluate and screen ideas on a regular basis; deliver feedback to all DER providers on stage of their proposal; share best practices; and regularly engage with utility innovation staff to help support the advancement of the most promising innovation opportunities. • Develop innovation plan for activity beyond 2019. **Funding to support in-field market tests.** • Funding may be used to support market tests of promising REV Connect submissions that are of interest by one or more utility but may require additional testing before moving toward a utility partnership, broader demonstration, or program. REV Connect participants would have to submit to the NYSERDA issued solicitation to be considered for funding. • These funds will be provided through a broader NYSERDA issued solicitation whereby the highest rated submission(s), as determined through consultation with utilities, will be eligible for funding. • Work will be done to align the NYSERDA issued solicitation with the REV Connect activities and utility areas of interest identified through REV Connect.
Key Milestones	Milestone 1 (Q3 2016) - Complete • Execute contract with partner to operate REV Connect. Milestone 2 (Q2 2017) - Complete • Create information resources and summarize best practices. Milestone 3 (Q3 2017) - Complete • Launch initial REV Connect platform to allow submission of project ideas. Milestone 4 (Q2 2017) - Complete • Develop project evaluation criteria and process. Milestone 5 (2019) - Complete • Develop refined REV Connect plan Milestone 6 (2020) - Complete • Contract with platform partner. Milestone 7 (2020) - Complete • Release NYSERDA market test PON. Milestone 8 (2020) • Initial in-field market tests enter the market.

	Milestone 9 (2023) • Assess whether effective and ongoing coordination/collaboration between utilities, DER providers (including new entrants), etc. can be self-sustaining in the market or facilitated through utility operation of the REV connect platform or something similar.
Goals Prior to Exit	The potential impact of this initiative includes: • Increased quality and impact of REV demonstration projects or other partnerships and collaborations facilitated by REV Connect. • A process and format to report on the pipeline of project suggestions and the evolution to implemented projects. • Value to the utilities, DER providers, and State via ongoing feedback and surveys will define impact and shape future evolution of the model. • Entrance of non-traditional, forward-thinking DER providers into the NY energy system. • Facilitation of partnerships among third parties that may individually offer parts of broader, collective solutions • Easy to use and widely-used tools to connect utility solutions providers with utility points of contact • New ideas developed to address the technical, financial and regulatory issues that will have a bearing on the success of REV demonstration projects and REV overall objectives • Opportunities to convene groups to focus on critical energy product and service issues and then communicate outcomes in a compelling format • Increased system asset utilization via solutions coming through REV Connect platform • Foster exchange information and best practices around innovation between utilities Goals prior to exit include: • REV Connect serves as a key partner to market partners, utilities and the State in identifying innovation opportunities and bringing the highest value projects to fruition • REV Connect functionality operates on a self-sustaining financial basis, based on value generated and paid for by utilities, DER providers, communities and others • Greater utility coordination and collaboration around shared problems and opportunities, including REV demonstrations, non-wires alternatives, and other innovative programs • DER providers have a clear and efficient path to work with each other and the utilities to bring new solutions to market • Entrance of non-traditional, forward-thinking DER providers into the NY energy system who provide new or unique value to ratepayers

8.1.5 Relationship to Utility/REV

Utility Role/ Coordination Points	• The NYS Department of Public Service (DPS) approved REV Demonstration projects involve all utilities with the exception of PSEG-Long Island. • Regular interface with utilities will continue to surface areas of interest for future sprints and demonstration projects.

	• Program will seek ongoing counsel and guidance from DPS Staff for the purposes of program planning and program execution in order to meet and align with evolving regulatory and/or policy objectives. • Program staff will actively participate on internal, cross-functional NYSERDA teams that interface with utility programming to ensure optimal leverage of time and resources. • REV Connect also receives guidance from the Steering Committee which consists of innovation leaders from each utility as well as NYSERDA and DPS.
Utility Interventions in Target Market	Con Edison has actively engaged the market for innovation opportunities via RFPs or related means but has been closely coordinated with REV Connect in doing so. Other utilities have also sourced innovation and demonstration projects outside of REV Connect but the nature of the REV Connect Steering Committee has ensured all related activities are well coordinated.

8.1.6 Budgets

The commitment budget for all activities included in this chapter is as follows:

Funding Commitments

Budget	Plan Total	Previously Committed	2020	2021	2022	2023	2024	2025
		---------- Commitments Plan ----------						
Incentives and Services	12,983,582	2,931,806	441,757	2,925,000	3,185,019	2,500,000	1,000,001	-
Implementation	16,418	6,652	9,766	-	-	-	-	-
Research and Technology Studies	-	-	-	-	-	-	-	-
Tools, Training and Replication	-	-	-	-	-	-	-	-
Business Support	-	-	-	-	-	-	-	-
Total	**13,000,000**	**2,938,458**	**451,523**	**2,925,000**	**3,185,019**	**2,500,000**	**1,000,001**	**-**

An annual expenditure budget for all activities included in this investment plan is shown in Appendix B alongside expected acquired benefits. Budgets do not include Administration, Evaluation, or Cost Recovery Fee; these elements are addressed in the Budget Accounting and Benefits chapter filing. The budget as presented in the Budget Accounting and Benefits Chapter will serve as the basis for any subsequent reallocation request. The additional level of detail presented within Appendix B is intended for informational purposes only.

8.1.7 Progress and Performance Metrics

The anticipated commitment benefits totals for the initiative with respect to CEF Order target metrics is as follows:

Benefit Commitments

Direct Benefit (2016-2025)	Plan Total
Energy Efficiency MWh Annual	-
Energy Efficiency MMBtu Annual	-
Renewable Energy MWh Annual	-
CO2e Emission Reduction (metric tons) Lifetime	-
Participant Bill Savings Lifetime	-
Leveraged Funds	34,500,400

Indirect Benefit (2016-2030)	Plan Total
Energy Efficiency MWh Annual	-
Energy Efficiency MMBtu Annual	-
Renewable Energy MWh Annual	-
CO2e Emission Reduction (metric tons) Lifetime	-

Benefits summarized in Appendix B represent the plan for acquiring impacts through completed projects or activities.

Benefits listed as direct, are near term benefits directly associated with this initiative's projects. These benefits will be quantified and reported on a quarterly basis and will be validated through later evaluation.

Appendix C provides program Activity/Output indicators representing measurable, quantifiable direct results of activities undertaken in the initiative. Outputs are a vital way of regularly tracking progress, especially in the early stages of an initiative, before broader market changes are measurable. Outcome indicators can encompass near-term through longer-term changes in market conditions expected to result from the activities/outputs of an intervention. Outcome indicators will have a baseline value and progress will be measured periodically through Market Evaluation.

8.1.8 Fuel Neutrality

Fuel Neutrality	REV Demonstration projects have been funded by and focused on utility customers. However, REV Connect is envisioned to be technology and fuel agnostic in response to utility and community needs and will provide solutions for gas customers as well where there is potential for economic benefits or in the context of a total-energy solution, particularly in the area of gas energy efficiency.

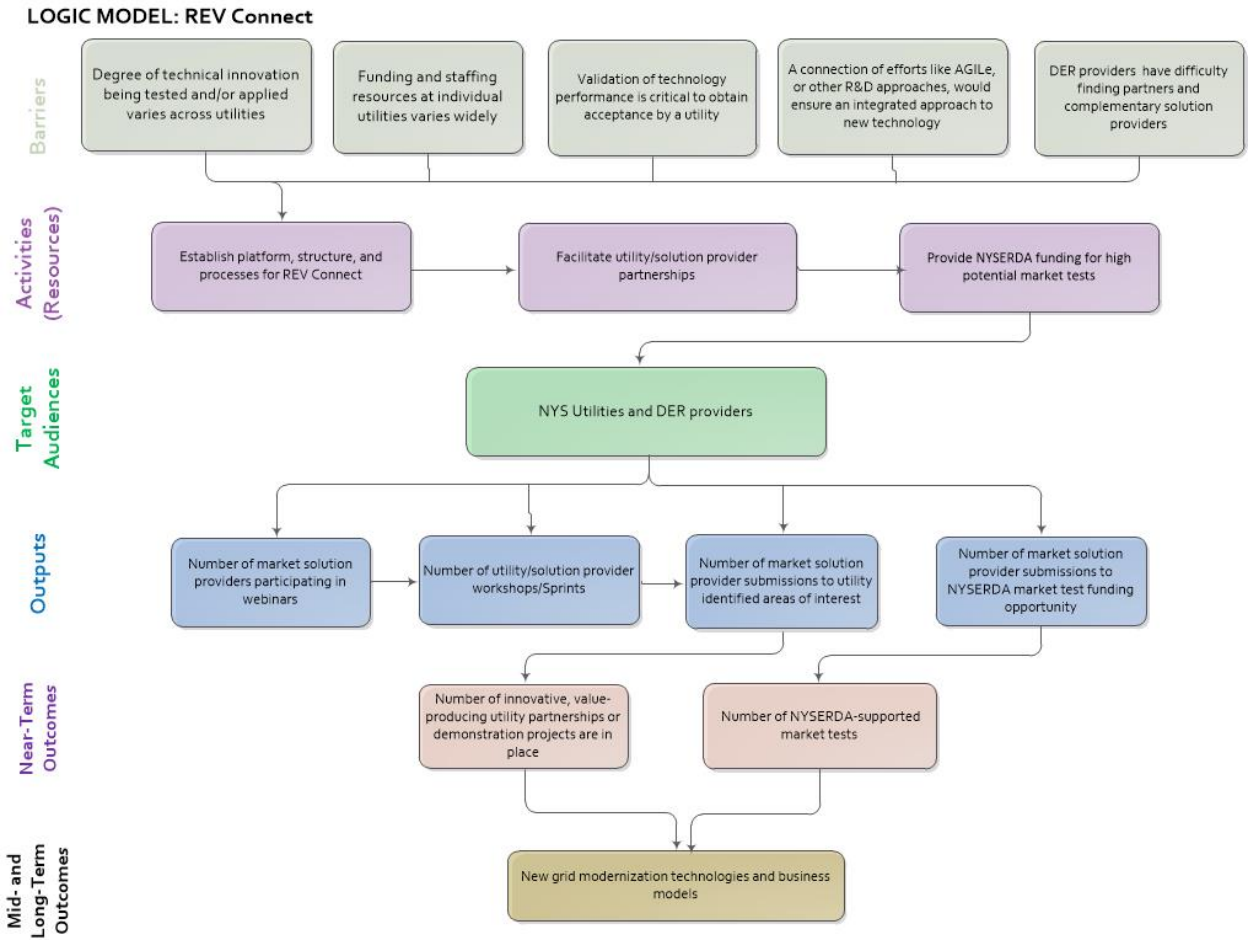
8.1.9 Performance Monitoring and Evaluation Plans

Performance Monitoring & Evaluation Plan	NYSERDA's approach to monitoring and assessing the effectiveness of the initiative and overall market development is described below. **<u>Test-Measure-Adjust Strategy</u>** • Tracking of standard activity metrics including: number of project submissions, completion of business agreements, private sector leverage. • Conducting an annual customer survey to gauge effectiveness of the REV Connect process and platform. • Conducting reviews of certain projects in the process to define timing, technical impasse, pivot point, critical milestones. • Assessing the portfolio of projects annually with regard to goals, metrics, outputs and outcomes. **<u>Market Evaluation</u>** • Market Evaluation will measure the new grid modernization technologies and business models adopted in the market by surveying the utilities and DER providers. **<u>Impact Evaluation/Field Verification</u>** • Impact evaluation/field verification will not occur for this initiative.

Verified Gross Savings Specifications

Verified Gross Savings Specification	
Date of CEF filing: *see cover page*	
CEF Chapter Name: REV Technical Assistance	
Initiative Name	REV Connect
Program Period	This initiative was originally offered in May 2016. REV Connect is not a new initiative and was not previously under any other name.
Program Description	REV Connect is a structure to facilitate the deployment of new technologies and business models in the New York market. REV Connect will help DER providers connect with New York State utilities to advance high quality REV demonstrations, non-wire alternatives and other innovative projects. For companies with a technology, product, service or business model innovation that creates value for energy customers in partnership with the utility, REV Connect will offer a channel to submit project ideas and to receive expert guidance, feedback, facilitation, and matchmaking with New York utilities and other potential market partners. REV Connect will also publicize opportunities, share good practices and convene market participants to enhance the culture of innovation and collaboration in NY State.
Gross Savings Methodology	Energy savings are not calculated for the REV Connect initiative.
Realization Rate (RR)	No RR will be determined for this initiative as there are no energy savings.
Planned VGS Approach	Impact evaluation/field verification will not occur for the REV Connect initiative.
Exemption from EAM Status	N/A

Appendix A – Logic Model



Appendix B | Initiative Budget and Benefits Summary

REV Connect

Benefits Acquisition Plan

Direct Benefit	Plan Total	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Energy Efficiency MWh Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy Efficiency MWh Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy Efficiency MMBtu Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy Efficiency MMBtu Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy Efficiency MW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewable Energy MWh Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewable Energy MWh Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewable Energy MW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO2e Emission Reduction (metric tons) Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO2e Emission Reduction (metric tons) Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Participant Bill Savings Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Participant Bill Savings Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leveraged Funds	34,500,400	-	66,400	51,000	655,000	1,328,000	7,600,000	8,000,000	8,750,000	3,500,000	4,550,000	-	-	-	-	-

Indirect Benefit	Plan Total	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Energy Efficiency MWh Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy Efficiency MMBtu Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewable Energy MWh Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewable Energy MW Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO2e Emission Reduction (metric tons) Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO2e Emission Reduction (metric tons) Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Energy Usage	Plan Total	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Direct Energy Usage MWh Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Direct Energy Usage MWh Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Direct Energy Usage MMBtu Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Direct Energy Usage MMBtu Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indirect Energy Usage MWh Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indirect Energy Usage MWh Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indirect Energy Usage MMBtu Annual	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indirect Energy Usage MMBtu Lifetime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Participants	Plan Total	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Budget Expenditures Plan

Budget	Plan Total	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Incentives and Services	12,983,582	59,155	1,217,655	942,791	609,093	441,757	2,175,000	2,288,132	2,500,000	1,000,000	1,750,000	-	-	-	-	-
Implementation	16,418	-	-	-	6,652	9,766	-	-	-	-	-	-	-	-	-	-
Research and Technology Studies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tools, Training and Replication	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Business Support	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	**13,000,000**	**59,155**	**1,217,655**	**942,791**	**615,745**	**451,523**	**2,175,000**	**2,288,132**	**2,500,000**	**1,000,000**	**1,750,000**	**-**	**-**	**-**	**-**	**-**

Table Notes:

* With the May 2021 IPPR filing of all investment plans, each Appendix B table that accompanies an investment plan was transitioned from yearly commitment-based budget and benefit plans to plans that forecast expenditures and acquired benefits.

Appendix C | Initiative Outputs and Outcomes Summary

REV Connect

	Indicators	**Baseline** (Before/Current)	**2023** Target (cumulative)
Outputs	Number of market solution providers participating in webinars	241	541
	Number of market solution provider submissions to utility identified areas of interest	122	272
	Number of utility/solution provider workshops/Sprints	2	5
	Number of market solution provider submissions to NYSERDA market test funding opportunity	0	10
Outcomes	Number of innovation, value-producing utility partnerships or demonstration projects in place	8	31
	Number of NYSERDA-supported market tests	0	15
	Number of new grid modernization technologies and business models	0	6

Table notes

a. A 0 (zero) denotes that the actual value is currently believed to be zero for baseline/market metrics.

b. Before the REV Connect initiative began, utilities had initiated 12 REV Demonstration Projects which similarly pursue business model innovation in partnership with DER providers