

CLEAN POWER TECHNOLOGY INNOVATION PROGRAM

Initiative Level Logic Model Report

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Introduction

The Systems Benefits Charge (SBC) Plan funds public policy initiatives that are not expected to be adequately addressed by New York's competitive electricity markets to advance the achievement and realization of the New York Public Service Commission (PSC) policy objectives. Furthermore, the SBC is designed to effect long-term changes in the New York energy sector to optimize the system and ratepayer benefits. The activities funded by the SBC include energy programs targeting efficiency measures, technology research and development, behavior and market change, and support for the low-income sector. The PSC issued the Order Continuing Systems Benefit Charge and Approving the Operating Plan for a Technology and Market Development (T&MD) Portfolio of System Benefits Charge-Funded Programs (The Order) on October 24, 2011. The Order approved the T&MD portfolio proposed by the New York State Energy Research and Development Authority (NYSERDA) for the five-year period of January 1, 2012, through December 31, 2016. The Clean Power Technology Innovation Program under the SBC plan builds on previous efforts to support New York business and academic institutions in technology advancement and development of new and improved renewable power generation products.

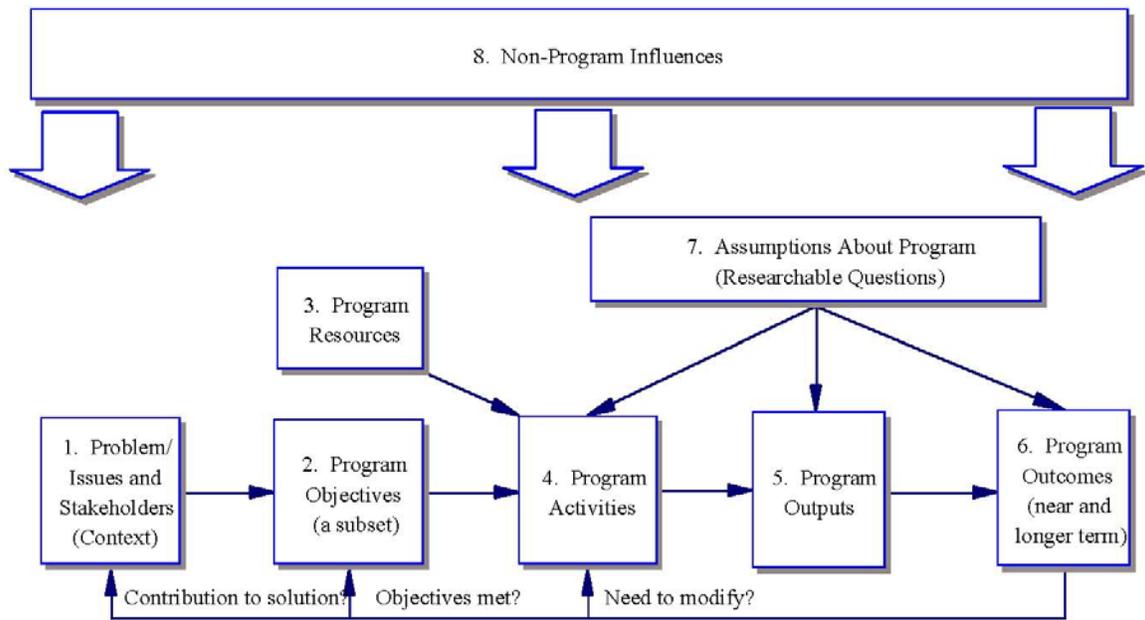
This document is organized in the following eight sections:

- 1. Program Context, Stakeholders, Intent and Design:** This section describes the problem(s) the program is attempting to solve, or issues it will address and the regulatory and stakeholder environments (context) within which the program is working.
- 2. Program Objectives:** This section describes, at a high level, the program's ultimate purpose and targets.
- 3. Program Resources:** This section identifies the funding, workforce, partnership, and other resources the program is providing.
- 4. Program Activities:** This section describes the program's various stakeholder engagement, demonstration and commercialization progress, support activities, and marketing and outreach activities.
- 5. Program Outputs:** This section describes the anticipated immediate results associated with program activities. Outputs describe the specific products or accomplishments of program activities.
- 6. Program Outcomes:** This section describes expected achievements in the near, intermediate and longer term. Outcomes describe the specific changes that the program seeks to instill.

- 7. **Assumptions About Program:** This section describes assumptions about how program activities and outputs will lead to the desired near, intermediate and longer-term outcomes, including spillovers.
- 8. **External Influences:** This section describes factors outside the program that may drive or constrain the achievement of outcomes.

Figure S-1 details the relationship between these eight items.

Figure S-1: Program Design Template (Numbers indicate Section in this report.)



1 Program Context, Stakeholders, Intent, and Design

The Clean Power Technology Innovation (CPTI) Program is one of three initiatives funded under the Technology & Market Development (T&MD) portfolio's Advanced Clean Power Initiative. The CPTI Program seeks to assist New York State innovators in product development, and overcome barriers and institutional impediments to the widespread use of clean power technologies.

The purpose of the CPTI Program is to increase the growth of advanced clean power markets in New York by overcoming barriers to widespread adoption of clean power. The Program accomplishes this by supporting New York business and academic institutions in addressing barriers to increased market acceptance of clean power technologies and in technology development of new and improved clean power generation products.¹

Increasing indigenous renewable generation and the overall efficiency of energy generation are priorities articulated in the New York State Energy Plan. Developing a pipeline of clean energy resources is necessary to meet the state's renewable power generation (RPS) and energy efficiency (EEPS) goals, increase grid resiliency, and address the combined threats of climate change and dependency on volatile fossil fuel markets. Performance improvements and cost reductions require continued investment in technology innovation and marketplace acceptance. The development and testing of new power conversion systems and supporting technologies will benefit New York State's economy and exploit more fully the value of clean energy resources.²

The CPTI Program is designed to address a wide range of barriers that directly affect the development and application of new products. As shown in Table 1-1, these barriers can be grouped into four general categories: Technical, Economic, Informational and Institutional/Market. Within these general categories, barriers can be further subdivided into three market areas: barriers affecting the supply side, mid-market/infrastructure barriers, and barriers affecting demand side market actors. Supply-side barriers are defined as obstacles that delay or impede the delivery and availability of a new product into the marketplace, such as limited funding for product development and testing. Mid-market/infrastructure barriers are defined as obstacles that impede the willingness or ability to provide or deliver the product, such as regulations, physical infrastructure, or business practices that slow adoption of a product into the marketplace. Demand-side barriers are defined as barriers that deter customer demand for a product, such as competing needs for capital, performance uncertainties, and information or search costs. As shown in

¹ NYSERDA TMD Operating Plan, February 2013, Section 9.1.2-Advanced Clean Power (9.12)

² NYSERDA TMD Operating Plan, February 2013, Section 9.1.2-Advanced Clean Power (9.12)

Table 1-1, NYSERDA is just one of many stakeholders (market actors) involved in addressing these barriers. Table 1-1 provides a summary list of these four types of barriers addressed by the CPTI Program.³

Table 1-1. Problems to Be Addressed by NYSERDA’s CPTI Program⁴

Barriers	Stakeholders Impacted and/or Involved
Technical Barriers	
<ul style="list-style-type: none"> a) Technical barriers that require further research and testing to produce functionally-viable advanced clean power systems (supply-side) b) Replicating the clean power systems across different facilities (demand-side) c) Clean power systems technical compatibility with rules, regulations or standards (supply-side and mid-market/infrastructure) 	Product Developers, Product Manufacturers, Product Installers & Technicians, Regulatory Agencies, End-Users, Customers
Economic Barriers	
<ul style="list-style-type: none"> a) Lack of funding for clean power systems development, testing and evaluation, due to market and technical risk (supply-side) b) High installation, operation, and maintenance costs of clean power system demonstrations (supply-side and midmarket/infrastructure) c) Compensation for all benefits of clean power not always realized, hindering the cost effectiveness of clean power systems (supply, mid-market, demand) 	Product Developers, Private Sector Investors, Regulatory Agencies, End-Users, Customers
Informational Barriers	
<ul style="list-style-type: none"> a) Uncertainty regarding clean power system performance due to a lack of verification (mid-market/infrastructure and demand-side) b) Proven benefits of clean power systems are not widely disseminated or perceived by customers (demand-side) c) Lack of technology “best practice” information for clean power systems (e.g., optimal end-user characteristics, required complementary technologies, recommended product “templates”) (demand-side) d) End-users are not aware of available clean power system technologies (demand-side) 	Public Energy Efficiency Policy and Program Staff, Technology End-Users, Technology Suppliers (Wholesalers and Retailers), Building Owners and Managers, Building Architects/Engineers/Designers, Energy Services Companies
Institutional and Market Barriers	
<ul style="list-style-type: none"> a) Codes and regulations (permitting, tariffs, etc.) may not favor clean power systems (mid-market/infrastructure) b) Resistance to clean power systems from utilities and other customers who are hesitant to adopt a new technology or system (mid-market/infrastructure) c) Lack of uniform interconnection standards between clean power systems installations and the utilities’ distribution grids (mid-market/infrastructure) 	R&D Organizations, Investors, Private and Public Rating Organizations, Utility Companies, End-Users, Customers

³ NYSERDA Distributed Energy Resources Program: Program Logic Model Report. September 28, 2007

⁴ NYSERDA Distributed Energy Resources Program: Program Logic Model Report (4)

2 Objectives (High Level)

The ultimate goal of the CPTI Program is to reduce costs and increase market acceptance of clean power generation and provide consumers new clean power options with improved performance and lower cost.

The targeted objectives of the CPTI Program include the following⁵:

- Contract 51 clean power technology projects.
- Complete 51 clean power technology projects.
- Support 64 clean energy companies.
- Help 8 clean power technologies reach commercial availability.
- Generate \$55 million in commercial sales of supported clean power technologies.
- Generate \$65 million of leveraged funds (co-funding and outside investment) for clean power technology projects.
- Develop and commercialize clean power technology systems that enhance energy management (demand and peak-load management benefits), increase reliability of the electricity grid, and reduce emissions.
- Disseminate objective information about clean power technology systems, which helps improve decision-making and the selection of technologies by stakeholders and customers.
- Increase market adoption of clean power technology systems in New York State.
- Help to overcome some of the related technical, economic, informational and institutional barriers noted in Table 1-1 above.

Strategies NYSERDA will implement to help achieve its desired CPTI program objectives include:⁶

- Funding technology feasibility studies and product development projects through competitive PONs: NYSERDA's primary operational strategy for implementing its R&D programs is to identify and select projects through a competitive solicitation process and then provide funding and technical assistance to make projects successful.
- Supporting technology demonstrations: A key strategy for advancing new clean power technology systems is to provide customers with objective information on the cost and performance of the technology in a variety of applications. This provides necessary data to assess the risk of new technologies, make improvements in the technology, and ultimately expand market penetration.

⁵ NYSERDA T&MD Operating Plan, February 2013, Section 9-Technology & Market Development Initiatives; pages 9-20 through 9-21 (Table 9-4).

⁶ NYSERDA Distributed Energy Resources Program: Program Logic Model Report (5).

- Extensive stakeholder and expert input: An important R&D staff responsibility is maintaining awareness of emerging developments in the energy and environmental arenas by regularly interacting with stakeholders (utility companies, regulatory agencies, manufacturers) and experts in various energy and environmental fields.

The program will utilize the following tactics when implementing these strategies⁷:

- Funding higher risk projects in phases, and requiring the successful completion of milestones before beginning the next phase.
- Supporting projects that can offer quantifiable energy benefits and significant statewide benefits.
- Requiring cost sharing by project sponsors to encourage serious efforts, ownership and use of the project results.
- Encouraging, through the proposal process, teaming to enhance the likelihood of project success. Teams can include commercial firms, industry associations, universities, government agencies, and end-users.
- Supporting projects that address specific issues related to the transition to competitive energy markets (e.g., refining technology so it is easy to replicate, identifying the most marketable aspects of the technology for consumers).
- Providing investors and end-users with opportunities to directly observe and participate in trials of new technologies and collect credible information on performance and cost.
- Emphasizing projects that will produce deployable solutions, as opposed to basic research.

Through successful selection and implementation of specific projects, this program should lead to the development, testing, and commercialization of new distributed energy products that will provide benefits to electric ratepayers and provide opportunities for economic development in New York State.

⁷ NYSERDA Distributed Energy Resources Program: Program Logic Model Report (5-6).

3 Resources

This section identifies the dollar, workforce, and partnership resources that the CPTI Program requires.

Table 3-1 outlines the resources (or inputs), including funding sources, staff resources, external and intangible resources for the overall System Benefits Charge budget for the CPTI Program.

Table 3-1: Program Resources

SBC Funding for CPTI
<ul style="list-style-type: none"> • Advanced Clean Power: \$51,771,962 (2012-2016) <ul style="list-style-type: none"> ○ Clean Power Technology Innovation: \$27,826,749
NYSERDA Staff Resources
<ul style="list-style-type: none"> • 2-3 FTEs
Resources External to the CPTI Program
<ul style="list-style-type: none"> • Technical Evaluation Panels • Renewable Portfolio Standard
Closely Related NYSERDA Programs
<ul style="list-style-type: none"> • Solar Cost Reduction • NY-BEST • Workforce Development Program • Resource Development Program • CHP Performance • CHP Aggregation and Acceleration • Emerging Technologies and Accelerated Commercialization Program • Transformative Technologies for Energy-Efficient Manufacturing
Intangible Resources
<ul style="list-style-type: none"> • NYSERDA’s credibility and relationships with the industry, key players, and stakeholders • NYSERDA’s experience with product development, demonstration, and information dissemination projects • Existing awareness of NYSERDA among market actors
<p>Sources: NYSERDA T&MD Operating Plan, February 2013, Section 9-Technology & Market Development Initiatives; page 9-19 (Table 9-3). Interviews with CPTI program staff, April 2014-June 2014. NYSERDA Distributed Energy Resources Program: Program Logic Model Report. September 28, 2007.</p>

4 Program Activities

This section describes the activities that the CPTI Program delivers in order to achieve its objectives.

Under the first and second rounds of SBC funding, the Distributed Energy Resources Program (the predecessor program to CPTI) focused on distributed energy resource (DER) power systems product and business model development, demonstration, information dissemination, and coordination with policymakers. Under the third round of SBC funding, the program continued the work of the first two rounds to develop, demonstrate, raise awareness of, and promote favorable regulations for DER systems. A new focus included a performance-based incentive program for the replication of successful DG-CHP systems installed in the previous rounds at a lower cost to NYSERDA.⁸ Under the current round of funding, the CPTI program has maintained its product development and demonstration focus while adding supplementary activities to reduce market and institutional barriers through technology facilitation projects.

Support for these technologies is being provided through NYSERDA's Clean Power Technology Innovation program through a variety of activities that can be organized into six primary categories⁹:

1. ***Project Development and Selection.*** These activities are completed by NYSERDA program staff and include prioritization of proposal solicitations called Program Opportunity Notices (PONs), project selection, funding and project management activities.
2. ***Implement Technology Facilitation Projects.*** These activities are primarily completed by successful project bidders and are expected to reduce a variety of institutional and market barriers facing the commercialization or the use of a clean power technology.
3. ***Implement Early-Stage Product Development.*** These activities are primarily completed by successful project bidders and escort selected clean power system products and technologies through the product development cycle. Early-stage product development activities assess the technical and market feasibility of a product concept with a focus on developing or improving a specific product manufactured in New York State. New business models are developed and best practices are employed to integrate newly commercialized products and technologies into the marketplace.

⁸ NYSERDA Distributed Energy Resources Program: Program Logic Model Report (7-8); Interviews with NYSERDA program staff.

⁹ PON 2569 Advanced Clean Power Technologies, 2012-2013

4. ***Implement Product Development Projects.*** These activities are primarily completed by successful project bidders and escort selected clean power system products and technologies through the product development cycle. Product development activities include prototype design, lab testing, product refinement, milestone completion, and finally commercialization. New business models are developed and best practices are employed to integrate newly commercialized products and technologies into the marketplace.
5. ***Implement Demonstration Feasibility Assessments.*** These activities are primarily completed by NYSERDA staff and successful project bidders to identify promising clean power products and technologies. Feasibility studies assess the feasibility and effectiveness of new or under-utilized clean power technologies at a New York site. Studies are expected to lead to a proposal under Product Demonstrations and are intended to support project development activity.
6. ***Implement Product Demonstration Projects.*** These activities are conducted by successful project bidders and include installing, maintaining, and monitoring the performance of clean power demonstrations. Cost sharing is available for innovative demonstrations and the replication of previous successful demonstrations. Demonstrations raise awareness among end-users and project developers of clean power related issues and subsequently allow for product improvements and increased acceptance of clean power technologies in New York State.

A number of these activities include actions that communicate results of product development and demonstration to selected stakeholders and the public. These information dissemination activities might include white papers, case studies, stakeholder conferences and workshops, and other similar activities. These activities are conducted by successful are most likely to be funded under technology facilitation projects but could fall under other funded projects.

The CPTI program and its predecessors have produced a number of similar technology-specific programs as a result of the above activities. Although not a specific activity, the CPTI program may be thought of as an incubator program for related programs that mature and emerge from CPTI. These include battery storage, CHP, and photovoltaic balance of systems programs, which have received targeted funding under the T&MD portfolio. As a result, CPTI activities tend to focus less on those technologies in the above activities. Although not a formal activity, the CPTI program closely coordinates with other related NYSERDA programs (as identified in Table 3-1) to avoid redundant efforts while identifying synergistic opportunities between the closely related programs. These coordination efforts result in more targeted PONs and may increase the overall effectiveness of the programs.

5 Program Outputs

This section describes the anticipated immediate results associated with program activities in a table of outputs with indicators and potential data sources for those indicators.

Table 5-1: Outputs, Indicators, and Potential Data Sources¹⁰

Outputs	Indicators	Data Sources and Potential Collection Approaches
Outputs from Project Development and Selection		
Project types prioritized, eligibility established	Types of projects/preferences and associated solicitation eligibility requirements	Program files, PONs, and RFP documents
Solicitations issued	Number of PONs issued by focus area	Program files, projects database, and PONs
Proposals/projects selected for funding Projects completed	Number and types of projects selected for funding, by focus area Number of projects completed	Projects database
Clean energy companies receiving support	Number of clean energy companies receiving funding	Program files, project reports, interviews with program staff and participants
Funding leveraged from selected projects	Amount of funding contributed by selected projects	Projects database
Outputs from Implement Technology Facilitation Activities		
Barriers to implementation of clean energy addressed/reduced	Number and nature of barriers reduced; number, nature of organizations involved	Program files, project reports, interviews with program staff and participants
White papers, case studies, stakeholder conferences and workshops ¹¹	Number and nature of informational materials and presentation developed; Number of conferences/workshops held	Program files, project reports
Outputs from Implement Early-Stage Product Development Activities		
Prototypes developed, and/or processes modeled, theories tested, and/or subcomponents developed Feasibility of technology reported Project specific goals met	Nature of prototypes developed; processes modeled, theories tested, or subcomponents developed Documented feasibility of technology reported to NYSERDA Percent of project specific goals met	Program files, project reports

¹⁰ Interviews with CPTI program staff, April 2014-June 2014; NYSERDA Distributed Energy Resources Program: Program Logic Model Report. September 28, 2007.

¹¹ These outputs can be produced from any funded activity but are more likely to happen in Technology Facilitation projects

Outputs	Indicators	Data Sources and Potential Collection Approaches
Outputs from Implement Product Development Activities		
Prototypes refined, and/or subcomponents developed into systems, and/or process models validated, and/or products field-tested Project specific goals met	Nature of prototypes completed, systems developed, process models validated, or products field-tested Percent of project specific goals met	Program files, project reports
Outputs from Implement Demonstration Feasibility Studies Activities		
Power systems technology and product feasibility studies	Number of and nature of demonstration feasibility studies completed Documented feasibility of demonstrations	Program files, project reports
Outputs from Implement Product Demonstration Activities		
Innovative pilot studies and system demonstrations	Number of innovative demonstrations installed	Program files, project reports

6 Program Outcomes and Logic Diagram

This section presents more information regarding anticipated short, medium and long-term outcomes and associated indicators. Sources where data on specific indicators can be obtained to document achievement of these outcomes are also noted in Table 6-1, where applicable.

This section also presents NYSERDA's CPTI Program logic model diagram (Figure 6-1) showing activities, outputs, a series of outcomes, and the relationships among these. The diagram also includes Inputs and External Influences with no detail, since that information is included in Sections 3 and 8. The diagram presents information provided in Sections 2, 4, 5, and 6 at a higher level.

Table 6-1: Outcomes, Indicators, and Potential Data Sources¹²

Outcomes	Indicators	Data Sources and Potential Collection Approaches
Short-Term Outcomes from Engage Stakeholders and Select Projects/Technologies		
Diverse set of proposals attracted Strategic and flexible program portfolio	Number and nature of program focus areas Types of funded program activities Program ability to promote unanticipated technologies and products	Program files, PONs and RFPs Interviews with program staff and stakeholders
Short-Term Outcomes from Implement Technology Facilitation Activities		
Barriers recognized Barrier reduction strategies identified	Number and nature of barriers recognized Number and nature of actions taken to reduce market and institutional barriers (e.g. regulatory actions taken to reduce barriers)	Program files, project reports Interviews with program staff, participants, and stakeholders Market and institutional documents
Short-Term Outcomes from Implement Early-stage Product Development Activities		
Technical and commercial feasibility of technologies determined	Percent of technologies and products that achieve milestones/meet project goals	Program files, project reports Interviews with program staff and stakeholders

¹² Interviews with CPTI program staff, April 2014-June 2014; NYSERDA Distributed Energy Resources Program: Program Logic Model Report. September 28, 2007.

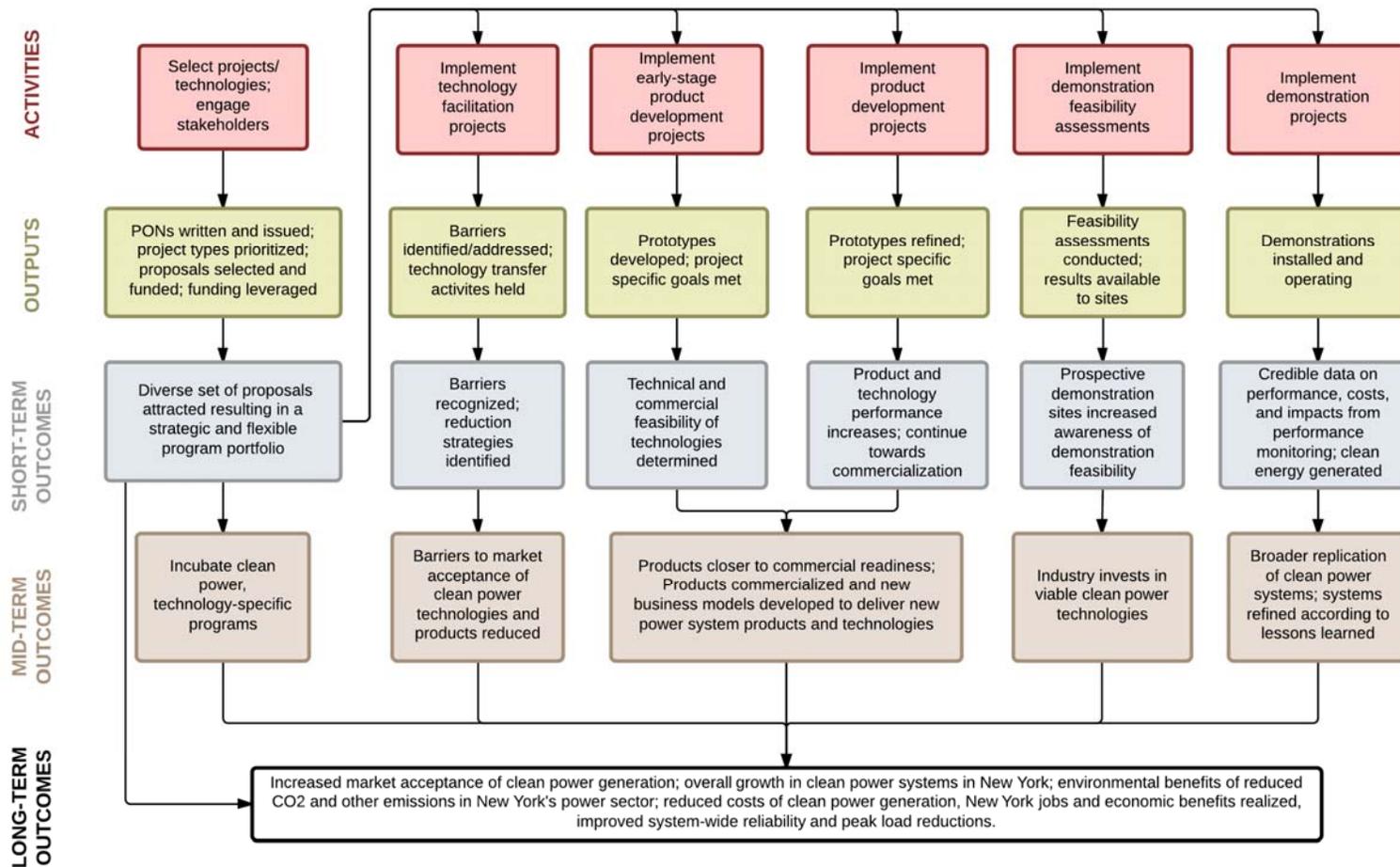
Outcomes	Indicators	Data Sources and Potential Collection Approaches
Short-Term Outcomes from Implement Product Development Activities		
<p>Product and technology performance increases and product becomes more refined (e.g. looks more like a commercial product)</p> <p>Product and technologies continue towards commercialization</p>	<p>Percent and nature of technologies and products that achieve milestones/meet project goals</p> <p>Percent and nature of technologies and products that continue to be developed after CPTI funding (e.g. patents filed, additional funding raised); extent of development after CPTI</p>	<p>Program files, project reports</p> <p>Interviews with program staff, participants, non-participants and stakeholders</p> <p>Review of patents</p>
Short-Term Outcomes from Implement Demonstration Feasibility Activities		
<p>Prospective demonstration sites have an increased awareness of demonstration project feasibility</p>	<p>Level of understanding of project feasibility by prospective demonstration sites</p>	<p>Program files, project reports</p> <p>Interviews with program staff and stakeholders</p>
Short-Term Outcomes from Implement Demonstration Projects Activities		
<p>Performance monitored, credible data on performance, costs, and impacts collected</p>	<p>Credible performance, cost, and impact data gathered (e.g. robust data that is complete, accurate, and consistent)</p>	<p>Program files, project reports</p>
<p>Broader replication of clean power systems</p>	<p>Number of sites with replicated clean power systems; size of replications</p>	<p>Program files, project reports; interviews with program staff, participants, non-participants and stakeholders</p>
Mid-Term Outcomes from All Program Activities		
<p>Incubate clean power, technology-specific programs</p>	<p>Number of NYSERDA T&MD programs that result from CPTI activities</p>	<p>Survey of NYSERDA program managers, program records</p>
<p>Barriers to market acceptance reduced</p>	<p>Number of market and institutional barriers reduced; key barriers reduced</p> <p>Increased sales and market share for clean power systems</p>	<p>Program files, project reports Industry publications</p> <p>Interviews with program staff, product manufacturers and other key stakeholders; product market share studies</p>
<p>Clean power technologies closer to commercial readiness</p> <p>Clean power technologies commercialized</p>	<p>Number of technologies and products that continue to be developed after CPTI funding</p> <p>Number of technologies commercialized; extent of commercialization</p>	<p>Program files, project reports Industry publications</p> <p>Program files, project reports of similar NYSERDA programs; interviews with program staff, product manufacturers and other key stakeholders</p>

Outcomes	Indicators	Data Sources and Potential Collection Approaches
Industry increases investment in clean power technology	Number of producers, suppliers and end users willing to invest in clean power systems Increased sales and market share of clean power technologies	Interviews with program staff, product manufacturers and other key stakeholders; product market share studies
Broader replication of clean power technologies and products	Number of sites with replicated clean power systems	Program files, project reports
Long-term Outcomes from All Program Activities		
Increased market acceptance of clean power generation; overall growth in the clean power systems market in New York	Market share for clean power systems	Interviews with program staff, product manufacturers and other key stakeholders; product market share studies
Environmental benefits of reduced CO2 and other emissions in New York's power sector	Reduced CO2 and other pollutants	Emissions reduction analysis
Reduced costs of clean power generation	Capital and levelized costs of clean power generation	Market data, industry publications
New York jobs and economic benefits realized	Number of clean energy jobs in New York Dollar value of clean energy economy in New York	Macroeconomic study, survey of stakeholders, industry publications
Improved system-wide reliability	Lower reserve margins, reduced power outages	Impact analysis, survey of stakeholders
Peak load reductions	kW savings	Impact analysis, survey of stakeholders

Figure 6-1: CPTI Logic Model Diagram

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Resources/Inputs: \$27.8 million program budget; 2-3 FTEs;



External Influences: General economic conditions & health of the economy, cost and performance of competing and complimentary technologies, end users' willingness to adopt new technologies, funding and activities of other R&D initiatives, and political/legislative/regulatory changes

7 Assumptions about Strategies

Based on this program logic model, a number of assumptions have been identified and are noted below.¹³

- NYSERDA's PON process will help to identify viable and solid performing clean power technologies and products and will lead to the development of a strategic and flexible portfolio of products and projects.
- NYSERDA funded technology facilitation projects will contribute towards the reduction of barriers facing adoption of clean power technologies, which in the long term will increase the adoption of clean power systems technologies in a fashion and at a rate accelerated beyond what might have occurred otherwise.
- The product development, testing, and demonstration activities supported through the CPTI program are helping to increase the performance of clean power systems components and technologies and are verifying functional viability which, in turn will help to lower development costs. By providing necessary data, the risk of new technologies can be assessed, improvements in the technologies can be made, and market penetration can ultimately be expanded.
- The knowledge disseminated through demonstration projects and other CPTI program activities will help producers, suppliers, and potential end-users to see the value of these products and technologies and will increase their understanding of how they should be applied.
- NYSERDA's collective CPTI product development, demonstration, and information dissemination activities are increasing the state's level of energy management and electricity reliability.

¹³ NYSERDA Distributed Energy Resources Program: Program Logic Model Report, 14.

8 Non-Program Influence on Outcomes

This section describes the influences that are external to the program that may affect the outcomes. These external influences include the economy and other influences over which NYSERDA programs have no direct influence. External influences can enhance or hinder the achievement of desired outcomes. Some of these potential external influences are presented below¹⁴:

General Economic Conditions & Health of the Economy

- Economic conditions may limit the availability of private or public capital for R&D investment
- Economic conditions may affect energy costs and the market for competing technologies

Competing or Complementary Technologies

- Changing cost and/or performance of competing and complementary technologies

Competing Priorities for Decision Makers

- Customers' willingness to adopt new technologies
- Attitudes towards funding of high-risk R&D activities may limit private investment

Success of Related Programs

- Funding, priorities and timing of other public and non-profit organizations promoting R&D activities

State, federal, and local government regulations and policies

- Changing political, legislative and regulatory climates may affect investment in clean energy technologies
- Regulatory and permitting climates and policies may place undue burdens on emerging technologies

¹⁴ NYSERDA Distributed Energy Resources Program: Program Logic Model Report, 14.

9 References

PON 2569 Advanced Clean Power Technologies, 2012-13, Program Background.

Interviews with CPTI program staff, April 2014-June 2014.

NYSERDA Distributed Energy Resources Program: Program Logic Model Report. September 28, 2007.

NYSERDA CPTI Program website. <http://www.nyscrda.ny.gov/Energy-Innovation-and-Business-Development/Research-and-Development/Advanced-Clean-Power/Clean-Power-Technology-Innovation.aspx> [Accessed May 13, 2014].

NYSERDA TMD Operating Plan, February 2013, Section 9.1.2-Advanced Clean Power (9.12).

NYSERDA TMD Operating Plan, February 2013, Section 6- Technology & Market Development Portfolio; Table 6-1, (6-2).

NYSERDA. TMD Program Semi-Annual Report, March 1, 2013.