

Commercial/Institutional Emerging Technologies and Accelerated Commercialization (ETAC-CI)

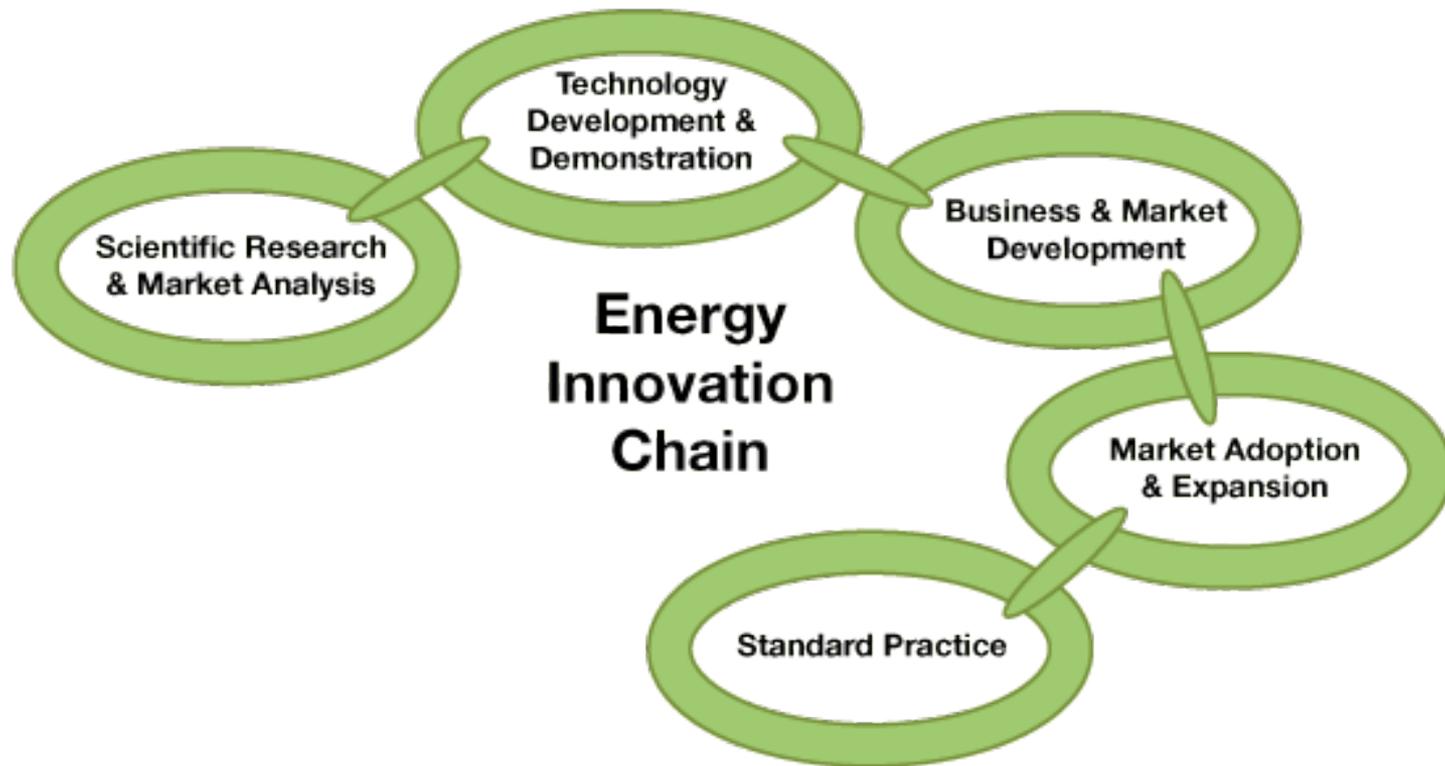
Advisory Group Meeting
April 22, 2013
Albany, NY

Welcome

Agenda

- Welcome & Introductions
- ETAC Initiative Status Update
- Program Elements
- Technology Screening
- NYPA Energy Efficiency Market Acceleration Program (EEMAP) Update
- Wrap Up

Energy Innovation Chain

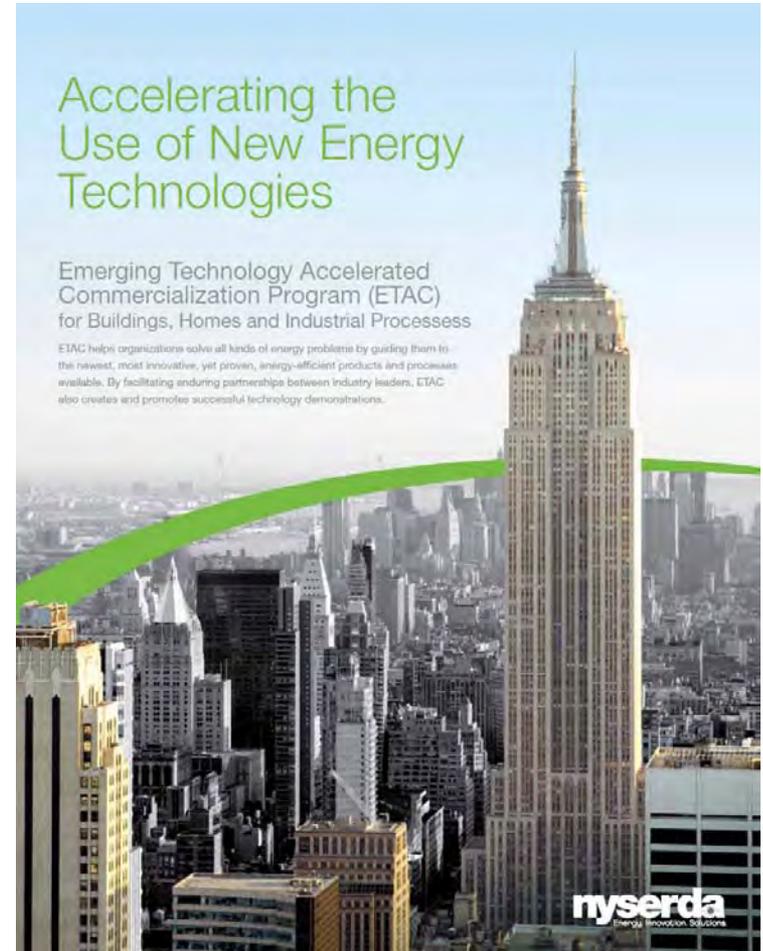


Emerging Technologies

- Why ET programs?
 - “Fill the pipeline” of resource acquisition programs (e.g., EEPS)
 - Increase market acceptance (with/without program administrator incentives)
 - Bridge the “valley of death” to full commercialization

ETAC Initiative Update

- C/I, Residential and Multifamily ETAC programs nearing release
- Joint press release planned
- Brochure in final draft



ETAC Initiative Update



[Andrew M. Cuomo, Governor](#)
[Francis J. Murray, Jr., NYSEERDA President and CEO](#)

Energy Efficiency and
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Energy Innovation and
Business Development

Energy Education and
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Energy and the
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NYSEERDA > [Energy Innovation and Business Development](#) > Emerging Technologies and Accelerated Commercialization (ETAC) Program

Emerging Technologies and Accelerated Commercialization (ETAC) Program

Accelerating the Use of New Energy Technologies in New York's Buildings, Homes, and Manufacturing

Many new proven energy-efficient technologies and processes are ready to deploy in commercial, residential, and multifamily buildings across the state. Through project demonstrations, NYSEERDA's ETAC program creates real-world evidence of the value of these commercially-proven technologies and the benefits to those who are ready to be leaders in New York's energy future.

Promising Partnerships Lead to Promising Outcomes

Supported by NYSEERDA's expertise and incentives, ETAC encourages productive collaboration between industry leaders – building owners, architects, ENERGY STAR® builders, contractors, and technology developers – to build exposure and credibility for the most promising technologies, accelerating market awareness and encouraging investment.

This collaboration also helps to build an online clearinghouse of information and resources that enable partners to share expertise and knowledge about successful projects across New York State.

Technologies for Tomorrow are a Reality Today

Solid-state lighting and lighting controls, energy management systems, super insulation, smart-grid integration, and micro-combined heat and power are just a few of the new technologies that have begun to revolutionize the [residential](#), [commercial](#), [manufacturing](#), and [multifamily](#) markets.

Be a Leader

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NYSERDA > **Energy Innovation and Business Development** > Emerging Technologies and Accelerated Commercialization (ETAC) Program

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Emerging Technologies and Accelerated Commercialization - Commercial/Institutional (ETAC-CI)

What is an Emerging Technology?

Emerging technologies are commercially available energy-saving technologies or approaches that have not yet been widely adopted.

Emerging technologies provide new opportunities for electric and gas efficiency and load management in commercial and institutional buildings, but may face barriers such as upfront costs, contractor awareness, and the lack of supply chain development.

The ETAC-CI initiative encourages collaboration among industry leaders to facilitate in-field demonstrations and sharing of findings. Demonstrations incorporate commercially available, under-used technologies into energy efficiency projects, then monitor, validate, and publicize the savings potential. Feature demonstrations may include: solid-state lighting, advanced HVAC controls, and novel energy management information systems.

The ETAC-CI program offers two participation paths:

Energy Performance Validation

Supports validation of multiple demonstrations implemented by technology developers or building owners wishing to gain independent verification of performance for a product, technology, or approach that is commercially available, yet not in widespread use.

Focused Demonstrations

Supports multiple installations of selected technologies or approaches that are commercially available, yet not in widespread use, in order to accelerate market acceptance. Cost-shared incentives support installation, monitoring and verification.

Further program details coming soon! Please [sign up for our mailing list](#) to receive periodic program information and offerings, and/or if you are interested in being a demonstration host site. Building owners may be contacted periodically by NYSERDA regarding potential demonstration opportunities.

Questions? Feel free to contact us at etac-ci@nyserda.ny.gov

Demonstration Projects

Streamlined

- Funding for % of installation
- Rolling application review
- limited to ~\$100-150K
- M&V provided by NYSERDA
- May limit eligibility to selected technology areas/approaches

Energy Savings Validation

- Applicant (technology developer or site owner) funds installation
- Rolling application review
- M&V provided by NYSERDA

Large Projects

- Funding for % of installation
- Competitively selected w/periodic due dates (likely)
- < ~\$100-150K
- M&V provided by NYSERDA

Program Facilitator, M&V Contractors

Demonstration Projects

Focused Demonstrations

- Funding for up to 60% of project costs
- Rolling application review
- limited to \$150K
- M&V provided by NYSERDA
- Eligibility limited to selected technology areas

Energy Performance Validation

- Applicant (technology developer or site owner) funds installation
- Rolling application review
- M&V provided by NYSERDA

Large Projects

- Funding for % of installation
- Competitively selected w/periodic due dates (likely)
- Up to \$1 M per project (likely)
- M&V provided by NYSERDA

Program Facilitator, M&V Contractors

ETAC Initiative Update

Third Program Option – Large Demonstrations

- Competitive solicitation
- June release

Large Projects

- Funding for % of installation
- Competitively selected w/periodic due dates (likely)
- Up to \$1 M per project (likely)
- M&V provided by NYSERDA

Standard Offer: Program Elements

- Demonstrate technologies/approaches that:
- provide electric/gas energy efficiency and/or load management benefits compared to current standard technology or practices; and
 - are replicable across New York State; and
 - provide performance data from a previous project or projects.

Program Elements

Participant Role:

- Recruit two or more demonstration host sites
- Install or implement project
- Support the M&V process
- Perform outreach (case study plus other activities)

Program Elements: Ineligible Projects

- Avoid duplicating existing NYSERDA programs
 - Stand-alone renewable energy, transportation, vehicle-charging station, biomass-related projects
 - Technologies covered by Existing Facilities Program Pre-qualified incentives
 - Single-site demonstrations
- Mitigate risk
 - Marketing or behavioral strategies lacking on-site implementation
 - Certain technologies identified as not meeting current NYSERDA program needs
 - Already installed technologies

Program Elements

Focused Demonstrations

- Cost-shared up to \$150,000 in NYSERDA funding (participant team must provide 40% or more of project costs)
- NYSERDA provides M&V
- Independent performance data available
- Technology/approach must fall within targeted areas

Focused Demo Targeted Areas

- Technologies or approaches that enable both kW and kWh savings by integrating automation, scheduling, and/or controls with load management, for example:
 - advanced web-enabled programmable thermostats
 - load-shedding lighting ballasts
 - internet-based monitoring control for refrigeration systems
- Building or energy system-focused technologies or approaches that offer energy data analytics and performance information, for example:
 - remote energy audits
 - advanced energy information systems, for instance, building energy performance analytics software with dashboards
- **(DRAFT)** Deep savings retrofit approaches with energy savings of at least 30%, based on the median site EUI (kBtu/sq. ft.) for the building type

Program Elements

Energy Performance Validation

- Funding: NYSERDA provides M&V only; applicant funds installation
- Open to broader range of technologies or approaches
- Performance data not required to be 3rd party or independently verified

Technology Screening

How to develop program and ID ETs?

- Contractor support (KEMA, Arcadis/Malcolm Pirnie, Washington State University Energy Program)
- NYSERDA resources (staff in R&D and deployment programs)
- Ongoing informal research, reading, info sharing
- Meet with technology developers

Technology Screening

Developer	Technology or Approach
Emerson	advanced, web-enabled thermostats
Cypress	wireless advanced thermostats to replace pneumatic controls;
Envirosystems	automated steam trap monitoring
essess	remote energy audits using infrared technology
FirstFuel	remote energy audits using interval data
Enernet Corporation	room air conditioners with automated demand response capability
Redwood Systems	integrated LED lighting controls
Encelium/Osram	
Sylvania	lighting upgrades and integrated controls
Enovative Group	demand-controlled circulation controls for central hot water systems

Questions?

- Questions?
- Suggestions?

New York Power Authority's Energy Efficiency Market Acceleration Program

April 22, 2013

NYSERDA ETAC Advisory Group Meeting

Li Kou

New York Power Authority

Program Overview

- Objective – to leverage significant NYS investment in energy efficiency to advance promising ***commercial but not-yet-widely*** deployed products and services
- Scope – a five year, \$20 million effort
 - Develop a comprehensive Implementation Plan
 - Screen / Select Target Products
 - Target Product Demonstration
 - Market Development
- Current status –
 - Issued RFP to solicit consultant(s) to help implement the program
 - Award announcement to be made at NYPA Board of Trustees meeting on May 21, 2013

Team Members

- New York Power Authority
- New York State Energy Research and Development Authority (NYSERDA)
- Electric Power Research Institute (EPRI)
- Awardee(s)

Collaboration with NYSERDA

- NYSERDA to serve as an advisory role for the program:
 - Technology screening and selection
 - Conduct energy performance evaluation of selected products
 - Perform focused demonstration
 - Large projects demonstration (will also leverage Build Smart NY)

Differentiation from NYSERDA's ETAC

■ Customer Base

- EE MAP will focus on Build Smart NY customers and public facilities throughout the State

■ Market Development activities with selected products

- Tech transfer activities with EPRI and other national organizations
- Training programs for designers, specifiers, facility managers, installers, etc.

■ Economic Development activities for NYS

- Local trade shows linking local manufacturers with facility managers, building owners, customers, etc.
- Potential economic cluster developments around synergistic technology research and manufacturing processes

Wrap Up

- Questions?
- Suggestions?
- Next steps: program release, applications and projects, competitive solicitation

Thank You!

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