

EMERGING TECHNOLOGY PROGRAM

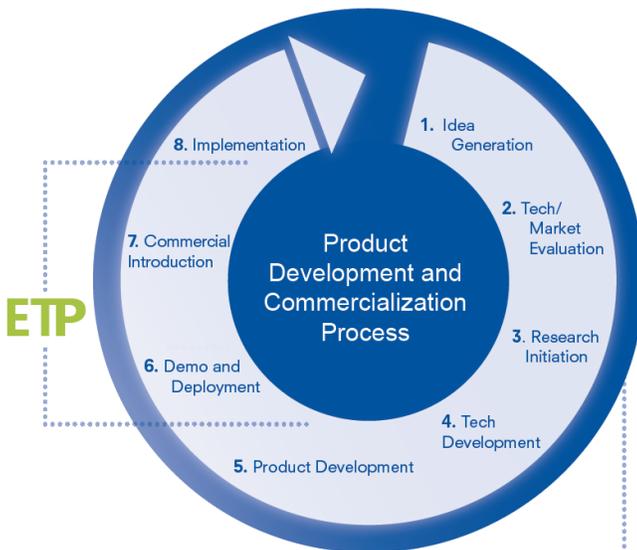
ACCELERATING THE MARKET ACCEPTANCE OF EFFICIENT TECHNOLOGIES



GTI's Emerging Technology Program (ETP) is a North American, membership-based utility collaborative. It is designed to help members identify and evaluate the most promising products and integrated solutions. It leverages collective funding and expertise to address market barriers, assesses product suitability for utility energy efficiency programs, and delivers comprehensive program guidelines for successful deployment.

OUR PROCESS

ETP works across numerous channels to deliver a pipeline of solutions, enabling utilities to meet energy efficiency goals with less risk and more certainty. "Beyond development" technologies are targeted for residential, commercial and industrial markets, meaning they are newly commercialized or underutilized in a market or region. Members determine which technologies are reviewed based on their needs.



ETP activities are "beyond development" stage: Field Testing, Demonstration, Pilot Programs, and Deployment — a focused effort to ensure market acceptance of next-generation emerging technologies

Screening Process

Technologies are vetted by a general screening criteria. Criteria include: cost-effectiveness, energy savings potential, impact on utility operations, manufacturer commitment, and fit with energy efficiency programs.

Pilot Assessment Projects, Demonstrations, and Deployment

Project proposals are developed for technologies that pass screening. ETP projects are funded by members on an opt-in basis, and are typically deployed or demonstrated at customer sites. Projects and demonstrations help validate performance, characterize market potential and implementation strategies, and creates datasets to support prescriptive measure and marketing programs. In 2016, GTI's ETP conducted over 20 active demonstration, pilot, and lab projects across a dozen technologies.

MAKING AN IMPACT IN THE MARKETPLACE

Training, Education and Outreach

All members have access to Technology Snapshots, project summary reports, case studies, program design white/work papers, and other resources. Members funding projects have enhanced access to specific project information, including raw data and real-time project outcomes. Non-confidential information learned from analysis and demonstrations is publicly available to stakeholders at gti.energy/emerging-technology-program.

Commercial Partner Engagement

ETP's reach makes the program attractive to commercial partners, including manufacturers, contractors and distributors. The program nurtures these relationships to expedite market introduction and acceptance of new products.

VALUE TO MEMBERS

Utilities can:

- Stay current with trends and leverage collective expertise
- Efficiently resolve barriers through collaborative projects
- Accelerate measure availability and energy efficiency program savings
- Drive the agenda to influence product deployments and evaluations
- Become an early adopter to better address regulatory requirements, company and customer needs

FOCUS AREAS

ETP focuses on identifying and addressing data or market barriers, including the development of new measures, impacts of disruptive technologies, awareness and education.

Additionally, ETP currently has various active projects for residential HVAC technologies, including low-capacity modulating furnaces, combo systems, condensing packs and commercial RTUs.



GTI began implementing the Nicor Gas ETP in 2011. This program has introduced new technologies and helped customers across Illinois save energy and money.

The program has:

- Received over 75 technology applications from manufacturers, sales representatives, and contractors
- Launched 20+ pilot projects in residential, commercial, and industrial markets
- Identified, evaluated and facilitated five emerging technologies as new rebates through energySMART, a Nicor Gas program

Under the Nicor Gas ETP, GTI field tested a modulating gas valve retrofit kit for commercial dryers.

- The data collection and analysis performed under the project demonstrated average savings greater than 330 therms annually, offering a 2-3-year payback before incentives
- The gas valve retrofit kit measure was added to the Illinois Technical Reference Manual (TRM)
- The Nicor Gas energySMART program currently offers a prescriptive rebate for the retrofit kit

You can learn more about the Nicor Gas ETP at www.nicorgasrebates.com/resources/emerging-technology.

For more information, contact Ryan Kerr, GTI Emerging Technologies Manager, at rkerr@gti.energy.

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MEMBERSHIP

EMERGING TECHNOLOGY PROGRAM



The Emerging Technology Program is managed to best serve member needs, and balances program efficiency, effectiveness, scale and customer choice. The membership options below list activities and benefits. Premium options are customizable, and offer the opportunity to fund assessment projects, demonstrations, or establish an ETP program.

	Base Membership	Premium: Collaborative Projects/Demos	Premium: In-Territory Projects/Demos
Membership Cost	\$25,000	\$25,000 + varied project cost	\$25,000 + varied project cost
Project/Demo Cost	N/A	Opt-In, Varies	Opt-In, Varies
Activities	<ul style="list-style-type: none"> • Technology screening and selection • Biannual meetings • Steering Committees • Member collaboration • Commercial partner engagement 	Base membership activities plus <ul style="list-style-type: none"> • Demonstrations and scaled field placements • Comprehensive data collection and analysis • Performance, market and cost data 	Base membership activities plus Premium membership activities in-territory
Deliverables	<ul style="list-style-type: none"> • Technology recommendations for projects • Summary reports, white papers, case studies 	Base membership deliverables plus <ul style="list-style-type: none"> • Full-scale program design and implementation guide • Consumer awareness outreach • Market standards development 	Base membership deliverables plus Premium membership deliverables in-territory
Benefits	<ul style="list-style-type: none"> • Member website access • Snapshot database • Project reports 	Base membership benefits plus exclusive access to full technology, project, and energy savings data	Base membership benefits plus Premium membership benefits

MEMBER ENGAGEMENT

Biannual Meetings

Two in-person membership meetings are held per year: one in spring, and one in fall. Meetings are coordinated with related industry events when possible. At these meetings, we discuss high potential focus technologies, active projects, Steering Committee activities, member needs, and next steps. This is a prime opportunity to network with fellow members, meet commercial partners, and connect with GTI's subject matter experts.

Steering Committees

ETP hosts seven focused Steering Committees for member participation, including Residential HVAC, Micro-Combined Heat & Power, Commercial Market, Commercial Foodservice, Industrial Market, Water Heating, and Program. Steering Committees enable members to explore new technologies, collaborate with others, and lead in identifying products for assessment. Committees meet up to four times annually. Time required is minimal, but participation provides the opportunity to drive the ETP agenda, stay current with technologies, and combine interests and expertise.

Establish Your Own ETP

A utility-led emerging technology program allows for technical and market understanding on installation, performance, and serviceability in customer energy efficiency solutions. Financial support for these programs vary by state and company. Some utilities opt to use a portion of their energy efficiency funds for

piloting technologies, equipment, and devices. GTI can help you develop regulatory submissions, plans and implementation programs to meet your long-term energy efficiency goals.

Pilot Projects and Demonstrations

Utilities with a base membership will be able to recommend high potential technologies for project consideration. The base membership allows members to be part of the initial scanning, screening, and selection processes. Pilots and demonstrations are funded by those with a premium membership on an opt-in basis. Once a technology has been selected, a project plan is developed. Multiple members can support a project, and costs vary depending on scope.

RESOURCES

- Membership Website: Members have full access to the ETP website offering program resources, including confidential project updates, data, and directory
- Technology Snapshots: Snapshots introduce members to the most important new technologies, highlighting attributes, market barriers and readiness, and next steps. ETP creates or updates around 20 Snapshots per year
- Project Materials: Project summary reports, case studies, program design white/work papers, and other resources are available for reference

Rev.4/10/19

GET INVOLVED

If you are a gas/combo utility or a commercial industry partner and would like to get involved in ETP, please contact Ryan Kerr, GTI Emerging Technologies Manager, at rkerr@gti.energy.

