SCE’s Emerging Technologies Program
- HVAC Strategy

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SCE ETP Framework

Mission
To support increased energy efficiency market demand and technology supply by contributing to development, assessment and introduction of new and under-utilized energy efficiency (EE) measures (that is, technologies, practices, and tools), and by facilitating their adoption as measures supporting California’s aggressive energy and demand savings goals.

Program Elements

**TECHNOLOGY DEVELOPMENT SUPPORT**
- **GOAL:** Increase Energy Efficiency Technology Supply
- **OBJECTIVES:**
  - Engage in Targeted Technology Support Efforts
  - Increase Developer Outreach

**TECHNOLOGY ASSESSMENTS**
- **GOAL:** Increase the Number of Measures Offered by Programs
- **OBJECTIVES:**
  - Assess Energy Efficient Technologies
  - Support Technology Transfer Process

**TECHNOLOGY INTRODUCTION SUPPORT**
- **GOAL:** "Seed" Market Demand
- **OBJECTIVES:**
  - Conduct Demonstrations and Targeted Field Deployments
  - Help Increase Market Knowledge of New Technologies

Product Areas
- Residential, Commercial, Industrial and Agricultural Sectors
- HVAC, Lighting & Daylighting, Plug Loads & Electronics, Whole Building, Process Loads

Continuous Improvement
- Transparency and Communication
- Commitment to Timeliness
- Coordination and Partnerships
- Responsive to Market Needs
ET 2013-2014 Program Design -
Three-Pronged Approach

**Technology Development Support**—Increase energy efficiency technology supply
Engage in targeted technology support efforts; increase developer outreach

**Technology Assessments**—Increase the number of measures offered by programs
Assess energy efficient technologies; support technology transfer

**Technology Introduction Support**—“seed” market demand
Conduct demonstrations and targeted field placements; help increase market knowledge of new technologies

Together, the three strategies work in concert to help technologies make the leap from idea to adoption. The visual below illustrates the diffusion of innovation—how ETP provides support across the lifecycle of technologies from the Innovators stage to Early Adopters and Early Majority.
## Program Strategies and Tactics

<table>
<thead>
<tr>
<th>Subprogram</th>
<th>Technology Development Support</th>
<th>Technology Assessments</th>
<th>Technology Introduction Support</th>
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<tbody>
<tr>
<td><strong>Goal</strong></td>
<td>Increased EE technology supply (Support the development of new technologies)</td>
<td>Increased number of measures offered by EE programs (Identify promising technologies for EE programs)</td>
<td>Support technology introduction including IDSM/whole-building deep-energy reduction solutions (“Seed” market demand among targeted end users)</td>
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<td><strong>Objectives</strong></td>
<td>Conduct targeted technology development support projects to benefit EE measure development</td>
<td>Assess EE measures, including integrated demand-side management (IDSM) measures</td>
<td>Conduct technology introduction activities</td>
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<td>• Conduct technology developer outreach through workshops</td>
<td>• Support the Transfer of measures from the ETP into the EE programs, with the goal of producing energy savings and/or demand reduction</td>
<td>• Conduct 3rd Party Solicitations - Technology Resource Innovation Program (TRIP)</td>
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<td><strong>Specific Tactics</strong></td>
<td>Develop standardized performance specification</td>
<td>Single and multi-site technology Evaluations</td>
<td>Multi-site technology placements (i.e. demonstration or showcases)</td>
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<td>• Outreach through Technology Resource Innovation Outreach (TRIO) and Open Forums</td>
<td>• Experimental Demonstrations and multi-site assessments</td>
<td>• TRIP Solicitations</td>
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<td><strong>Cross-Cutting Tactics</strong></td>
<td>Develop/Implement ETP Technology Roadmap to guide program activities in alignment with key Drivers and ETP stakeholder needs</td>
<td>Behavioral Studies</td>
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<td>• Support &quot;Deemification&quot; of measures</td>
<td>White papers</td>
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<td>• Field and Laboratory Performance Evaluations to support measure development</td>
<td>Tool Development</td>
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<td>• Market Studies</td>
<td>Disseminate Finding (Reports and fact sheets)</td>
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<td><strong>Barriers Addressed</strong></td>
<td>Information or search costs</td>
<td>Product or service unavailability</td>
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<td>Performance uncertainties</td>
<td>Hidden costs</td>
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<td>Organizational practices or customs</td>
<td>Asymmetric information and opportunism</td>
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ETP Roadmap - HVAC

Drivers
- Customer and Shareholder Value
- Regulatory and Policy Drivers
- DSM Potential
- Need for New Products and Measures
- Market Status and Realities

Gaps and Barriers
- Customer Acceptance and Awareness
- Performance Uncertainty
- Test Methods and Minimum Technical Performance Standards
- Training and Education
- Value Proposition
- Market Intelligence

Promising Product Families

ETP Engagement Strategies

Forecasted Years to Maturity

Design & Engineering Services
2013-14 ETP Budget

Statewide: $38 million
SCE: $21.2 million, 3% of SCE total