

## Why are California's utilities interested in energy-saving technologies?

For decades, the electric and gas utilities in California have been leaders in promoting energy efficient technologies and adopting renewable energy sources. These efforts advance the state's energy savings goals while simultaneously eliminating the need to install expensive and polluting power plants as the state's economy grows.

The Emerging Technologies Coordinating Council (ETCC) is a collaborative forum created by the major California utilities' Emerging Technology (ET) Departments and state government to help identify new technologies and coordinate assessment of their energy savings potential and customer acceptance through in-situ demonstrations. The members of ETCC are looking for residential, commercial, agricultural, and industrial technologies to evaluate. After a products savings have been verified, proven winners are recommended for inclusion in utility education and rebate programs that are aimed at encouraging rapid adoption and helping overcome price barriers.

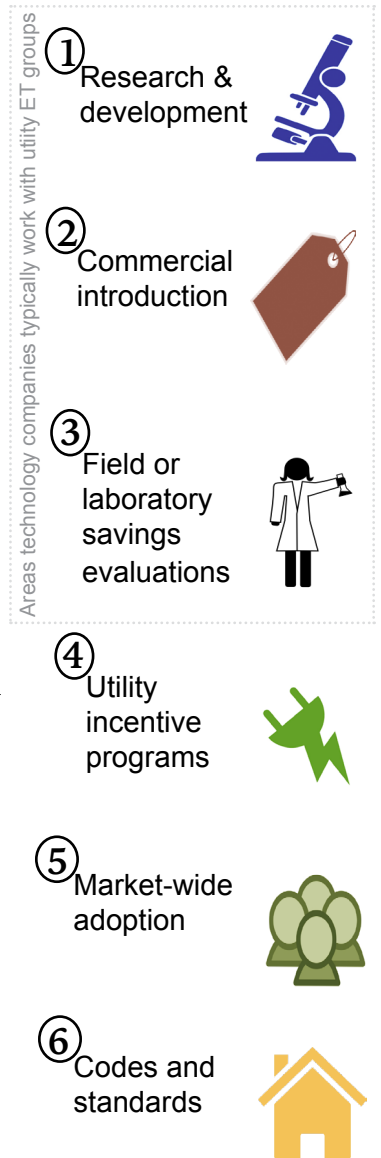
There are two types of technologies that are of most interest: those that save overall gas or electricity (energy efficiency) and those that reduce electric demand when the grid is most strained, typically during the hottest summer afternoons (demand response). If you are the maker, vendor, or proponent of a technology that fits one of these categories, you can submit it to an ETCC member utility's ET department for analysis and consideration of eligibility for one of these incentive programs.

## Examples of technologies currently under review

ETCC member utilities are interested in technologies that are commercialized or near commercialization. The utilities do not fund or incubate technologies that are in the idea or early development phase. Though ETCC members are looking for any energy-saving technologies, some technologies are of particular interest as the utilities strive to meet certain state energy-savings mandates or other types of energy efficiency goals. For a complete, up-to-date listing of the technologies of most interest, refer to the ETCC website:

<http://www.etcc-ca.com>

## The market adoption process



## What information is needed to move forward with evaluation?

To drive the evaluation process as efficiently as possible, vendors or proponents of a product are asked for supporting information, including:

**Basic Information**

- How does the product work and can you provide a technically-sound description of how it saves energy?
- What are the costs for the product, installation, and annual operation?
- Can you provide details on the useful life of the product, warranty, and forecasted maintenance needs?
- What are the annual energy savings (kWh or BTUs) and/or demand savings (kW)?

**Market Analysis**

- What is the expected annual market adoption rate in California over the next five years?
- What is the number of units sold to-date within California and outside? If the product has not yet launched, when is the planned market launch date?
- What is your target market?
- What barriers limit broad adoption of this product?

**Production & Installation**

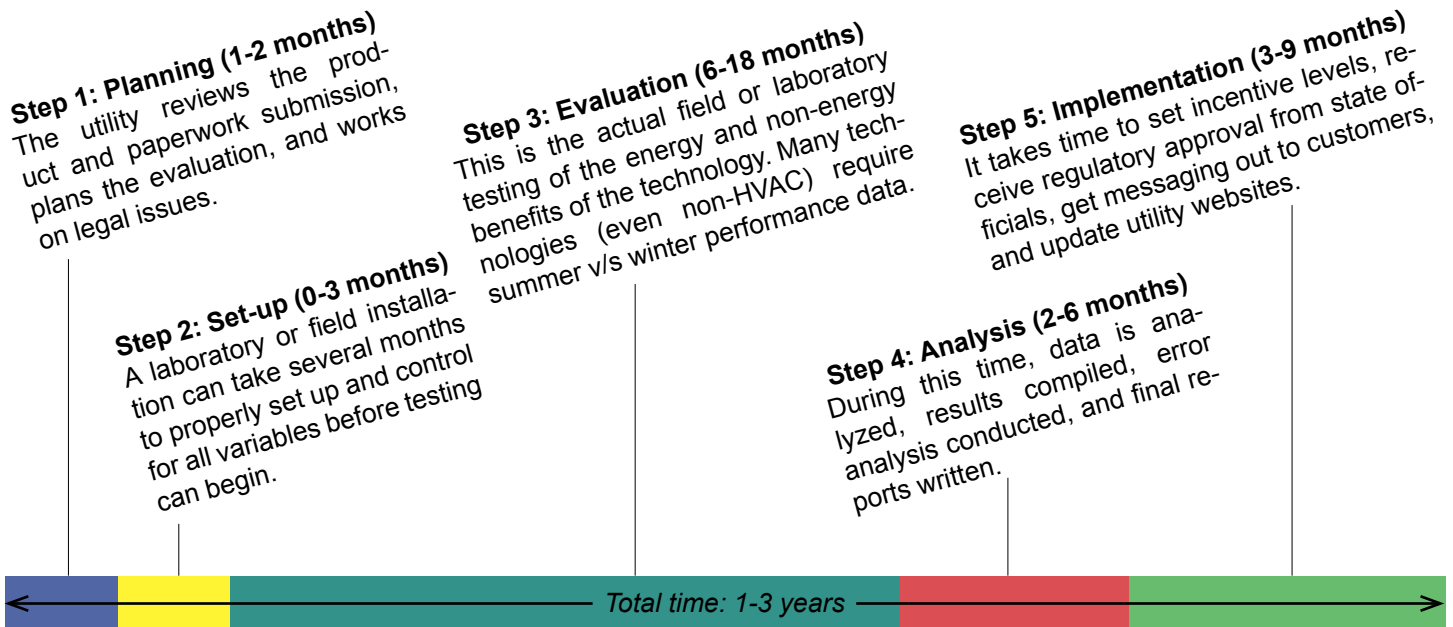
- Is a vendor or a contractor required to install or implement this product? If so, what are the installation service requirements?
- What, if any, established product distribution channels exist?
- What is the current manufacturing production capacity (# units/year)?

**Additional Insights**

- What proven benefits does this product offer beyond energy and cost savings (e.g. improved reliability, user productivity, customer satisfaction, societal benefits)?
- Have you partnered with other utilities to evaluate the product?

# How long will it take to get my technology through the process?

From submission to incentive implementation is usually about 1-3 years. That might seem like a long time, but there's a lot involved and most steps cannot be carried out until the previous steps are complete. Here's the rough break-down:



While this timeline portrays the evaluation process as linear, it is often highly iterative. Utilities may work with vendors through successive generations of technologies, backtrack to address errors in testing, and involve regulators into the process. These issues may speed up or slow down the evaluation process.

## Have energy savings been independently verified?

The California utilities are interested in whether your technology has been evaluated by a neutral, independent research organization for energy or demand savings. The utilities set a high bar in terms of what they consider neutral and independent. The types of organizations whose findings are most likely to be recognized include:

### Federal entities with expertise in energy efficiency, such as:

- National laboratories
- Power authorities (eg. Bonneville Power Administration, Tennessee Valley Authority)
- The GSA Green Proving Ground

### University laboratories or academic groups that specialize in energy efficiency, such as:

- UC-Davis' Western Cooling Efficiency Center
- Washington State University's Extension Energy Program
- Rensselaer Polytechnic Institute's Lighting Research Center

### Other industry-recognized independent laboratories or organizations, such as:

- Electric Power Research Institute (EPRI)
- State energy offices or energy research groups (eg. Efficiency Vermont, Minnesota Center for Energy Efficiency)
- Regional energy alliances

### Other utility companies' ET Departments

## Great! So how do I get started?

If you believe your technology is a good fit for evaluation by a utility ET Department, you can review more detailed submission instructions and download all needed forms at:

<http://www.etcc-ca.com/idea-proposal-form>

## Glossary of common utility terms

These are a few industry terms that are likely to be useful for technology vendors to know as they interact with ETCC member utilities.

### DSM (demand side management)

DSM refers to utility activities that aim to modify consumer gas or electric use through various methods, such as financial incentives and behavioral change through education.

### ET (emerging technology)

ET is utility shorthand for any new or underutilized technologies that can be used to save energy or curb demand. After an ET group in a utility has evaluated a product, the DSM department uses the analysis to determine whether the product may be eligible for inclusion into rebate programs. As the name implies, ETCC is a collaboration of utility ET groups.

### EE (energy efficiency)

Used to refer to technologies or actions that reduce annual gas or electricity consumption.

### DR (demand response)

DR is used to refer to technologies or actions that reduce the overall demand when the grid is most strained (usually during hot summer afternoons). DR technologies can achieve this by remotely turning electricity-consuming devices off, switching devices to a low-energy mode, or shifting the load to another time of day.

### Prescriptive rebate

A utility offers a fixed rebate based on a generic savings estimate (sometimes called deemed savings) to customers for installing energy-efficient technologies. An example might be \$50 for a new Energy Star refrigerator or rebating \$75 for each ton of capacity that a new ultra-efficient commercial rooftop air conditioner has.

### Custom rebate

This is a rebate that is not part of a utility's prescriptive rebate portfolio but a building owner can still claim if they demonstrate savings. This is often a good fit for unproven or obscure technologies. However, the one-off nature of custom programs often means that uptake of eligible measures is slower.

### Upstream or mid-stream incentive

Rather than offering incentives straight to end-users, utilities may offer bulk incentives to retailers or others in the supply chain to drive greater consumer adoption. One example is that utilities often subsidize retailers making bulk purchases of energy efficient light bulbs, which are then sold to consumers at a discounted price.

### Third party programs

A utility sometimes outsources administration of some or all of their EE and DR incentive programs to an outside firm.