

CalNEXT Project Submissions for Measure Development

Measure Package Development Webinar

September 29, 2026

Presenters



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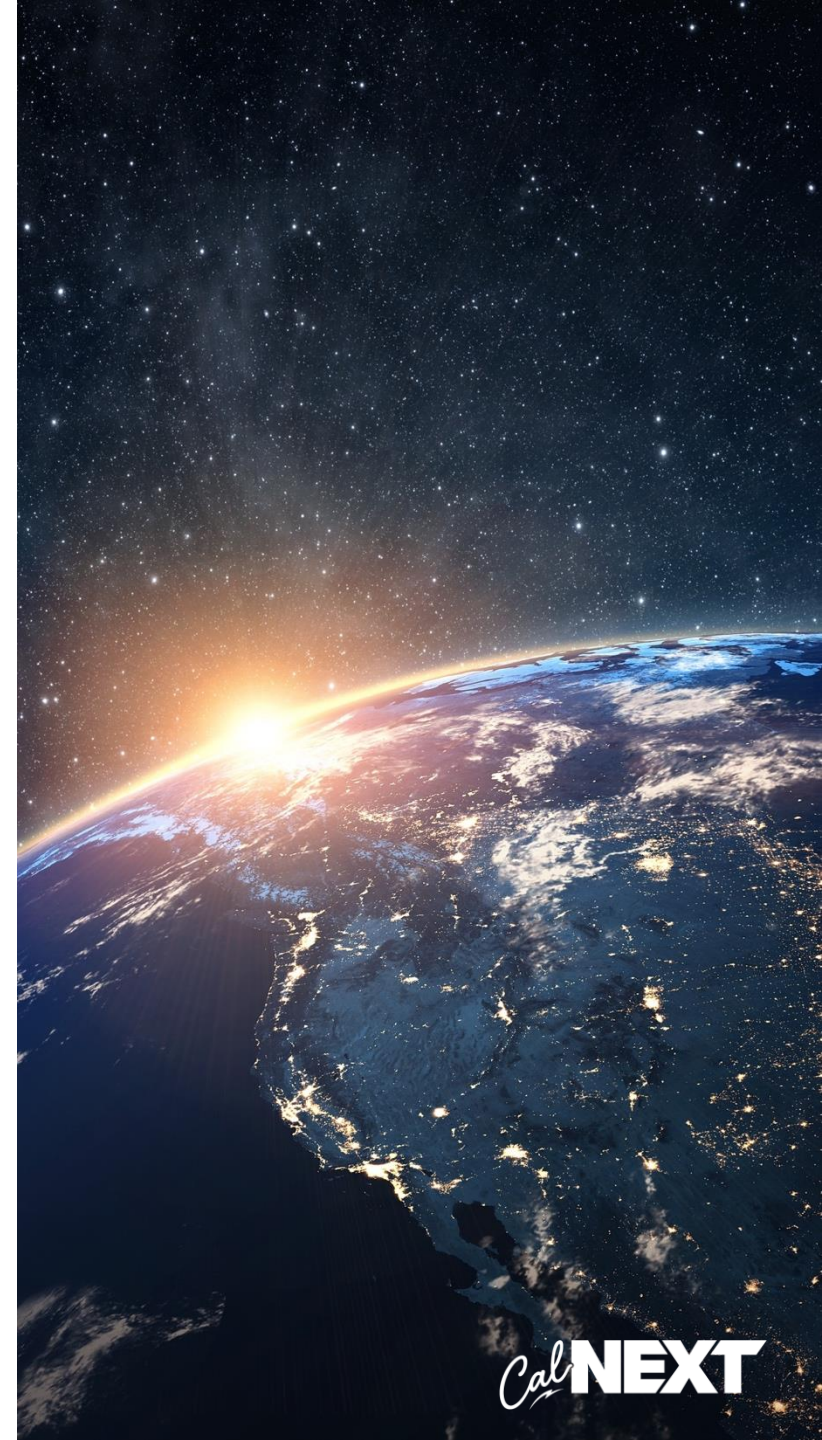
Technology Transfer Lead
Energy Solutions

Agenda

1	About CalNEXT	5 Min
2	Project Selection and Tech Transfer	15 Min
3	Why Measure Development	5 Min
3	How Measure Development Works	10 Min
4	Measure Development Examples	5 Min
5	Scanning and Screening/How to Participate	10 Min
6	Feedback Q&A	10 Min

California's Electric Emerging Technology Program (CalNEXT)

CalNEXT's vision is to identify emerging technology trends and bring commercially available technologies to the energy efficiency program portfolio.



CalNEXT Partners



Program Objectives



Communicate program priorities to stakeholder community.



Scan, Prioritize, Evaluate technologies and their applications to support increased adoption in the investor-owned utility energy portfolios.



Broadcast results to inform stakeholders, support technology transfer, and advance industry understanding to support large-scale commercial adoption.



Advance California's decarbonization, equity, and grid priorities by incorporating them into research priorities.

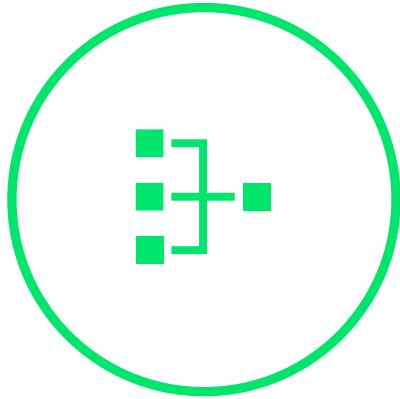


Execute emerging technology research projects that support the investor-owned utility energy efficiency portfolios.

How to Participate



What is Scanning and Screening?



Intake Process

Path to submit ideas for consideration



Prioritization Method

Evaluating submissions to prioritize projects that bring the most value to the program

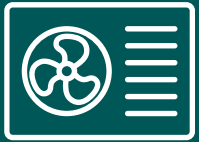


Portfolio Builder

Process for responsibly meeting program portfolio targets, on time and within budget

About CalNEXT Technology Priority Maps

CalNEXT's vision is to identify emerging technology trends and bring commercially available technologies to the energy efficiency program portfolio.



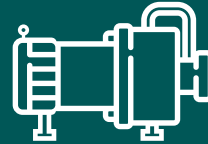
HVAC



Lighting,
Plug Loads
& Appliances



Portfolio
Enhancements



Process
Loads



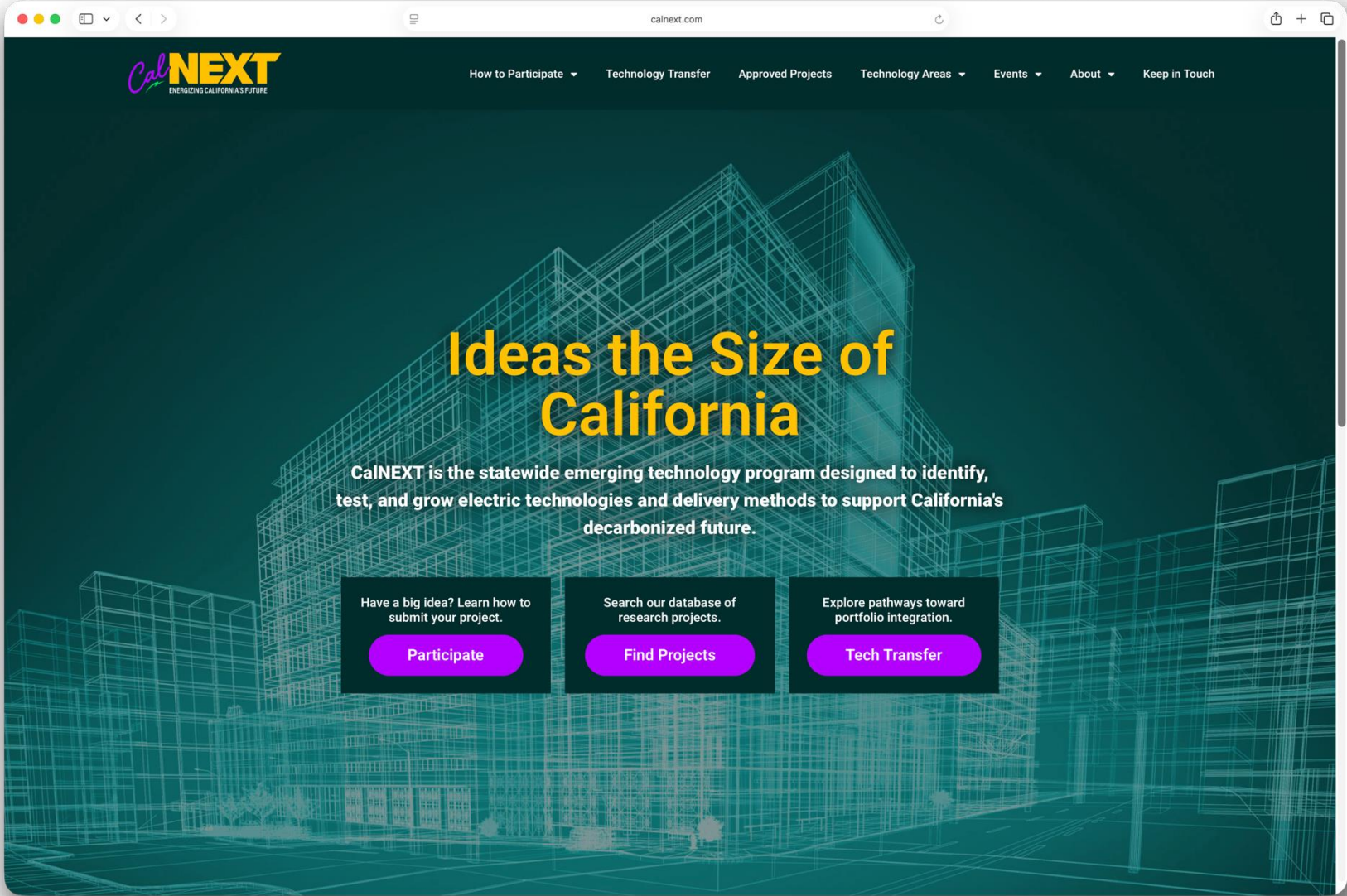
Water
Heating



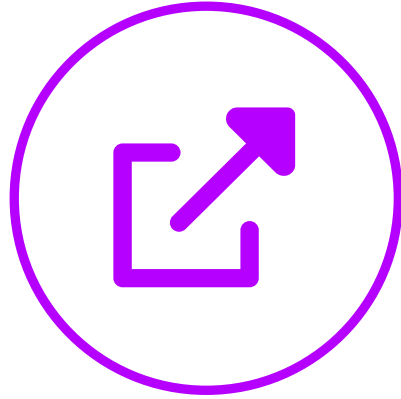
Whole
Buildings

Project Submission Prioritization Criteria

Criteria	Weighting	Details
Technology Priority Map Alignment, Portfolio Priority, and Technology Transfer	30%	How well the project aligns with the CalNEXT technology priority maps, if the project is a high-priority project, and quality and opportunity of technology transfer proposed
Energy Efficiency Program Benefits	10%	Project has defined clear benefits to energy efficiency portfolios through measurable kWh savings, affordability improvements for customers, load flexibility, and/or grid decarbonization, and leads to measures expected to meet the delivery design and cost-effectiveness criteria of current portfolio programs.
Project Quality	45%	Clarify of scope, how innovative it is, whether it's ready for implementation, has a clear market strategy, and has a reasonable timeline
Cost	5%	Estimated budget
Disadvantaged and Hard-to-Reach Communities Impact	10%	Whether the project has benefits for the utilities and affects hard-to-reach and/or disadvantaged communities

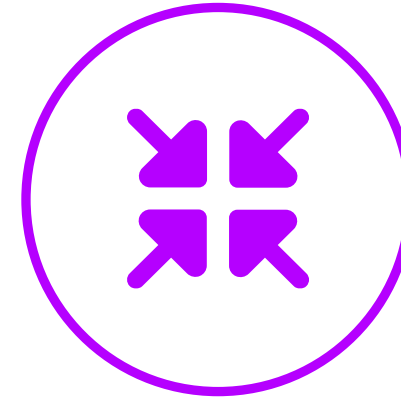


Project Types



Technology Support Research

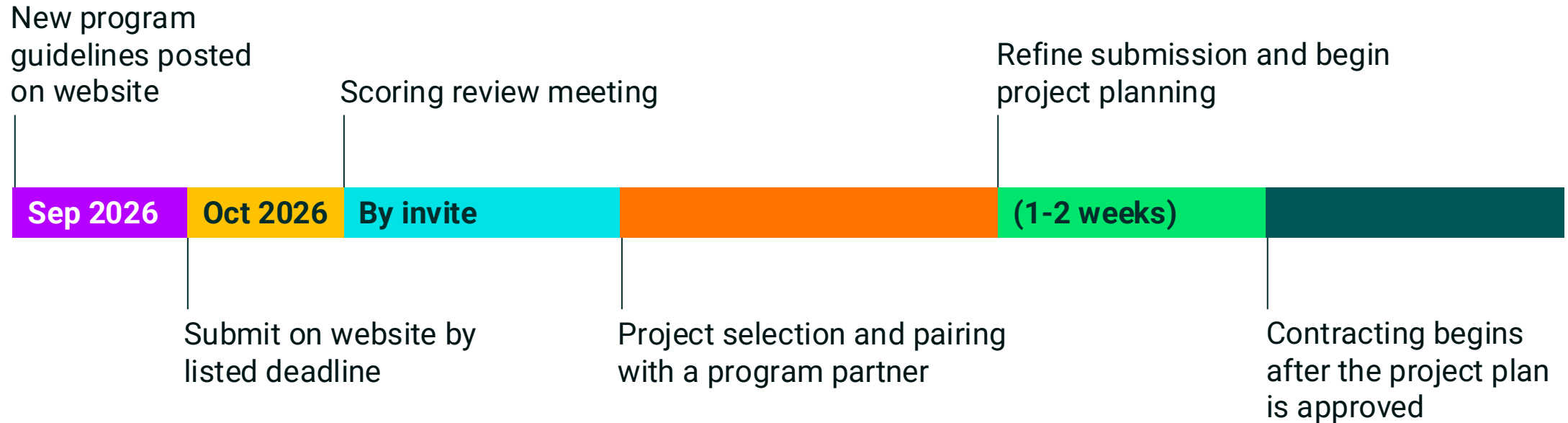
Projects focused on addressing market barriers or developing the commercial capability of *market-ready technologies*.



Technology Development Research

Projects focused on addressing market barriers or developing the commercial capability of *early-stage technologies*.

Project Selection Process



Project Submission



Submit an Idea



Submit a Project

*Updated guidelines and submissions forms will be live on CalNEXT.com around October 1, 2026

Tech Transfer



Technology Transfer: Key Terms Defined

Technology Transfer

Technology Transfer occurs when stakeholders leverage CalNEXT project findings to impact the energy efficiency portfolio.

Technology Transfer Pathway

The planned sequence of activities a project undertakes to achieve technology transfer, with each pathway representing a distinct mechanism through which energy efficiency portfolio impacts are realized.

Knowledge Transfer

The process of communicating project findings to stakeholders with sufficient clarity and detail to enable portfolio integration.

Emerging technology is more than technology validation. It can be the first step toward getting a new technology recognized, incentivized, and deployed at scale throughout California.

Why Focus on Measure Development?



Emerging Technology Results Beyond Just a Report

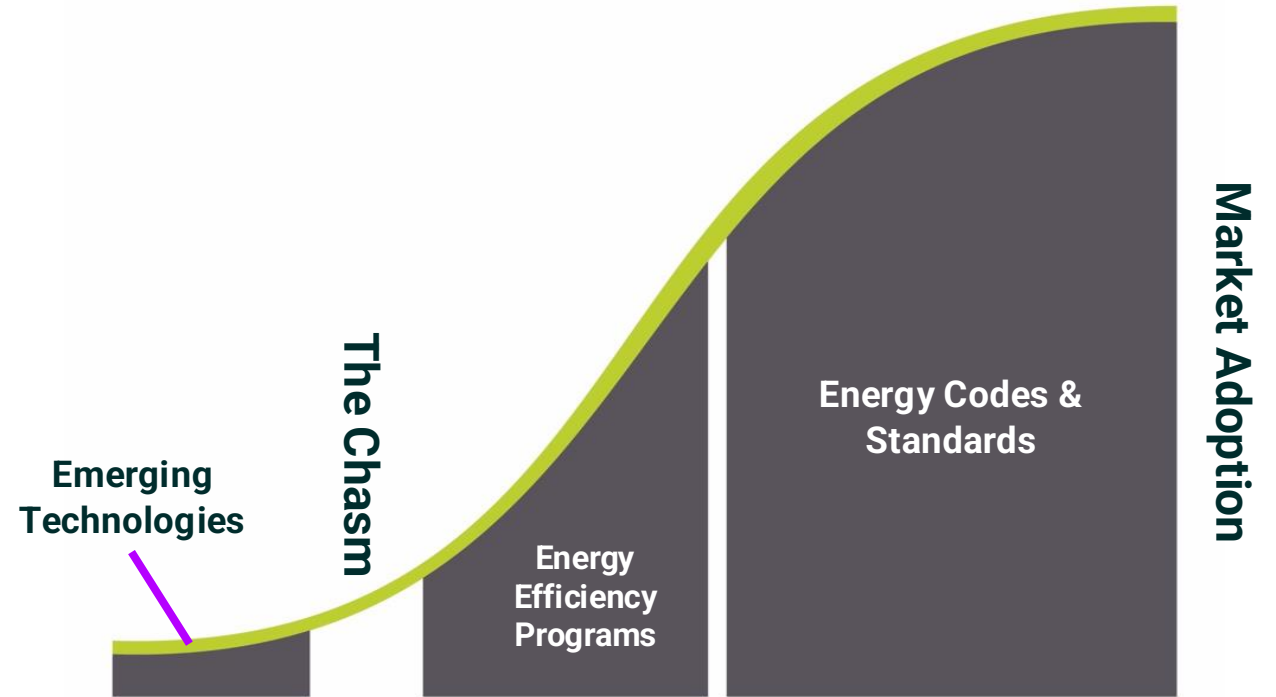
Emerging technology needs to do more than just evaluate energy savings. Program impacts don't follow without added information:

-  Describing market positioning and which California ratepayers are the best fit for a technology
-  Determining proper baseline of energy codes, appliance standards, and industry standard practice
-  Assessing the fit for program options: Add-on equipment or normal full replacement? Direct Install or rebate?

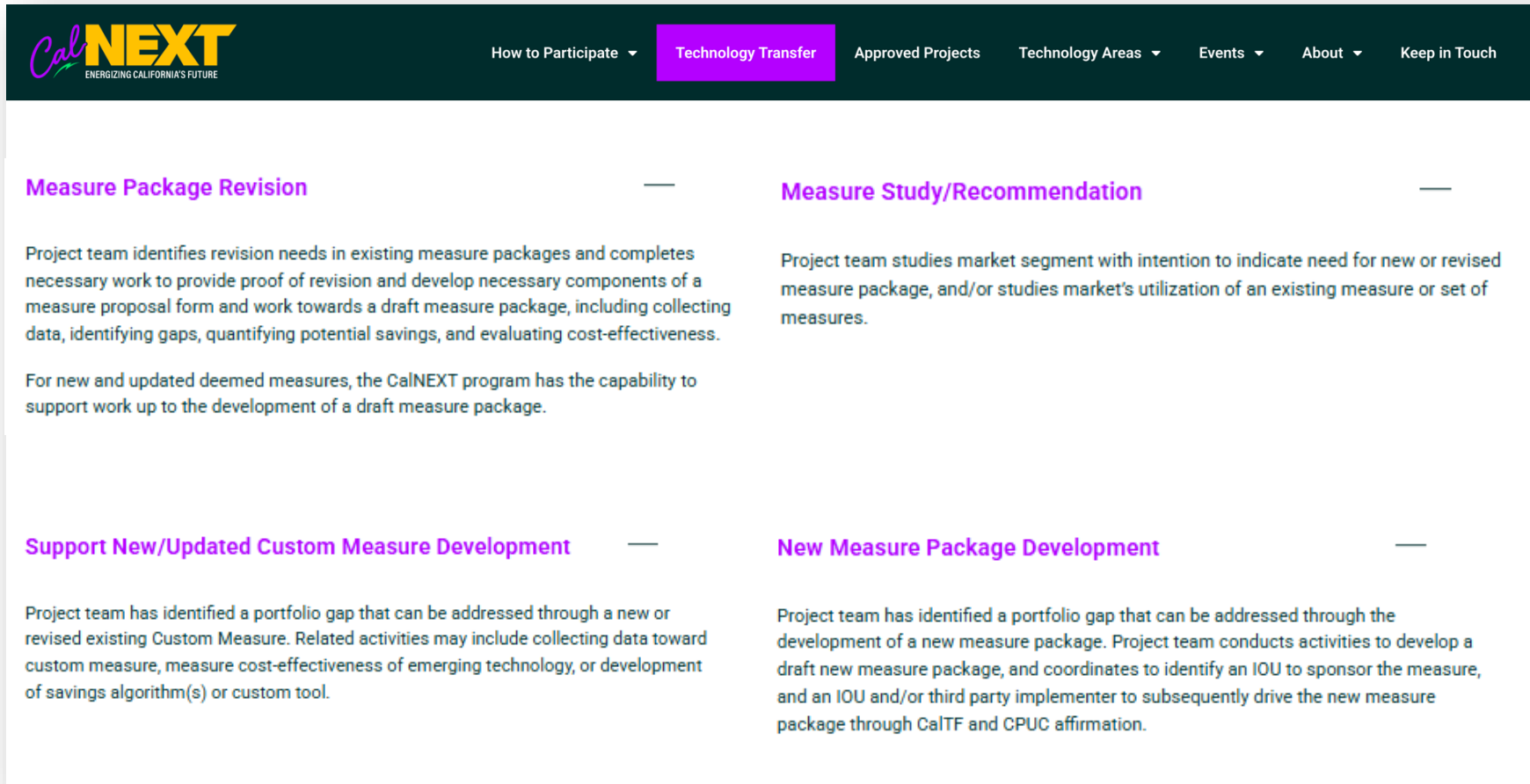
Support for Leaping the Chasm

The challenges in moving energy technologies with positive emerging technology results into energy efficiency programs led to talk of a chasm.

CalNEXT has outlined best practices and key contacts for new project proposals.



An Action Plan for Emerging Technologies Measure Development



The screenshot shows the CalNEXT website's 'Technology Transfer' page. The header includes the CalNEXT logo and navigation links: 'How to Participate', 'Technology Transfer' (highlighted), 'Approved Projects', 'Technology Areas', 'Events', 'About', and 'Keep in Touch'. The main content area is divided into four sections, each with a title and a description:

- Measure Package Revision**: Project team identifies revision needs in existing measure packages and completes necessary work to provide proof of revision and develop necessary components of a measure proposal form and work towards a draft measure package, including collecting data, identifying gaps, quantifying potential savings, and evaluating cost-effectiveness. For new and updated deemed measures, the CalNEXT program has the capability to support work up to the development of a draft measure package.
- Measure Study/Recommendation**: Project team studies market segment with intention to indicate need for new or revised measure package, and/or studies market's utilization of an existing measure or set of measures.
- Support New/Updated Custom Measure Development**: Project team has identified a portfolio gap that can be addressed through a new or revised existing Custom Measure. Related activities may include collecting data toward custom measure, measure cost-effectiveness of emerging technology, or development of savings algorithm(s) or custom tool.
- New Measure Package Development**: Project team has identified a portfolio gap that can be addressed through the development of a new measure package. Project team conducts activities to develop a draft new measure package, and coordinates to identify an IOU to sponsor the measure, and an IOU and/or third party implementer to subsequently drive the new measure package through CalTF and CPUC affirmation.

The basic requirements for measure development projects are on our website at

calnext.com/tech-transfer/

Measure Development in California



Measure Development Roles in California



Utilities lead the resourcing decisions, including starting development of new measures and maintaining existing measures.



The California Technical Forum (Cal TF) administers the Technical Reference Manual (eTRM) of efficiency measures.



California Public Utility Commission (CPUC) staff and consultants give final approval for measure packages, set a schedule that holds values constant for a two-year program cycle, and then sets out update priorities a scoping memo.



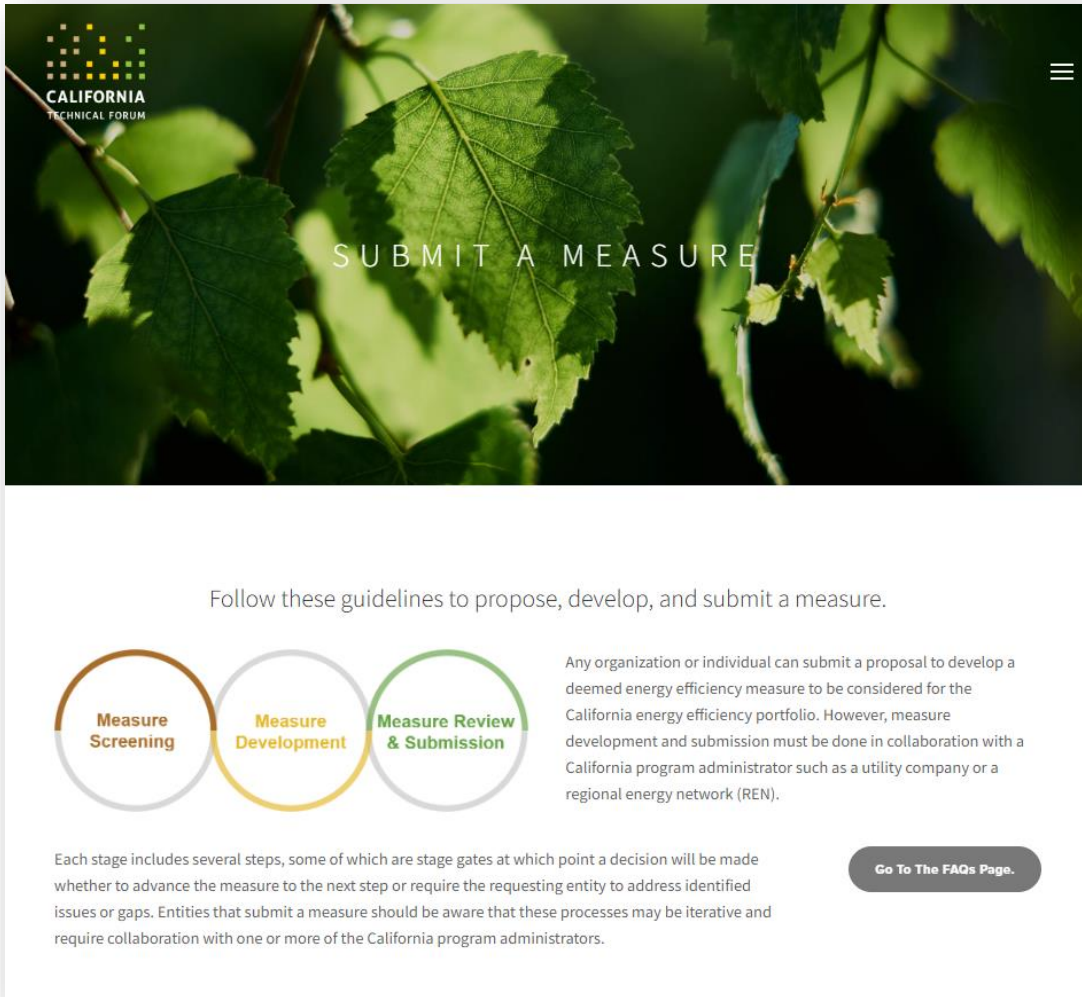
Development work is overseen by utility engineers, often with engineering consultants.

California Electronic Technical Reference Manual

Anyone can view the current measure offerings, savings values and methodologies, and efficiency program claims histories at caetrm.com.

The screenshot displays the eTRM website interface. On the left is a navigation sidebar with the eTRM logo and menu items: HOME, MEASURES, SHARED DATA, CPUC SUPPORT TABLES, PA IMPLEMENTATION CODES, PROPERTY DATA, ETRM STATS, and USER GUIDE. The main content area is titled 'Measure Catalog' and includes a search bar with the text 'Find by keyword...'. Below the search bar, there are navigation controls showing '1-25 of 184 measures' and a table of measures. The table has four columns: NAME, MEASURE VERSION ID, STATUS, and USE CATEGORY. The first four rows of the table are visible.

NAME	MEASURE VERSION ID	STATUS	USE CATEGORY
Insulated Hot Food Holding Cabinet	SWFS007-06	CPUC Approved	FS - Food Service
Packaged Heat Pump Air Conditioner Commercial, Fuel Substitution	SWHC046-06	CPUC Approved	HC - HVAC
Ice Machine, Commercial	SWFS006-05	CPUC Approved	FS - Food Service
Heat Pump Clothes Dryer, Residential, Fuel	SWAP014-05	CPUC	AP - Appliance or



Measure Development Process

The Cal TF also hosts resources that explain the measure development process in more detail at www.caltf.org/submit-a-measure.

Engineers working on eTRM measure packages are required to complete an in-depth training. CPUC policy and rules set over past years govern the efficiency claims allowed, the base case energy consumption assumed, and the useful life of each technology.

Measure Development Summarized



Building and maintaining the eTRM is a complex interaction between many parties based on many years working together.



CalNEXT partners have deep experience and can assist emerging technology project submitters in both the proposal and implementation stages of CalNEXT projects.



eTRM savings values are generally fixed for a 2-year program cycle between updates, so considering timing and planned updates is critical for existing measures.



Input from the market—energy efficiency programs, manufacturers with new products, etc.—makes better at eTRM, so submit to [Cal TF Measure Screening](#) and/or [CalNEXT](#).

A low-angle photograph of modern glass skyscrapers reaching towards a bright sky. In the foreground, several green trees with dense foliage are visible, partially obscuring the buildings. A strong sun flare is present in the upper right quadrant, casting a warm glow over the scene. The image is used as a background for a title banner.

CalNEXT Measure Development Examples

Developing New Measure Packages

- Efficiency programs and others wanted to be able to claim savings for residential and commercial high-efficiency window replacements.
- CalNEXT funded sequential projects that first completed a market study, and then craft a new eTRM measure package.
- **ET23SWE0018 - Commercial Windows Market Study and Measure Package Development**
SWBE012 for Commercial High Efficiency Windows was published in the eTRM on June 16, 2026
- **ET23SWE0043 - Residential High-Performance Windows Measure Package Development** and
SWBE011-01 for Residential High Efficiency Windows was published in the eTRM on May 29, 2026

Adding a New Offering to Existing Measure Packages

- Efficiency programs were limited to sizes below 29 cubic feet by the ultra-low temperature freezer measure package **SWCR017**.
- The COVID-19 pandemic and other healthcare trends expanded the size range for these products.
- CalNEXT funded an effort to update the measure package with larger-size offerings.
- This update to the ultra-low temperature freezer SWCR017-06 was completed in November 2025.
- **ET24SWE0016 - Large Ultra-Low Temperature Freezer Measure Offering**

Creating a Standard Calculation Tool for Custom Measure Packages

- A California investor-owned utility was looking to standardize estimation of energy savings for commercial retro-commissioning (RCx).
- RCx measures have had limited adoption partly due to the complex savings validation.
- CalNEXT modeled energy savings via EnergyPlus across various commercial building types and climate zones for RCx measures to create an HVAC control wequence savings estimation spreadsheet tool.
 - This project will enable scalable adoption: Develop California-specific savings estimates, a site-level energy savings/incentive calculator, and TRM/workpaper support to reduce the cost and uncertainty of identifying and incentivizing high-value HVAC control retrofits.
- You can download and use this tool from CalNEXT.com under project **ET22SWE0043 - Standardized HVAC Sequence of Operations Savings Calculator**

Plugging a Gap in Product Sizing, Rating, or Others

- Heat pump water heater product lines have undergone rapid change in the past decade.
- Deemed measure offerings haven't always kept pace. CalNEXT has stepped in multiple times to update offerings.
- In 2022, CalNEXT updated measure rules that prevented program claims for residential heat pump water heaters that upsized tank volume, per common manufacturer recommendations.
- The next year, a new CalNEXT project added 120V plug-in heat pump water heaters to the same measure packages.
- **ET22SWE0036 - Residential Water Heater Sizing Measure Package Support and ET23SWE0074 - Plug-in 120V HPWH Measure Package Updates to eTRM**

Piloting a New Program Design and Delivery Model

ET25SWE0061 - Decarbonizing Household Appliances: Opportunities and Limitations with 120V Appliances

- CalNEXT piloted a new program approach where homeowners and community volunteers in Los Banos were invited to attend contractor-led trainings that taught them how to upgrade their own household appliances — and help their neighbors do the same.
- CalNEXT provided education and training for 120-volt electric appliances, including room heat pumps, heat pump dryers, and heat pump water heaters.

Adapting to a changing efficiency landscape

- Commercial Foodservice (CFS) efficiency programs were looking at a steep decline in future program savings potential due to both the CPUC's gas incentive phase-out Decision 23-04-035, and anticipated future appliance standards.
- CalNEXT funded a broad market study to thoroughly assess CFS equipment for program savings potential by developing preliminary savings estimates, estimating measure costs and sales volumes, identifying equipment testing needs and fuel-substitution potential, and engaging with market actors to understand market trends and efficiency efforts.
- **ET24SWE0032 - New Commercial Foodservice Measure Prioritization**

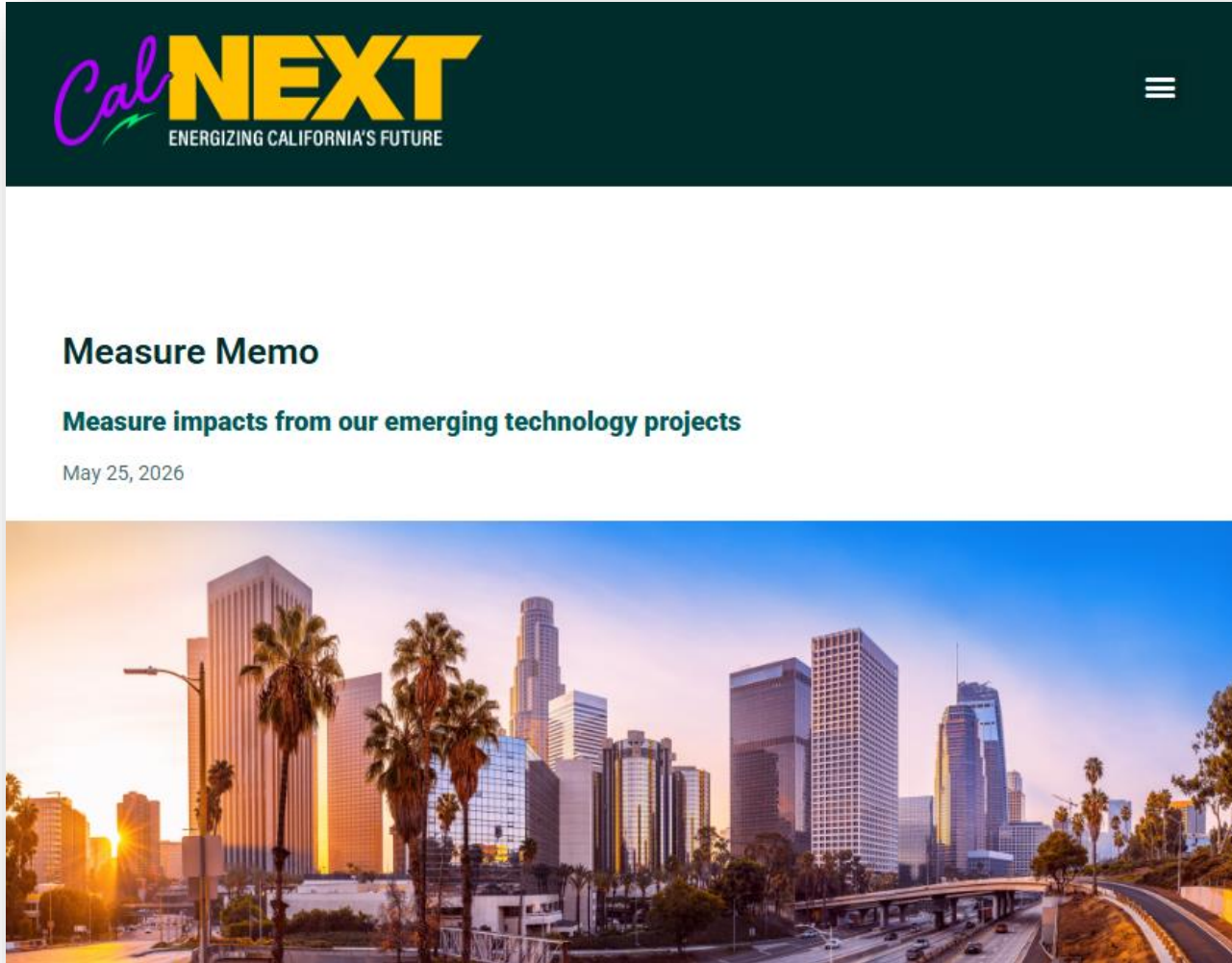
Technology Transfer cont.

Why Measure Developers Monitor Emerging Technology Findings

- **Identify near-ready measures:** A project may have completed most of the cost analysis, modelling, and work needed for a measure that a measure developer could take over and finalize.
- Final reports may contain results that recommend a new measure or measure update.
- **Find opportunities for handoff:** A project that has reached the end of its funding or research phase may need a measure developer to translate the technical findings into a standardized, implementable measure.
- Findings across completed projects can highlight technology gaps, barriers, and areas where additional development work may be warranted.



Measure Memo



Check out CalNEXT.com to read our annual **Measure Memo** – A report providing summaries and links to full reports of all measure-related activities and their outcomes from CalNEXT projects.

Q&A



CalNEXT



Thank You!

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*Cal***NEXT**