

How Manufacturers and OEMs Can Engage with CalNEXT

September 8, 2026

Presenters



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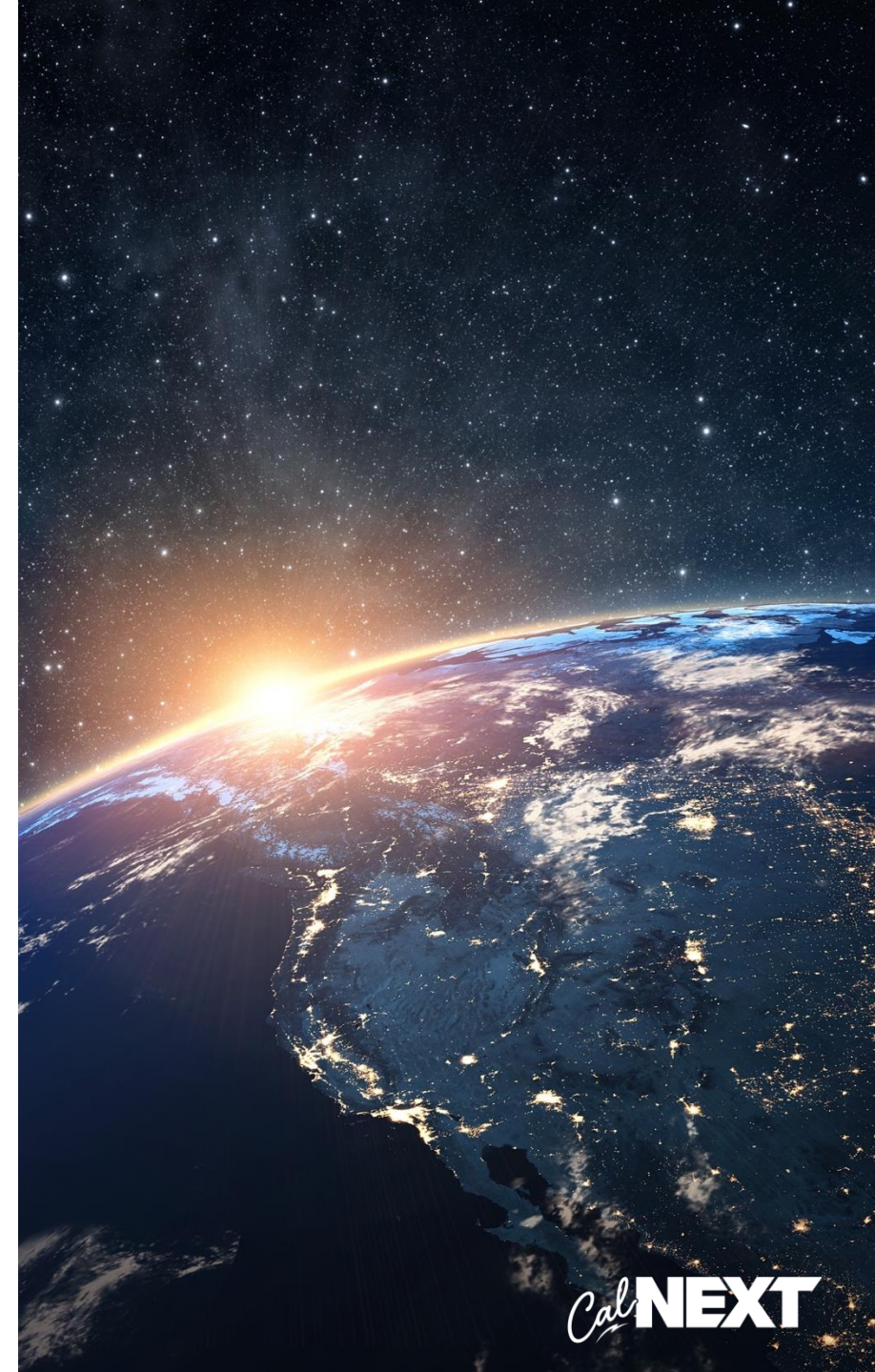
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Agenda

1	About CalNEXT	5 Min
2	Technology Priority Maps (TPMs)	10 Min
3	How CalNEXT Works with Manufacturers	15 Min
4	Scanning & Screening/How to Participate	10 Min
5	Technology Transfer	10 Min
6	Q&A	10 Min

About CalNEXT

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



CalNEXT Partners



Program Objectives

-  **Communicate** program priorities to stakeholder community.
-  **Scan, Prioritize, Evaluate** commercially available, emerging, or underutilized 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.

The 2026 CalNEXT Program



What are Technology Priority Maps?



High-Level Framework

Explains the CalNEXT program priorities with annual updates, sorted into six technology categories



External Communications Tool

Defines what CalNEXT research topics we want to fund

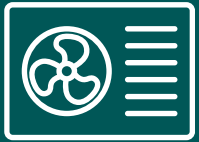


Internal Tool for Screening

20% of score is based on alignment with technology priority maps (TPMs)

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.



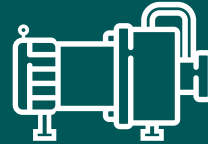
HVAC



Lighting,
Plug Loads
& Appliances



Portfolio
Enhancements



Process
Loads



Water
Heating

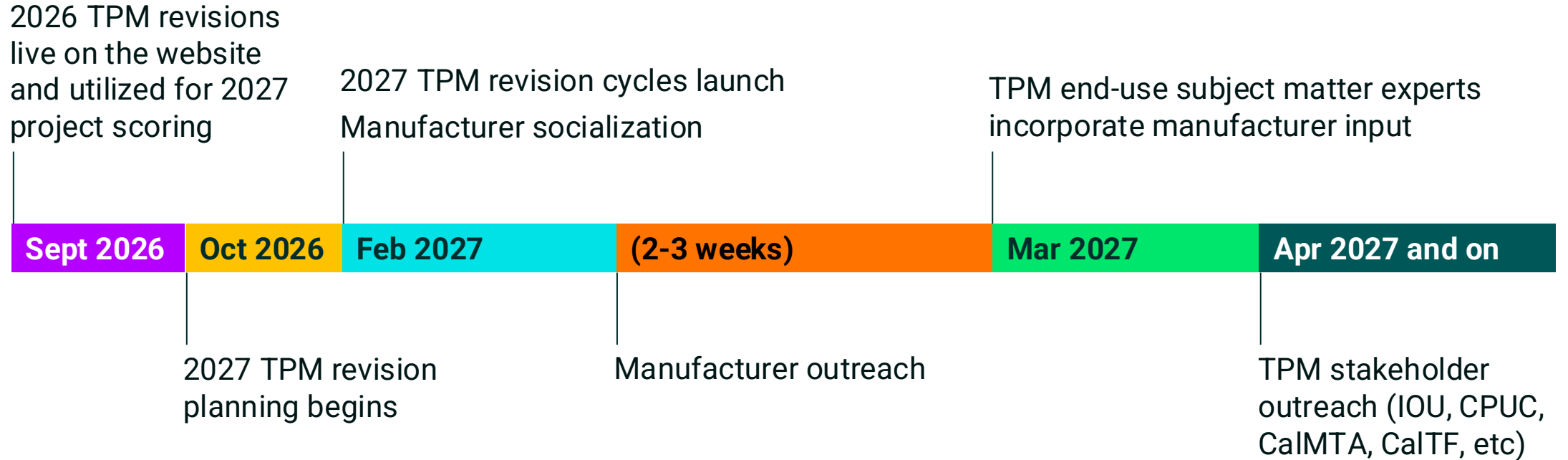


Whole
Buildings

Technology Priority Map Alignment and Portfolio Priority

- **Technology Priority Maps** – Project needs to objectively align with technology priority map (TPM) technology family and its priority level. Note that a project may align with multiple TPMs, it is intended that this criterion apply to the highest priority technology family that applies to the project.
 - Projects will be scored on alignment with new research initiatives ranking system.
 - High needs will be seen as highest priority; however, a project is not discounted if it falls into other “needs” rankings.
 - Note that a project may align with multiple different research initiative types in the research initiative table and will be evaluated based on where most of the project work is expected.

Manufacturer Technology Priority Map Involvement Timeline



Manufacturer Technology Priority Map Involvement

CalNEXT would like greater alignment on our understanding of opportunities and barriers within each TPM.

- Manufacturers may have identified key points in these areas that our subject matter experts have missed.
- Opportunities and barriers do not have to be specific to gains in energy efficiency (related to kWh savings); they may be market related. If there is a known market barrier or opportunity that involves a non-energy benefit but can drive greater adoption of energy efficient products, we'd like to have it identified.

CalNEXT would like manufacturer feedback on the research areas and research initiatives.

- Research Areas are broad end use categories (e.g. Commercial Air-to-Air Heat Pumps), and Research Initiatives are more focused, project specific categories within each research area (e.g. heat pump RTUs and controls and infrastructure).
- Opportunities and barriers should be related to the research areas they are listed under.

Technology Priority Map Alignment and Portfolio Priority

Icon	Meaning
 Future Needs	Covers items that are not yet ready for consideration due to having high needs in validation, market analysis, measure development, or program development. Programs should not be discouraged from submitting proposals for research initiatives with a “Future Needs” classification but instead focus on making a strong argument for how the project outcomes can help fill in the missing gaps for validation or market analysis.
 Low	Covers items that have lower industry interest and/or uncertain impacts for energy efficiency due to having an expansive data set or information readily available or not being pertinent to the research initiative.
 Medium	Covers items that are an evolution or offer promise to existing and common technologies for energy efficiency. This can be in the form of needs that are currently being addressed with existing projects or needs that may exist but are not critical to the objectives of meeting efficiency metrics.
 High	Covers items that have high industry interest and high impacts for energy efficiency.

Technology Priority Map Alignment and Portfolio Priority

Research Initiatives

Research Initiatives	Performance Validation needs	Market Analysis needs	Measure Development needs	Program Development needs
Window HPs (Room Heat Pumps)				
Portable HPs				
Through- the-wall HPs (PTHPs/SPVHP)				

KEY  High Needs  Medium Needs  Low Needs  Future Needs

Technology Priority Map Research Initiative

Opportunities and Barriers

OPPORTUNITIES

Micro heat pumps have the potential to rapidly electrify space heating, replacing existing portable space heaters and older, less efficient room air conditioners with more efficient heat pumps. As these products become more widely available, some opportunities are emerging. For example:

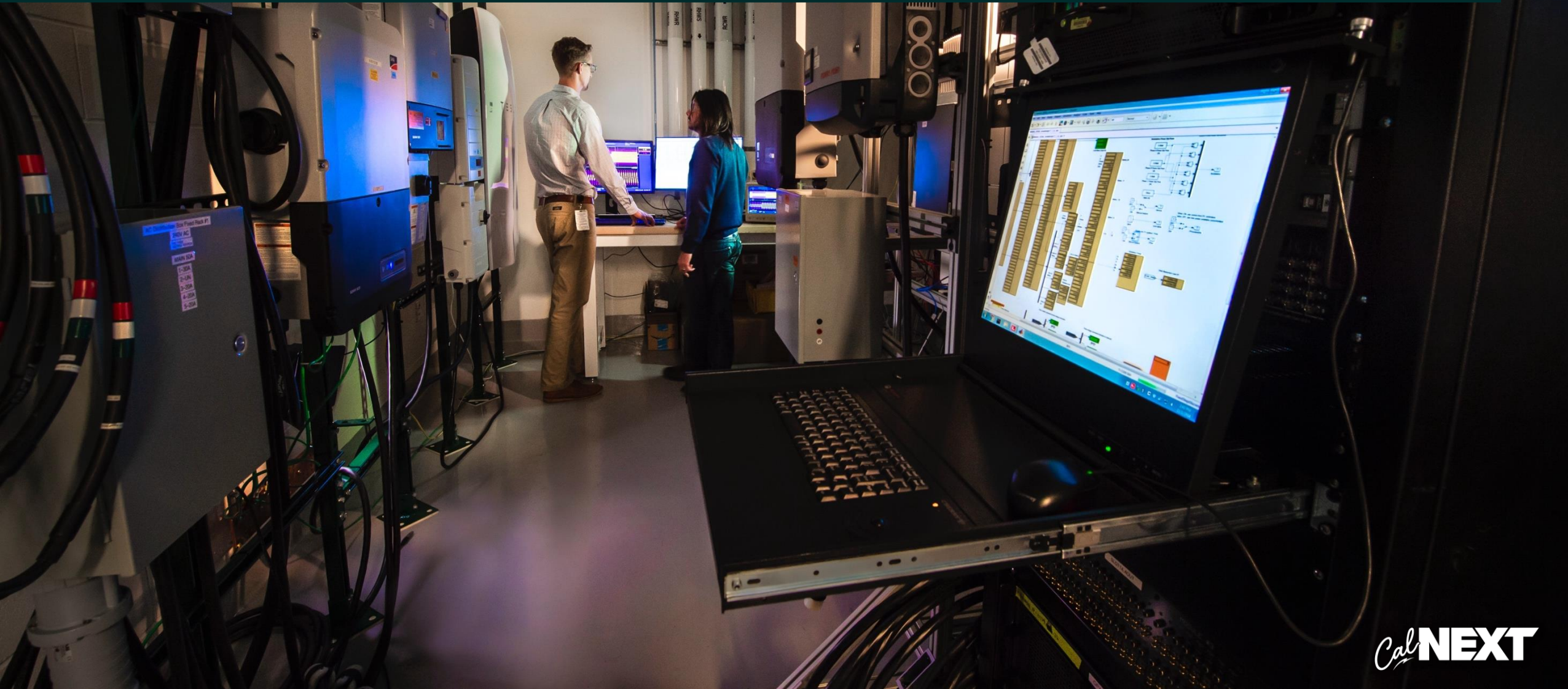
- This technology family may be especially important for disadvantaged communities and hard-to-reach customers where the majority of households are renters with limited options to improve their electrical or HVAC infrastructure by way of 120V plug-in options.
- Customer usage patterns can help inform the real-world efficiency and electrification potential of these products, for example:
 - Ease of self-installation and customer satisfaction.
 - Cost and performance compared to central heat pumps.

BARRIERS

Barriers may include the following:

- Implementation barriers, including product usage patterns, customer sentiment, and understanding overall market awareness.
- Installation practices, including identifying common installation challenges. For example, the setting of the outdoor air damper position, sealing around the unit, decommissioning existing equipment, and thermostat control setting (especially to avoid conflict with controls of central systems) may be challenging.
- Lack of heating performance testing and metrics. This is an area that is quickly evolving as ENERGY STAR® is continuing to develop a test procedure for window heat pumps that is expected to be released in 2025.

How CalNEXT Works with Manufacturers and OEMs





Supporting the Investor-Owned Utilities and CPUC

- Manufacturers and OEMs can submit projects that address barriers outlined under the TPM research initiatives.
- Help inform our technology priority maps.

Putting Forward Project Ideas

Project Criteria

- Address barriers outlined under the TPM research initiatives.
- Project outcomes must be tied to measurable savings in kWh or affordability for the end user.
- CalNEXT must be manufacturer agnostic.

Ways to Engage

- Connect with our partners if you have an existing relationship.
- Reach out to info@calnext.com.
- Submit a project idea at calnext.com/how-to-participate, so we can pair you with the right partner.

Helping to Inform Technology Priority Maps



Provide Feedback in
the Yearly TPM
Updates

Has CalNEXT caught all relevant updates to the research areas and research initiatives?

Has CalNEXT identified all relevant opportunities for the calendar year?

Has CalNEXT identified and updated all relevant barriers?

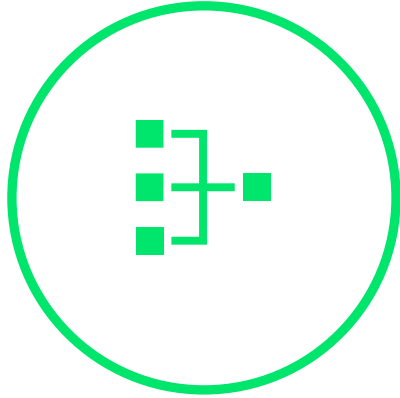
Why Engage with CalNEXT?

-  Obtain agnostic, third-party validation of efficiency claims.
-  Opportunity to observe equipment in-the-field and improve product in-real-time before taking it to the market.
-  Establish valued relationships with contractors and distributors that can later champion the technology.
-  Receive access to customer case studies.

Project Evaluation Criteria



About CalNEXT Scanning & Screening



Intake Process

Path to submit ideas for consideration



Prioritization Method

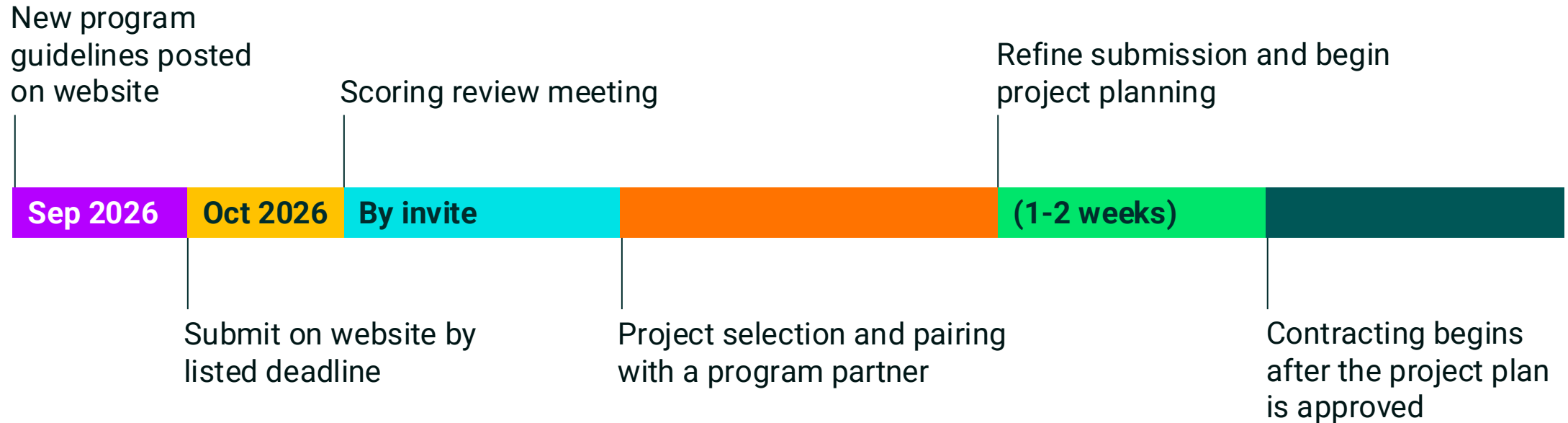
Evaluating submissions to prioritize projects that bring the most value to the program



Portfolio Builder

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

Project Selection Process



Prioritization Criteria

Criteria	Weighting	Details
TPM Alignment/Portfolio Priority/Technology Transfer	30%	How well the project aligns with the CalNEXT TPMs, if the project is a high-priority project and quality and opportunity of technology transfer proposed
Energy Efficiency Program Benefits	10%	Whether the project has benefits for efficiency portfolios, load flexibility and/or grid decarbonization
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
DAC/HTR Impact	10%	Whether the project has benefits for the utilities and affects Hard-to-Reach/Disadvantaged Communities

Prioritization Matrix Summary

Major Considerations	Criteria	Weight
Project Impact/Value (60%)	TPM Priority	10%
	TPM Research Initiative Priority	10%
	Technology Transfer/Market Strategy	10%
	Utility Benefit	10%
	DAC/HTR Benefit	10%
	Project Innovation/Justification	10%
Project Execution (40%)	Project Clarity	10%
	Project Readiness	10%
	Stakeholder Engagement	10%
	Timeline	5%
	Cost	5%

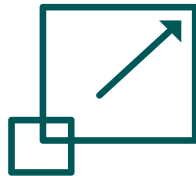
CalNEXT Portfolio Fit



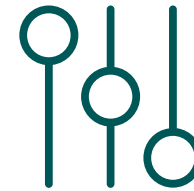
Annual Budget



**Annual Committed
and Expected Targets**



**Tech Transfer
Balance**



**Technology Area
Balance**

Efficiency Program and DAC/HTR Benefits



Efficiency Program Alignment (10%)

- Meeting specific energy efficiency target
- Demand reduction during peak
- Load flexibility
- Grid decarbonization
- Reducing operating costs
- Efficiency portfolios



Disadvantaged Community (DAC) / Hard-to-Reach Community (HTR) Benefits (10%)

- Site located in DAC CalEnviro Screen area
- Works with CBOs and/or diversity advocates
- Develops outreach materials in many languages
- Utilizes diverse contractors
- Supports/utilizes workforce development programs
- Addresses impacts on vulnerable communities
- Engages with diverse working groups for feedback/partnership

Project Quality & Cost



Scope & Project Clarity (10%)

- What will you do?
- How will you do it?
- What do you expect to happen?



Justification/Innovation (10%)

- Why is this different from work that has been done?
- What is the estimated value of the contribution?



Stakeholder Engagement (10%)

- Who is this for?
- Who influences them?
- How do you know?
- How do you engage them?



Readiness (10%)

- How ready are you to start research?
- What resources and partners are in place?
- Why do you think you are positioned for success?



Timeline (5%)

- How long will it take to complete the scope?
- How does this compare to industry standards?

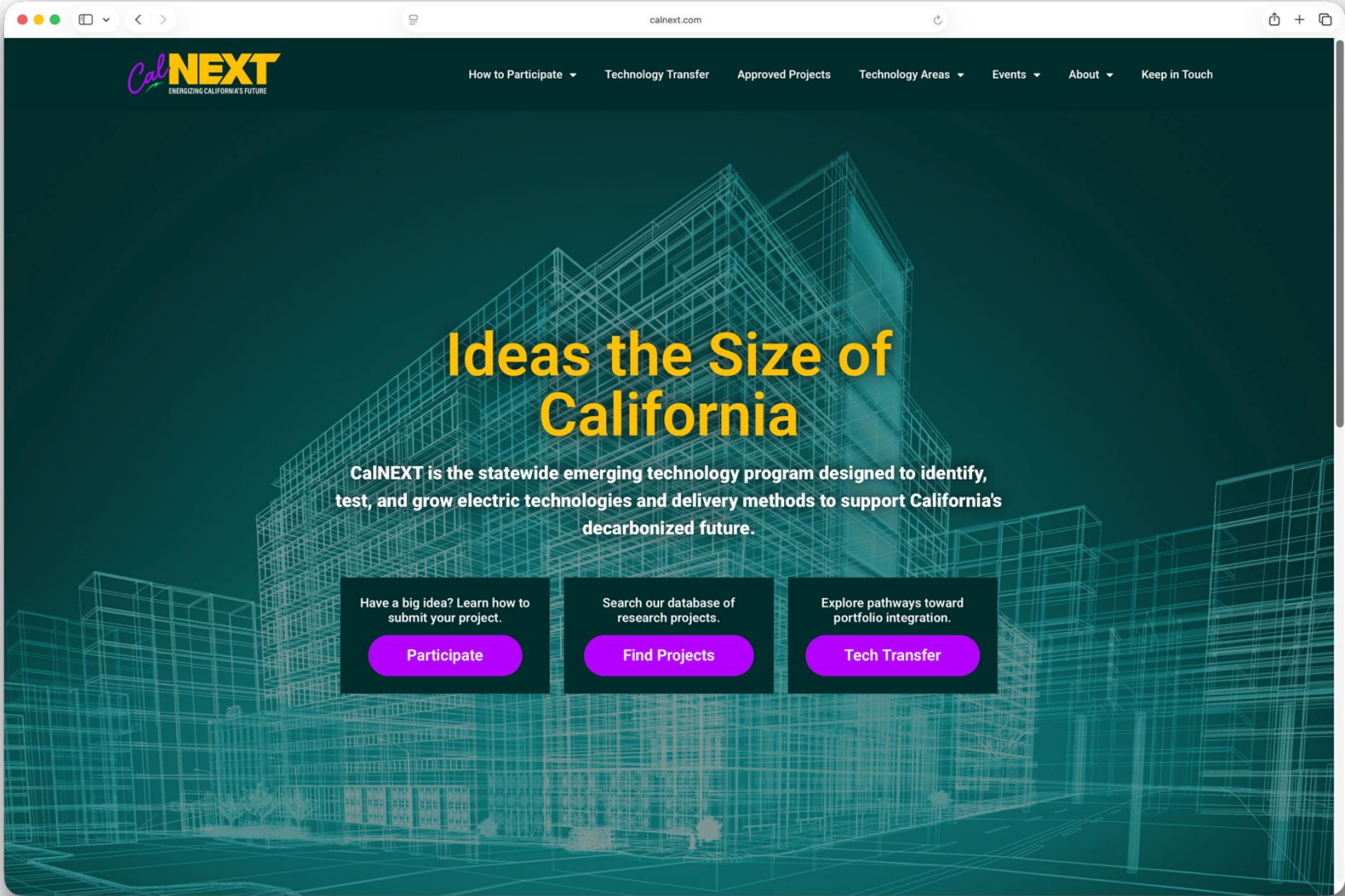


Cost (5%)

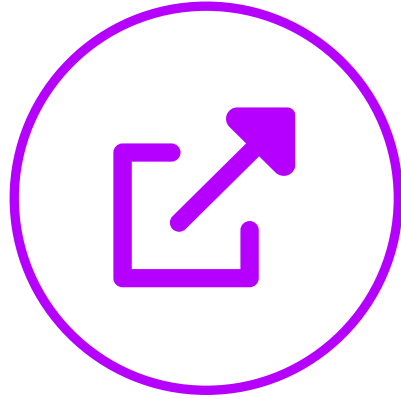
- How much will it cost to complete the scope?
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How to Participate



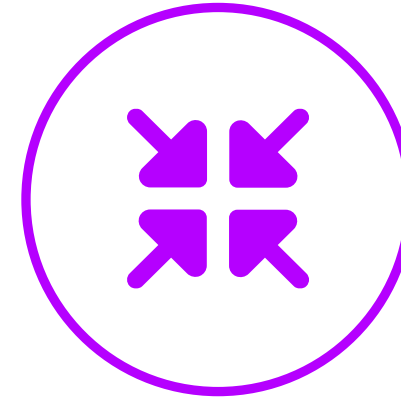


Project Types



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 Submission



Submit an Idea



Submit a Project

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

Technology Transfer



Technology Transfer: Key Terms Defined

Technology Transfer (Tech 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!

Emerging Technology: A Pathway to Market Growth

- **Validate performance and reduce adoption risk:** Field demonstrations and independent testing establish credible savings, performance, and customer confidence.
- **Build the case for new measures:** Emerging technology data provides the technical evidence needed to support California measure development and future incentive opportunities.
- **Shape the market early:** Engage with utilities, regulators, program administrators, and technical experts while helping establish how the technology is evaluated.
- **Strengthen the business case:** Measure development can translate technical performance into a framework that supports investment, incentives, and broader deployment.
- **Expand market opportunity:** Transitioning from emerging technology to an established measure can unlock access to more customers, applications, and programs.
- **Gain a first-mover advantage:** Early participation positions manufacturers to help move emerging technologies from **validation** → **measure development** → **market adoption**.

Technology Transfer Examples

Aerosol Sealing of Existing Attics and

Crawlspaces: New approach to air sealing for existing homes.

- **Field validated:** Demonstrated across 13 residences, with positive performance results.
- **Industry visibility:** Results shared at four national/international conferences, including ACEEE, BSC, AIVC/ASHRAE, and Buildings XVI.
- **Path to commercialization:** Follow-on CEC-funded project will advance the technology toward a commercial product and expand field testing.
- **Measure development opportunity:** Results provide a foundation for developing a measure package for retrofit envelope air sealing.

CO₂ Chiller for Agricultural Sector

- **Product refinement:** Based on project findings, the manufacturer introduced a smaller 50 heat pump CO₂ chiller in March 2026, expanding the tech's fit for smaller customers.
- **Market engagement:** Leveraging project findings, manufacturer participated in the California Dairy Sustainability Summit to expand market visibility.
- **New application identified:** Manufacturer began evaluating a project to repurpose waste heat from the CO₂ chiller to increase methane production from a manure digester.
 - Potential for added value: This could deliver additional energy and operational benefits beyond the chiller's primary function.

Q&A





Thank You!

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*Cal***NEXT**