Insights into the CalNEXT Project Selection Process

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CalNEXT ENERGIZING CALIFORNIA'S FUTURE

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Presenters

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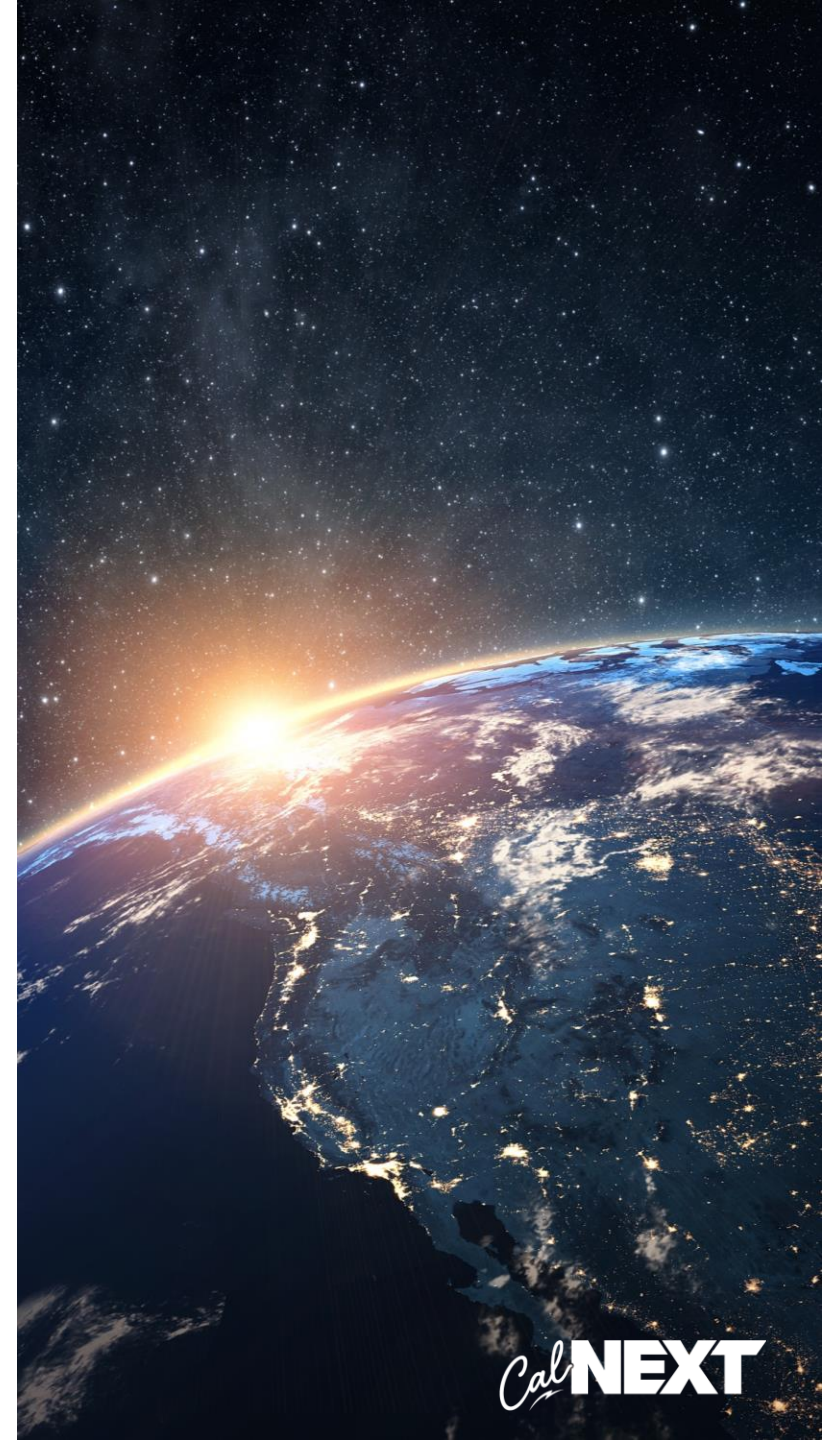VEIC

Cassidee Kido

Project Manager II

Energy Solutions

Agenda

Insights into the CalNEXT Project Selection Process

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About CalNEXT

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

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 IOU EE 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.

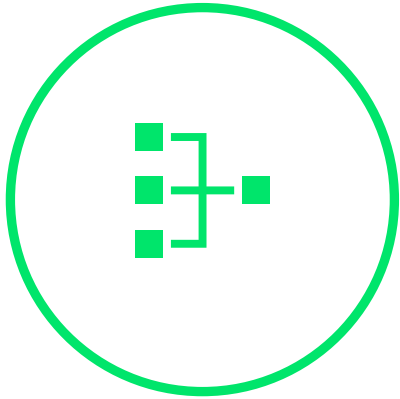**Execute** emerging technology research projects that support the IOU energy efficiency portfolios.

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Desired Outcomes of Scanning & Screening

What is 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

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Scanning & Screening Glossary

Intake Form: Refers to the webform on CalNEXT.com where anyone can submit an Idea or a Project

Partner: Refers to one of the CalNEXT Partner organizations (Energy Solutions, UCD, AESC, TRC, VEIC, and the Ortiz Group)

Evaluator: Person from one of the partner organization who is reviewing and scoring project submissions

Project Planning: Set of activities that result in an approved Project Plan that is the scope of work for your contract

TPM: Technology Priority Map is a document that describes the technologies the program is interested in exploring

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Poll #1

Who is joining us today?

Please respond to the Zoom poll

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Desired Outcomes of Project Selection Process

- Identify enough projects to meet annual program targets within annual program budget

- Make fair, consistent, and defensible decisions

- Identify projects that have the most value to contribute to the program

- Engage industry stakeholders

Target Description	2023 Targets		
	Technology Development Research	Technology Support Research	Total
New Contracted Projects	8	32	40
Completed Projects	8	27	35

High Level Project Selection Process

Submit on website by listed deadline

→

CalNEXT Partner supports submitter to refine project submission

(3 weeks)

→

Revised project idea is evaluated using Prioritization Criteria

→

High Priority projects will be selected to begin Project Planning

→

Contracting begins after the Project Plan is approved
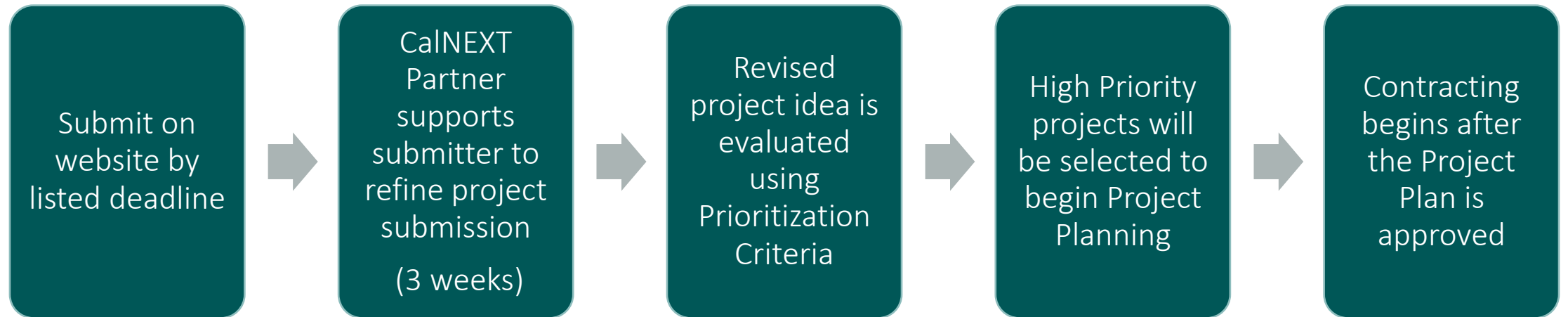
Project Evaluation Criteria

Prioritization Criteria

Criteria	Weighting	Details
TPM Alignment	25%	How well the project aligns with the CalNEXT TPMs
Benefits	20%	Whether the project has benefits for the utilities and affects HTR/DACs
Quality of Idea	50%	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

TPM Alignment/Portfolio Priority

| Technology Priority Map (TPM) Priority (15%)	Technology Transfer and Program Alignment (10%)
• Project aligns with the priorities described in the CalNEXT Technology Priority Maps (TPMs)	• Integration into Energy Efficiency (EE)/Demand Side Management (DSM) portfolios • Establishes a market and/or a direction to increase technology adoption • Real potential for energy savings • Adequate market maturity

0% 25% 50% 75% 100%

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Benefits

Utility Company Benefits (10%)
- Meeting specific energy efficiency target
- Demand reduction during peak
- Grid flexibility
- Reducing operating costs
- Meeting clean energy goals

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

0%   25%   50%   75%   100%
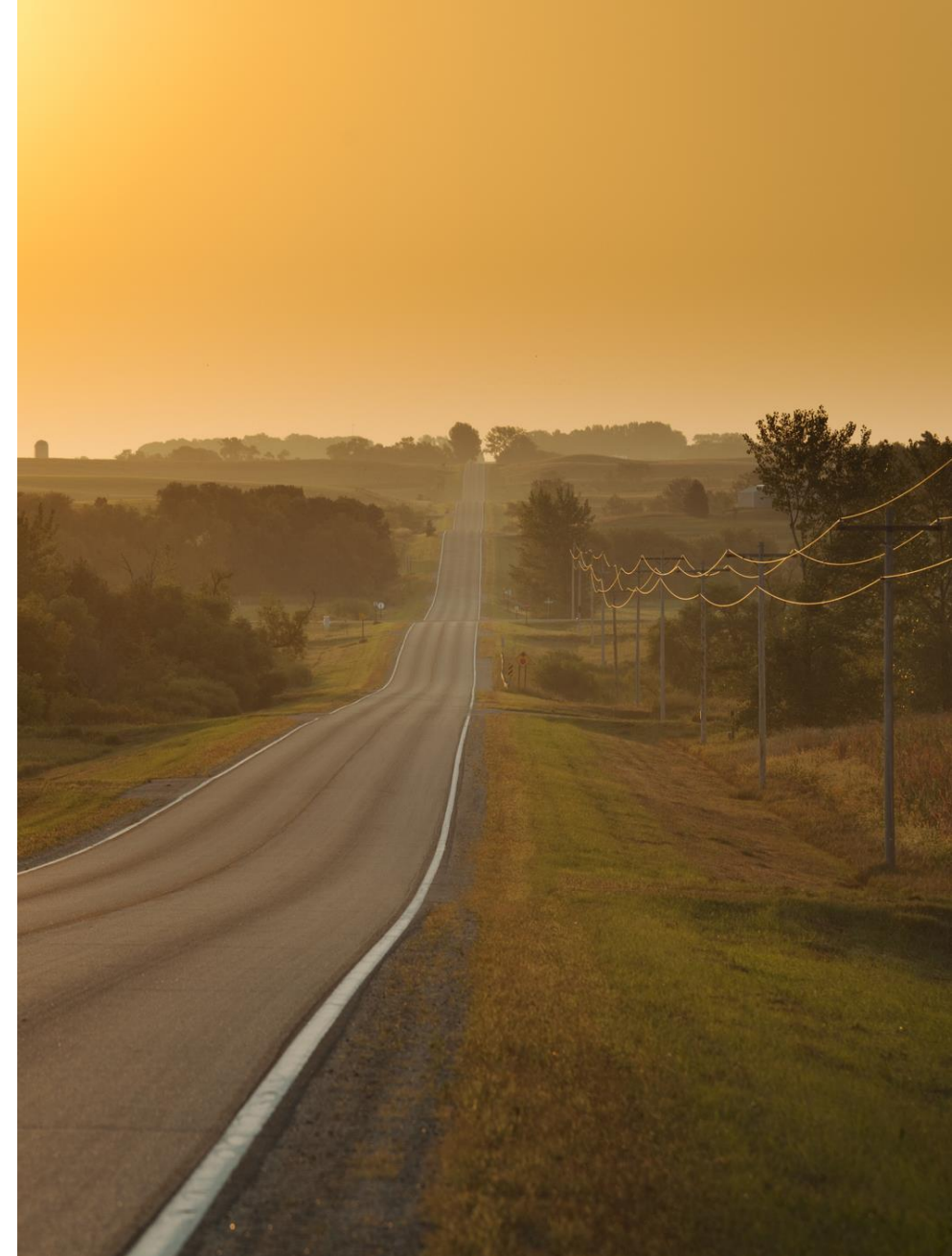
Project Quality & Cost

Scope & Project Clarity (15%)
- What will you do?
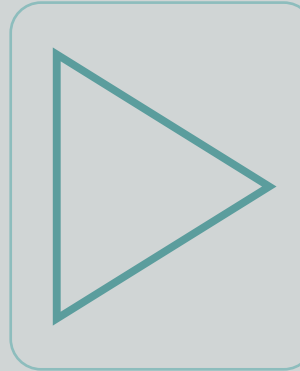- How will you do it?
- What do you expect to happen?

Justification/ Innovation (15%)
- Why is this different from work that has been done?
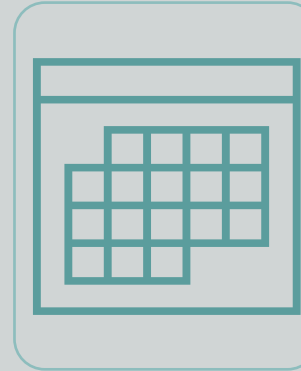- What is the estimated value of the contribution?

Market Strategy & Awareness (5%)
- 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?
- How does this compare to industry standards?

Insights into the CalNEXT Project Selection Process

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Project Submission Examples

Project Submission

- ➢ 9a Recently completed studies
- ➢ 15 TPM Alignment
- ➢ 16 Utility Benefit
- ➢ 18 Scope
- ➢ 19 Expected outcomes

Submit a Project

For projects that are ready to implement:

(Tip: Download this PDF of form questions to prepare your answers before using the online form, as your answers may not be saved if you leave the session and come back to it later.)

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CalNEXT Project Submission Form

PROJECT TEAM INFORMATION

1. Submission Date *

📅 11/18/2022

2. Project Name *

3. Company or Organization Name *

4. Contact Name *

9a. Recently Completed Studies

9a. If available, please provide names and links of recently completed studies related to this project.

1. SCE Report – June 2021

https://www.etcc-ca.com/reports/next-generation-low-gwp-refrigeration-systems-tools-assessment-and-market-impacts

Next-Generation, Low-GWP Refrigeration Systems: Tool Assessment and Market Impacts. This report was prepared by Southern California Edison in order to characterize refrigerant options for grocery/supermarkets in California and how to phase out Hydrofluorocarbon (HFC) refrigerants to be replaced by those with a lower Global-Warming Potential (GWP). It identifies potential energy modeling platforms as they apply to refrigerant upgrades in grocery stores and supermarkets. It provides the advantages and shortcomings of those modeling tools.

Evaluator Perspective
- Provides link and brief explanation
- Helps evaluators understand novelty
- Helps evaluators prevent duplication
- Applies to Justification/Innovation criteria

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15. Technology Priority Map Alignment

TPM / PORTFOLIO PRIORITY

15. How does the proposed project align with the Technology Priority Maps? If it does not align, please explain why this project should be a priority.

The project most directly aligns with the Refrigeration (commercial) and Supermarket Systems TPM categories. It also aligns with Whole Building (non-residential) because the proposed tools and underlying methodology will quantify the whole building impacts, resulting from interactions between the refrigeration systems, the supermarket spaces, and HVAC systems. By aligning with multiple medium and high ETP Priority technology families, all of which are designated as a "lead" program role for SWEETP, the proposed project has very good alignment with the TPM.

Evaluator Perspective
- Refers to two relevant TPM categories specifically
- Acknowledges the priority level and program role from the TPMs
- Applies directly to the TPM Priority Criteria
- Received average score of 23 (out of possible 25)

16. Utility Benefit

16. How does the project benefit utility programs with electrification, load flexibility, new measures and savings for utility programs?

This project supports building electrification efforts by understanding market adoption rates and projected timelines and corresponding load impacts to the grid. The project estimates energy impacts for BAU and leak-tight installations. This project will support the utility program administrations as they expand electrification with the programs in support of California GHG goals. In addition to the significant decarbonization potential of this project attributed to mitigating refrigerant leaks and promoting the adoption of low-GWP refrigerants, there is also significant energy savings potential associated with maintaining the appropriate amount of refrigerant in a commercial heat pump system.

Evaluator Perspective
- Program Alignment: Energy Efficiency Savings
- Utility Benefits: State GHG reduction goals
- Utility Benefits: Grid Impacts
- Submissions with numerical estimates achieve the highest scores here

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18. Scope

18. **What is the scope for the project?**

For the market evaluation study, proposer will:

- conduct an initial market evaluation to size the total market of offices with single zone air conditioners serving multiple zones
- identify workplace occupancy trends, leveraging <6 month old studies evaluating workplace occupancy and return to work trends nationally or in California. This will be used to inform the total available market and savings potential.
- identify the currently available communicating occupancy sensors that can be leveraged in commercial retrofit scenarios, and identify current marketplace opportunities and barriers identified through other ET studies nationally

For the technical field study, proposer will

- select two different communicating occupancy sensor technologies – to install at two study sites – one technology at each site.
- identify and select two multi-tenant commercial study host building sites where tenant spaces include multiple zones serve by single zone air conditioner.
- at each host building site, map HVAC units to sub-zoned tenant spaces.
- For 50% of HVAC unit-served spaces, install communicating occupancy sensors. 50% will remain untreated as the control group. The occupancy information in each space is communicated wirelessly (e.g., via ZigBee protocol) to the thermostat. The thermostat can be programmed to turn off equipment, both supply fan and compressor, when associated spaces in a zone are detected to be unoccupied for a preset amount of time.
- Perform 6 to 12 months of M&V, comparing the hourly energy consumption, load, and GHG of the treatment and control groups.

Evaluator Perspective
- Distinguishes two major parts of study
- Discusses time to complete
- Discusses relevant location info
- Number of technologies and installations

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19. Expected Outcomes

19. What are the expected outcomes of the project?

Expected outcomes include:

- Documentation of the multifamily housing characteristics relevant to decarbonization, efficient HVAC, enclosures, and combination systems.

- A methodology for low-income multifamily market characterization, including data sources appropriate to different segments of the low-income multifamily stock (e.g., subsidized versus "naturally occurring" affordable housing), a literature review of available resources, and a field survey methodology for collecting detailed housing characteristics while on-site for existing multifamily programs.

- Identification of high priority technologies for this market segment.

- A comprehensive study on the low-income multifamily sector which fills a gap in existing market studies and provides more targeted detail on housing characteristics relevant to the target technologies.

Evaluator Perspective
- Existing Program outcomes
- Technology outcomes
- Documentation outcomes

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How to Participate

CalNEXT.com
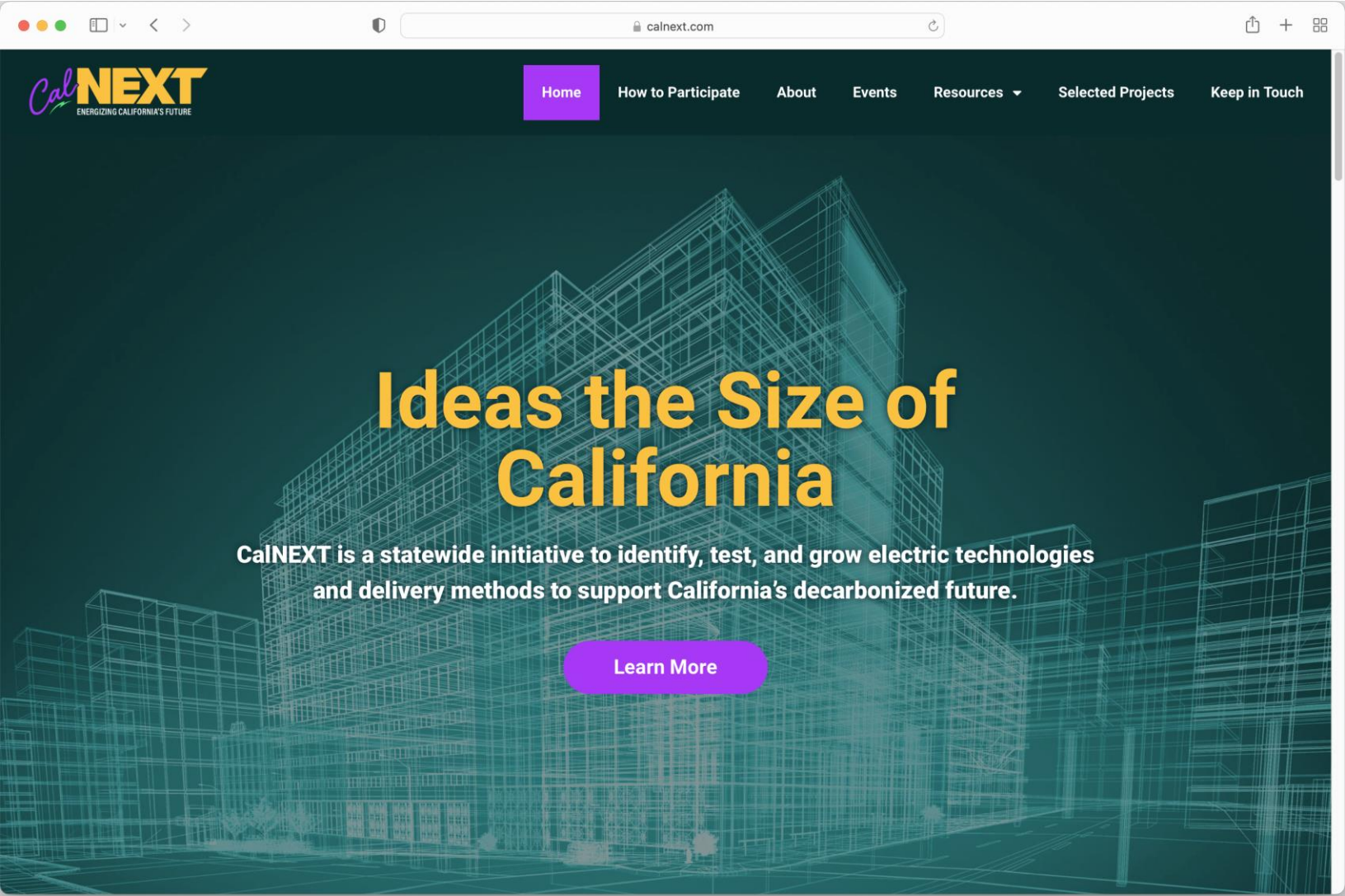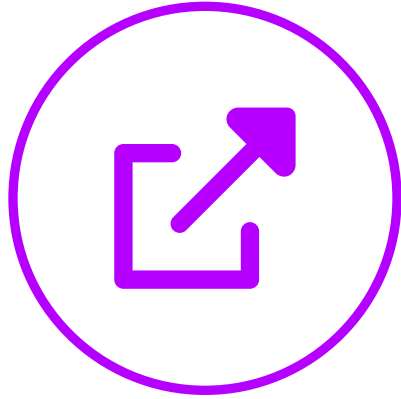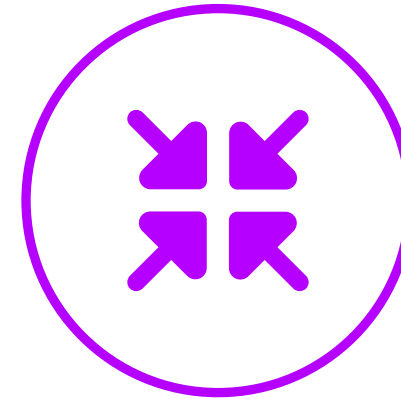
Project Types

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*.

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Project Submission

Submit an Idea

Submit a Project

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Submission Next Steps

YOU Submit an idea or project at CalNEXT.com

Team Reviews

Team Provides Feedback

Project Moves Forward or is Not Selected

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Prioritization Framework

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Poll #3

How likely are you to submit a project or idea before the February 23, 2023 deadline?

Please respond to the poll

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How did we do?

Please respond to the poll

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Feedback/Q&A

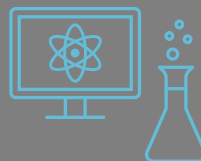# CA Statewide Gas Emerging Technology

The Statewide Gas Emerging Technologies Program (GET) advances promising as potential measures for future energy-efficient programs. Working with cross functional stakeholders, the GET program sources and screens technologies at a TRL of 4 and higher to gather necessary technical and savings potential data, identify key market barriers to adoption, and develop strategies to overcome these barriers.
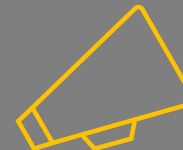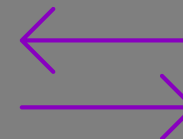

| Scanning and Screening | Planning and Prioritization | Technology Evaluation | Dissemination | Technology Transfer |

For more info: https://cagastech.com

Thank You!

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