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Document Title:	CEC Draft Solicitation Concept for The Next EPIC Challenge
Description:	*** This document supersedes TN 232148 *** Details, competition format and requirements, and schedule for the Next EPIC Challenge.
Filer:	Adam Gottlieb
Organization:	California Energy Commission
Submitter Role:	Commission Staff
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CEC DRAFT SOLICITATION CONCEPT FOR THE NEXT EPIC CHALLENGE

The challenges of climate change and the affordable housing crisis present a unique opportunity to reimagine how new housing is planned, designed, and built in California. Market actors and stakeholders are pursuing a number of promising innovations in architecture, planning, policy, technology, construction, and financing. However, to bend both curves (greenhouse gas emissions and rising housing costs), innovations across these sectors will need to come together into new models capable of disrupting the housing sector so that all Californians have access to safe, healthy, affordable, and desirable living environments. To that end, the Energy Commission is considering releasing a $48 million funding competition that will challenge multi-disciplinary project teams to design and build a medium- to-high-density mixed-use development that is affordable, equitable, emissions-free and resilient to climate change impacts and extreme weather events.

This upcoming challenge is titled *The Next EPIC Challenge: Reimaging Affordable Mixed-use Development in a Carbon Constrained Future*. The CEC is anticipating the release of the funding opportunity for this upcoming design-build competition in mid-2020. The purpose of this concept is to solicit input from stakeholders and prospective applicants on the proposed design-build competition, including specific changes and suggestions that should considered by CEC in the final funding opportunity.

Comments on the staff concept should be submitted to the CEC Research Ideas Exchange at https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=19-ERDD-01.

Prospective applicants looking for partnering opportunities are encouraged to register on the CEC's Empower Innovation website at www.empowerinnovation.net.

Competition Format and Requirements

There is initially up to $48,000,000 in CEC-funding that is considered for this competition. Up to $16 million will be available for the Design Phase of the competition. Project teams selected for the Design Phase will receive up to $1 million each to implement their concept and approach for designing a zero-emission, mixed-used development. Project teams are expected to work with community-based organizations and local jurisdictions to incorporate the needs of the community and prospective tenants in the design. The selection process for the Design Phase will utilize a two-stage submittal and evaluation process with a concept application that precedes a full application.

Project teams selected for the Design Phase will also be eligible to apply for and compete for the Build Phase and receive up to $8 million to build out their concept. A

distinguished panel of judges will select four winners for the Build Phase, one from each regional group shown in Table ES-1.

Table ES-1: Eligible Counties by Group

Group	Eligible Counties
Group 1: Bay Area Region	Alameda, Contra Costa, Mendocino, Marin, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma
Group 2: Central Valley/Northern California	Alpine, Amador, Butte, Calaveras, Colusa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Inyo, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Mono, Monterey, Nevada, Placer, Plumas, Sacramento, San Joaquin, San Benito, San Luis Obispo, Shasta, Sierra, Siskiyou, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Yolo, Yuba
Group 3: Los Angeles Region	Los Angeles, Orange, Santa Barbara, Ventura
Group 4: San Diego/Eastern Southern California	Imperial, Riverside, San Bernardino, San Diego

Source: California Energy Commission Staff

The winners will be announced at a CEC-sponsored forum to showcase new innovations for zero-emissions buildings. Project teams selected and funded for the Phase II Build Phase will construct, commission, and operate their zero-emission, mixed-use development. They will also be eligible to compete to become the grand prizewinner and possibly receive additional CEC funding to scale their designs at multiple locations across the state

Table ES-2: Anticipated Number of Project Teams by Group and Phase

Project Group	Number of Project Teams - Design Phase*	Number of Project Teams - Build Phase**	Number of Project Teams – Scale Phase***
Group 1: Bay Area Region	4	1	1
Group 2: Central Valley/North State	4	1	
Group 3: Los Angeles Region	4	1	

Project Group	Number of Project Teams - Design Phase*	Number of Project Teams - Build Phase**	Number of Project Teams – Scale Phase***
Group 4: San Diego/Eastern Southern California	4	1	
Total	16	4	1

Source: California Energy Commission Staff

** The CEC anticipates selecting four project teams from each region (16 total) for the design phase of the competition. Each team will receive up to $1 million.*

***One project team from each region (four total) will be selected and named the regional winner by a distinguished panel of judges. The winning project teams will be announced at a CEC-sponsored forum on Zero-Emission Buildings. The four project teams selected will move to the build phase of the competition and receive up to $8 million in funding to build out their design. In addition, they will be eligible to compete to be named the statewide winner. Funding for the Build Phase is contingent upon future research funding.*

****The CEC, at a later date, may consider adding a Grand Prize Challenge that will be awarded to the best of the four Build Phase projects to scale their design across the state.*

Table ES-3: Anticipated Timeline and Schedule

Activity	Date
Comments on the Staff Concept Due	April 3, 2020
Solicitation Release	May 2020
Deadline to Submit Abstracts	July 2020
Posting of Abstract Scoring Results	August 2020
Deadline to Submit Full Applications	November 2020
Notice of Proposed Award Posting Date	December 2020
Energy Commission Approval of Agreements	March 2021
Agreement Start Date - Phase I Begins	March 2021
Materials for Phase II (Build Phase) Application Due	March 2022

Activity	Date
Zero-Emission Buildings Forum and Phase II Announcements	May 2022
Phase II Begins	June 2022
Anticipated Agreement End Date	March 2025

Source: California Energy Commission Staff

Minimum Site and Design Requirements

The following describes the draft minimum site and design requirements that project teams must meet in their designs for the competition:

- A single development project of one or more buildings.
- The development can be new construction or a significant remodel and repurposing of an existing development. (Retrofits to existing buildings are not eligible.)
- The development must physically and functionally integrate residential space with non-residential space (retail, commercial, office, institutional, etc.).
- The project site must be located within the service territory of Pacific Gas & Electric (PG&E), Southern California Edison (SCE), or San Diego Gas and Electric (SDG&E).
- The development must designate a minimum of 20 percent of residential units as affordable housing.
- The development must include a minimum of 50 housing units with a minimum density of 100 residential units per acre.
- **All project sites must be located in a designated low-income[1] or disadvantaged community[2].**
- All building end-uses must be electric (no gas consumption is allowed).
- A minimum of 20% of the building's peak load must be available to be temporarily managed or curtailed to respond to grid conditions.
- The building's peak demand must be met through a combination of onsite renewables, onsite storage, and load management.
- All customer end uses must be controllable through the home energy management system, and be capable of responding to real-time pricing signals.

[1] Energy Commission staff proposes to use the existing low-income mapping tool developed by ARB to determine low-income communities. https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/communityinvestments.htm.

[2] Defined as communities representing census tracts scoring the top 25% in CalEnviroScreen 3.0. https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30.

- The master-metered microgrid controller(s) must be interoperable with DER aggregation platforms such as Virtual Power Plants.
- The building(s) must be able to island from the main grid during an outage and provide a minimum of 8 hours of electricity to critical loads using onsite renewables, storage, and electric vehicles.
- All parking spaces and structures associated with the development must have EV-charging stations that can respond to grid- and building-signals.