



GFO-20-305

The Next EPIC Challenge:
Reimagining Affordable
Mixed-Use Development
in a Carbon-Constrained
Future

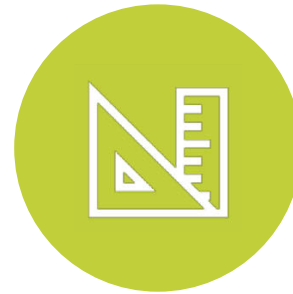
JANUARY 21, 2021
ENERGY RESEARCH AND
DEVELOPMENT DIVISION
CALIFORNIA ENERGY COMMISSION

Agenda

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Welcome and Intro
to EPIC Program



Overview of The Next
EPIC Challenge



Application Process



Question and Answer

Virtual Housekeeping

This public workshop conducted remotely via Zoom is recorded.

3 ways to comment

- ▶ Use the “raise hand” feature in Zoom,
- ▶ Over the telephone: dial *9 to “raise hand” and *6 to mute/unmute you phone line, or
- ▶ Type your question in the Q&A window.
- ▶ Please limit comments to 3 minutes.

Written comments can be submitted through the e-commenting system at:

<https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=19-ERDD-01>

Find a Partner on EmpowerInnovation.net

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Empower Innovation strives to accelerate your cleantech journey with easy access to funding opportunities from the Energy Commission and other funding providers, curated resources and events, and connections to people and organizations.

FIND A PARTNER

Announce your interest in this funding opportunity and message other interested parties to find potential partners.

RESOURCES & TOOLS

Browse the collection of resources for cleantech innovators including Resource Libraries, Funding Sources, Tools, and Databases.

EPIC Background

- ▶ The Electric Program Investment Charge (EPIC) is funded by an electricity ratepayer surcharge established in 2011 by the California Public Utilities Commission.
- ▶ Benefits ratepayers of state's electric investor-owned utilities (PG&E, SCE, and SDG&E).
- ▶ Funds clean energy technology projects: greater electricity reliability, lower costs, and increased safety.
- ▶ Projects must lead to technological advancement and breakthroughs to overcome barriers that prevent the achievement of the state's statutory energy goals.



Los Angeles Times

The days of fast growth are ending for L.A. and California, report says



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CALIFORNIA WILDFIRES

THE NEW NORMAL

Stream now with the ABC10 app on

Roku

Apple TV

amazon
fireTV

Seeking Solutions to Address our Challenges

The Next EPIC Challenge

Can we design and build mid-rise, mixed-use development that is affordable, equitable, climate-resilient, cost-competitive and emissions-free?



Deploy the
next-
generation
of energy
technologies

Advanced
planning,
design, and
construction
practices

Unlock value
streams from
grid-
interactive
buildings

Innovative
tools to
advance
energy
equity

Pathways to
Affordable,
Equitable,
Zero-Emission
Mixed-Use
Development

Deploy Next Generation Energy Technologies

"Incumbent technologies have a distinct advantage over new entrants, not because they are necessarily better, but because they are more widely used and diffused."



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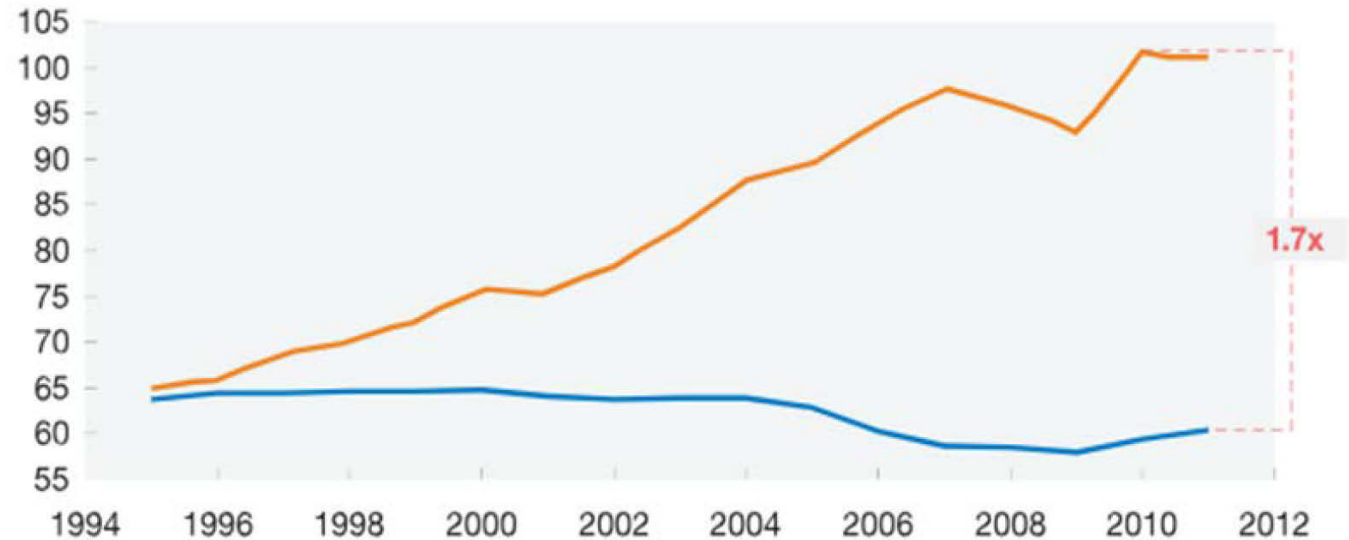
Advanced Planning, Design and Construction Practices

Overview of productivity improvement over time

Productivity (value added per worker), real, \$ 2005

— Manufacturing
— Construction

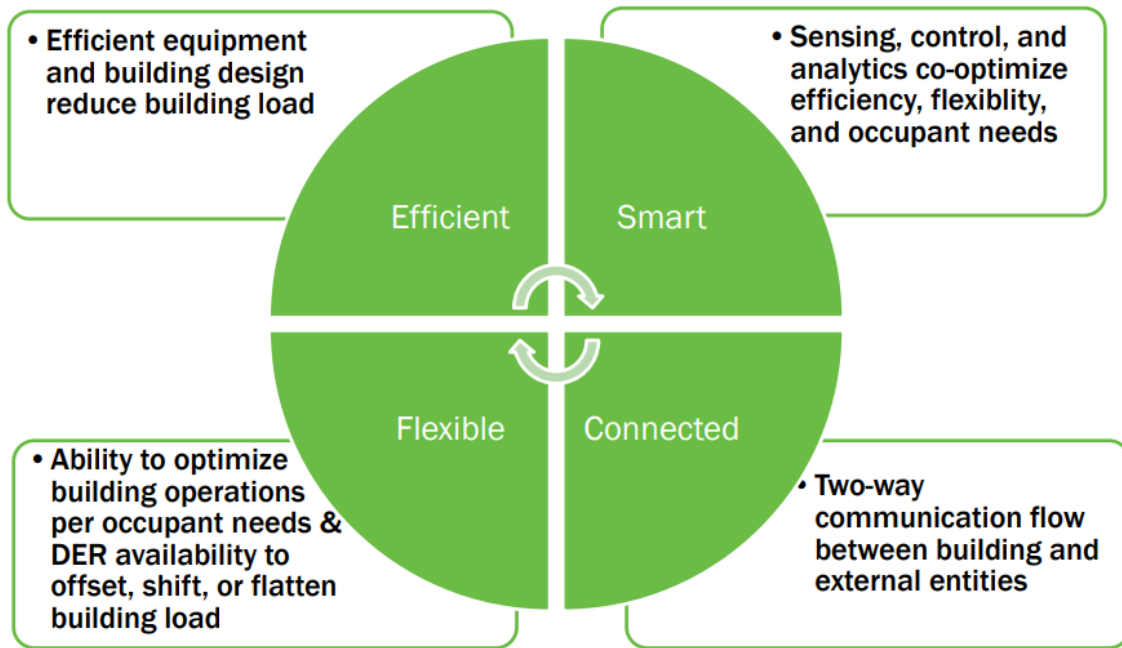
\$ thousand per worker



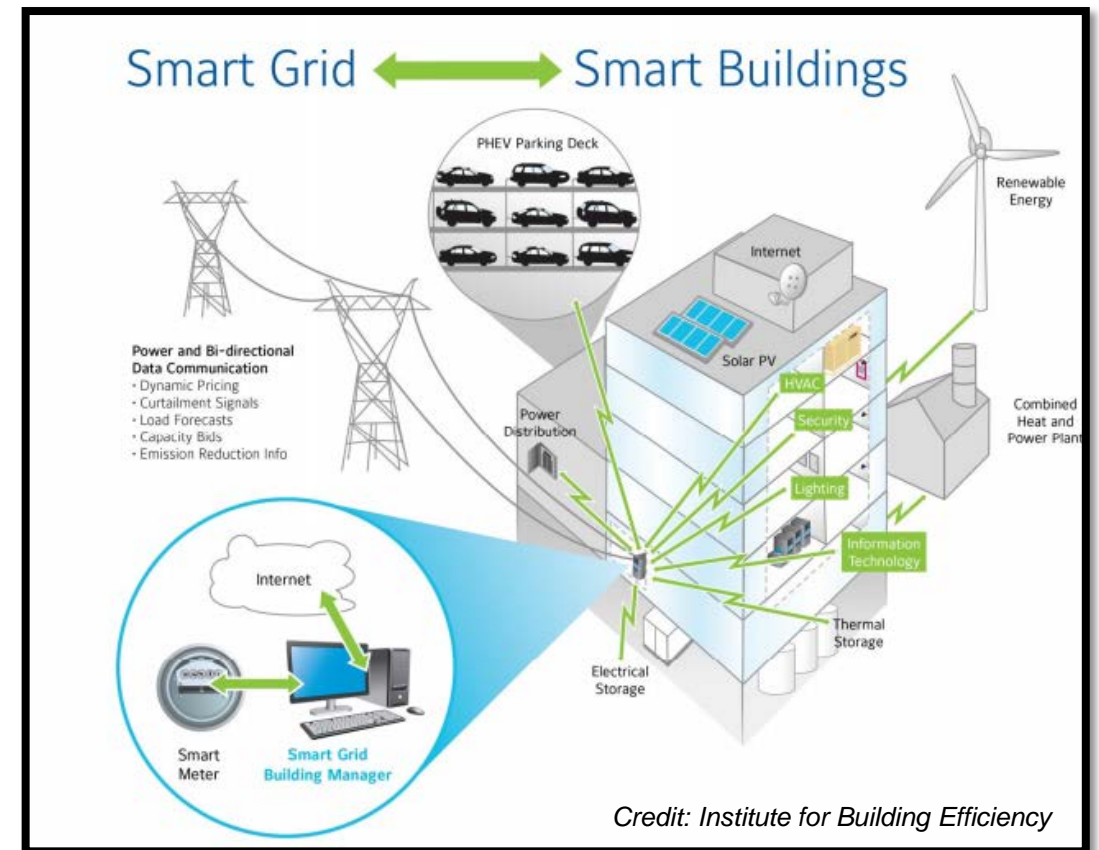
Source: Expert interviews; IHS Global Insight (Belgium, France, Germany, Italy, Spain, United Kingdom, United States); World Input-Output Database

McKinsey&Company

Unlock Value Streams from Grid-Interactive Buildings



Source: U.S. Department of Energy Office of Energy Efficiency & Renewable Energy



Credit: Institute for Building Efficiency

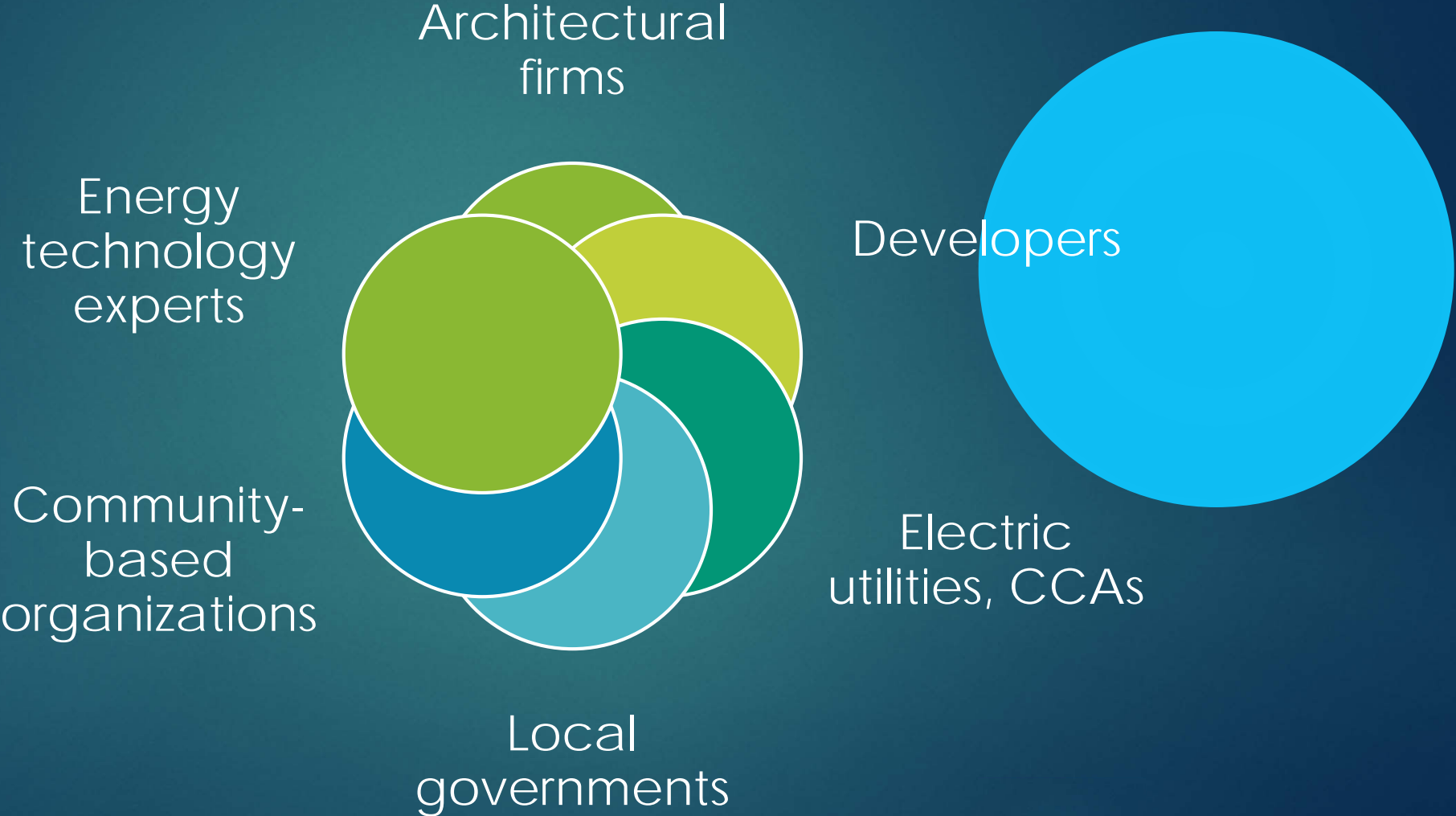
Innovative Tools to Advance Energy Equity

For example:

- ▶ Digital tools for community engagement
- ▶ Transactive energy platforms to enhance energy affordability
- ▶ Financial mechanisms that support do no harm development
- ▶ Other innovations to ensure equitable benefits to the local community



Anticipated Project Teams



Minimum Site Requirements

Minimum Site Requirements (1 of 2)

- ▶ Single development project of one or more buildings. If multiple buildings, must be located within $\frac{1}{4}$ of a mile, part of the same overall masterplan development, and have functional integration among buildings, such as DER aggregation.
- ▶ Can be new construction or an adaptive reuse of an existing development.
- ▶ Must physically and functionally integrate residential space with non-residential space (retail, commercial, office, institutional, etc.).

Minimum Site Requirements (2 of 2)

- ▶ Be located within PG&E, SCE or SDG&E service territory.
- ▶ Dedicate minimum of 20% of the units to affordable housing with at least half (10% of total units) dedicated to lower income units. Developments with a higher percentage of affordable housing units will be given preference points.
- ▶ Include a minimum of 50 housing units.
- ▶ Achieve minimum density of 30 residential units per acre, and must exceed 90% of the maximum density for the local jurisdiction. For example, if the maximum density in the location is 60 units per acre, the development must have a density greater than 54 units per acre. Affordable housing as specified can include moderate income (80%-120% of area median income (AMI)) and lower income (0-80% of AMI) units; based on California Department of Housing and Community Development.

Minimum Design Requirements

Minimum Design Requirements (1 of 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.
- ▶ Building's residential load during peak demand hours, 4-9pm, must be met through a combination of onsite renewables, onsite storage, and load management.
- ▶ All residential end uses must be controllable through the home energy management system and be capable of responding to real-time pricing signals.
- ▶ Microgrid controller(s) must be interoperable with DER aggregation platforms such as Virtual Power Plants.

Minimum Design Requirements (2 of 2)

- ▶ Building(s) must be able to island from the main grid during an outage and be able to shed discretionary loads to provide power to Tier 1 critical loads (10% of peak load) and Tier 2 priority loads (25% of peak load).
- ▶ Microgrid must be sized for indefinite renewables-driven backup power of Tier 1 critical loads using any combination of onsite renewables, onsite storage, and load management.
- ▶ 20% of parking spaces must have EV-charging stations that can respond to grid- and building-signals.
- ▶ Remaining parking spaces must be EV-ready, meaning they must have a dedicated electrical circuit with the capacity to eventually become a charging station.

Application Process

Project Group	Number of Project Teams (Design Phase)	Maximum Project Award (Design Phase)	Number of Project Teams (Build Phase)	Maximum Project Award (Build Phase)
Group 1: Bay Area Region	3	\$1 million	1	\$9 million
Group 2: Central Valley/Northern California	3	\$1 million	1	\$9 million
Group 3: Los Angeles Region	3	\$1 million	1	\$9 million
Group 4: Imperial Valley, Inland Empire, and San Diego County	3	\$1 million	1	\$9 million

Funding Overview

Number of Housing Units in the Development	Maximum Project Award Build Phase (non-DAC or LI)	Maximum Project Award Build Phase (DAC or LI)
50 – 74	\$5 million	\$6 million
75 – 99	\$6 million	\$7 million
100 - 124	\$7 million	\$8 million
125+	\$8 million	\$9 million

Maximum Funding Amounts by Number of Residential Units

Eligible Costs

Administrative costs to manage the grant

Costs to procure, install, operate, and maintain advanced energy features and energy management systems (see Table 7 for eligible technologies)

Costs to procure, install operate and maintain measurement and verification equipment

Costs to implement advanced construction practices

Warranties for emerging technologies

Costs to document and produce case study report

Application Process Overview



Concept Application



Full Application



Design Phase



Build Phase Selection and Showcase Event



Build Phase

Concept Application

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Ten-page (max) concept application that summarizes key project details



Includes goals and objectives, proposed technical innovations, and expected benefits to the residents and community.



Projects must address questions listed in Table 13 of solicitation manual



Concept applications will be scored on pass/fail basis.



Projects will not be required to have a site secured to submit a concept application.

Design Phase Full Application

Design Phase: Full Application



Only applicants with a passing Concept Application will be eligible to submit a full application for the Design Phase.



The full application must include a detailed project proposal to show how the applicant plans to get from concept phase to build phase.



The Project Narrative (Attachment 6) must describe how the project will meet the minimum site and design requirements, and thoroughly address each of the questions listed in the scoring criteria.



Applicant teams are required to have a site selected and secured to submit the Full Application for the Design Phase.

Design Phase: Full Application Scoring Criteria

	Max Points
Emerging Energy Technologies	20
Energy, Emissions, and Cost Performance	15
Resiliency and Safety	10
Aesthetics and Functionality	10
Advanced Construction Practices	10
Construction Readiness	10
Community and Economic Impact	15
Market Transformation	15
Customer (Tenant) Interface	5

Design
Phase: Full
Application
Scoring
Criteria
(Additional)

	Max Points
Team Qualifications, Capabilities, and Resources	15
Budget and Cost-Effectiveness	10
CEC Funds Spent in California	10
Ratio of Direct Labor to Indirect Costs	5
Additional Match Funds (preference points).	5
Disadvantaged & Low-Income Communities (preference points)	10

Submitting an Application

Electronic Submission

- ▶ Preferred method of Delivery is the Energy Commission Grant Solicitation System, available at: <https://gss.energy.ca.gov/>
- ▶ First time users must register as a new user to access system.
- ▶ Electronic files must be in Microsoft Word (.doc format) and Excel Office Suite formats, unless originally provided in solicitation in another format.
- ▶ Attachments requiring signatures should be scanned and submitted in PDF format.
- ▶ Complete Budget Forms (Attachment 7) must be in Excel format.
- ▶ Instructions on how to register and submit an application: https://www.energy.ca.gov/sites/default/files/2019-05/GSS_How_to_Apply.pptx

Purpose

The purpose of this solicitation is to fund a design-build competition that will challenge multi-disciplinary project teams to design and build a mixed-use development – using cutting-edge energy technologies, tools and construction practices - that is affordable, equitable, emissions-free and resilient to climate change impacts and extreme weather events.


ADDITIONAL INFORMATION

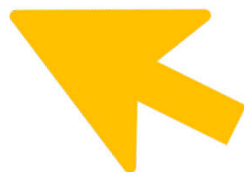
- Addendum 1 (See Solicitation Files)

Deadline to Submit:

- Concept Application Abstracts: April 9, 2021 - 5PM PDT
- Full Applications for the Design Phase: July 28, 2021 - 5PM PDT
- Application Materials for the Build Phase: June 23, 2023 - 5PM PDT

SOLICITATION FILES

-  [00 GFO-20-305-01 Addendum 1 Solicitation Manual ada.docx](#)
-  [01 GFO-20-305 ConceptApplication Form ada.docx](#)
-  [02 GFO-20-305 Concept Project Abstract Form ada.docx](#)
-  [03 GFO-20-305 Concept Commitment and Support Letters Form ada.docx](#)
-  [04 GFO-20-305 Design EPIC Application Form-ada.docx](#)
-  [05 GFO-20-305 Design EPIC Executive Summary Form ada.docx](#)
-  [06 GFO-20-305 Design EPIC Project Narrative ada.docx](#)
-  [07 GFO-20-305 Design EPIC Project Team Form ada.docx](#)



Check the
Attachment
Templates for
Instructions

INSTRUCTIONS FOR EACH
ATTACHMENT CAN BE
FOUND INSIDE THE
ATTACHMENT TEMPLATE



Schedule of Key Activities

Empower Innovation Event

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EMPOWER INNOVATION EVENT

VIRTUAL AVAILABLE

DEVELOPING SUSTAINABLE, AFFORDABLE HOUSING IN CALIFORNIA'S COMMUNITIES

JANUARY 28, 2021 8:30 AM TO 12:30 PM

REGISTER NOW →

JOIN US FOR AN INFORMATIVE AND INTERACTIVE EVENT TO LEARN ABOUT HOW TO GET INVOLVED IN CREATING SUSTAINABLE AND AFFORDABLE HOUSING IN YOUR COMMUNITY.

CEQA



The Design Phase schedule should factor in CEQA review time, so that the applicant's deliverables for consideration for the Build Phase are ready in time.



Due to the scale and scope of the proposed projects, a particular project may require an Initial Study at least, and a Negative Declaration, Mitigated Negative Declaration, or an Environmental Impact Report, rather than fall within a CEQA exemption.



CEQA review will typically be by a local, lead agency with general governmental powers.

Prevailing Wage

- ▶ Projects deemed to be public works require payment of prevailing wages, which can be significantly higher than non-prevailing wages.
- ▶ Applicants should consider whether and how the prevailing wage requirements might apply not only to the part funded by CEC funds, but also to the entire land-use development, if the Applicant receives CEC funds under a grant.
- ▶ Applicants are encouraged to consult with their attorneys regarding prevailing wage requirements.
- ▶ Note that the Department of the Industrial Relations (DIR) and/or the courts determine what is a public works project and what is not. The CEC is not the evaluator of such questions

Written Questions & Answers

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Please send all related questions in
electronic form to:

Phil.Dyer@energy.ca.gov



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Empower
Innovation
Demonstration

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EmpowerInnovation.net

- ▶ Visit the link to watch the Empower Innovation introductory video:

https://www.youtube.com/embed/PVBGdV0_MGA