



Pre-Application Workshop

EPIC Building Efficiency Grant Solicitation

**Reducing Costs for Communities and Businesses Through Integrated
Demand-Side Management and Zero Net Energy Demonstrations**

GFO-15-308

Energy Efficiency Research Office
Energy Research and Development Division
California Energy Commission
October 6, 2015



Agenda

Time	Topic
1:00 pm	Welcome <ul style="list-style-type: none">• Housekeeping• Background, Policy Drivers• Solicitation Purpose• Key Dates• Eligible Applicants
1:15 pm	Research Groups
1:30 pm	Application Requirements: <ul style="list-style-type: none">• Attachments Application Evaluation <ul style="list-style-type: none">• Screening• Scoring
1:45 pm	Questions and Answers



Housekeeping

- In case of emergency
- Facilities
- Muting of Webex during presentation
- Q&A protocol
- Updates on Solicitation Documents and today's presentation can be found at:

<http://www.energy.ca.gov/contracts/GFO-15-308/>



Commitment to Diversity

The Energy Commission adopted a resolution strengthening its commitment to diversity in our funding programs. We continue to encourage disadvantaged and underrepresented businesses and communities to engage in and benefit from our many programs.

To meet this commitment, Energy Commission staff conducts outreach efforts and activities to:

- Engage with disadvantaged and underrepresented groups throughout the state.
- Notify potential new applicants about the Energy Commission's funding opportunities.
- Assist applicants in understanding how to apply for funding from the Energy Commission's programs.
- Survey participants to measure progress in diversity outreach efforts.

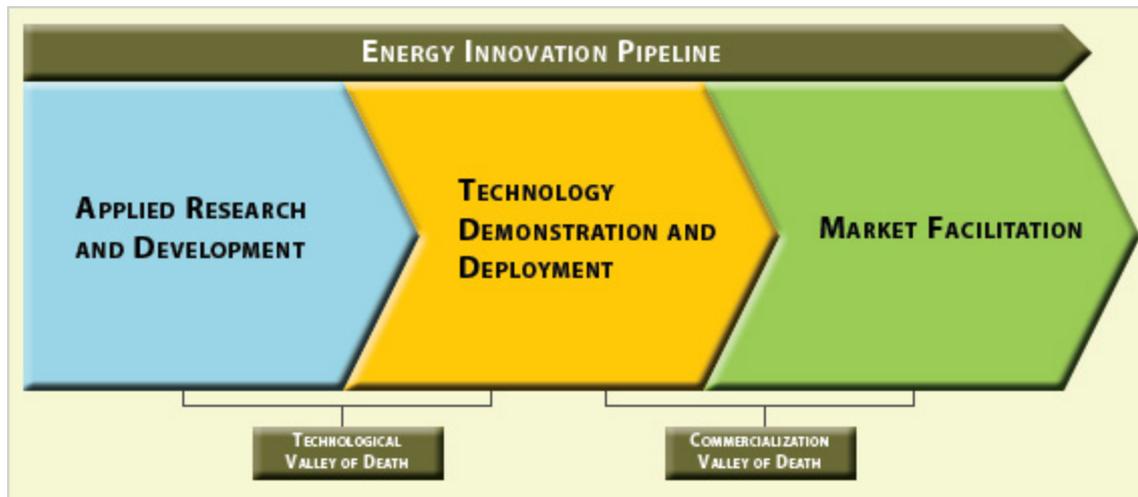


Background

- The Electric Program Investment Charge (EPIC) is funded by an electricity ratepayer surcharge established by the CPUC in 2011
- The purpose of EPIC is to benefit electric ratepayers of three electric investor-owned utilities (PG&E, SDG&E, and SCE)
- EPIC projects promote greater electricity reliability, lower costs, and increased safety
- Funded projects must lead to technological advancement and breakthroughs to overcome the barriers that prevent the achievement of the state's statutory energy goals
- Annual program funds total \$162 million per year with 80% administered by the California Energy Commission



Energy Innovation Pipeline





Stages of Research in this GFO

- **Applied Research and Development:** Activities that include strategies/analysis or early, pilot-scale testing activities that are necessary to demonstrate the feasibility of pre-commercial technologies.
- **Technology Demonstration and Deployment:** Aims to evaluate the performance and cost effectiveness of pre-commercial technologies at or near commercial scale to bring these technologies closer to commercial success.
- **Pre-commercial Technology:** A technology that has not reached commercial maturity or been deployed at scales sufficiently large and in conditions sufficiently reflective of anticipated actual operating environments to enable the appraisal of operational and performance characteristics, or financial risks.



Policy Drivers for Building Efficiency RD&D

- AB 32 (Global Warming Solutions Act of 2006)
- AB 758 (Energy Efficiency Existing Buildings)
- CPUC Strategic Energy Efficiency Strategic Plan
 - All new residential/commercial construction ZNE by 2020/2030
- Title 20 and Title 24 Energy Efficiency Standards



Solicitation Purpose

To fund integrated technologies, strategies, and demonstrations that emphasize innovative energy efficiency packages to achieve whole building performance improvements that help overcome technical, economic, and other market barriers that prevent achievement of state policy goals.

Energy efficiency packages can include, but are not limited to:

- Advanced building envelope materials or construction methods;
- Advanced heating, ventilation, and air conditioning (HVAC) technologies, strategies, and components
- Novel controls and sensors or energy management systems for HVAC, lighting, plug loads and other energy-using systems;
- Advanced lighting technologies and daylighting strategies; and
- Demand response technologies.



Key Dates

Activity	Action Date
✓ Solicitation Release	September 23, 2015
Pre-Application Workshop	October 6, 2015
<u>DEADLINE FOR WRITTEN QUESTIONS</u>	<u>October 8, 2015 by 5:00 p.m.</u>
Post Questions and Answers to Website	Week of October 19, 2015
<u>DEADLINE TO SUBMIT PROPOSALS</u>	<u>November 20, 2015 by 3:00 p.m.</u>
Post NOPA	January 12, 2016
Anticipated Energy Commission Business Meeting Date	June, 2016
Anticipated Agreement Start Date	June 30, 2016
Agreement Termination Date	Groups 5 & 6: March 31, 2020 Groups 1,2, 3 & 4: March 31, 2021



Eligible Applicants

- This is an open solicitation for public and private entities and individuals with the exception of publicly-owned utilities.
- Business entities are required to register with the California Secretary of State and be in good standing in order to enter into an agreement with the Energy Commission. <http://www.sos.ca.gov>
- All applicants must agree to the EPIC terms and conditions located at:
<http://www.energy.ca.gov/contracts/pier.html#epicterms>



Research Groups	Amount Available
Applied Research and Development	\$10,000,000
1: Emerging Building Technology and Approaches for Existing Buildings	Up to \$4,000,000
2: Emerging Technology Pilots for Zero Net Energy New Buildings	Up to \$4,000,000
3: Cost-Effective Approaches to Achieve California's Zero Net Energy Buildings Goals	Up to \$1,000,000
4: Zero Net Energy Cost Effectiveness Models by Climate Zone for Multifamily and Commercial Buildings	Up to \$1,000,000
Technology Demonstration and Deployment	\$24,000,000
5: Integrated Demand-Side Management Demonstrations to Achieve Maximum Efficiency	Up to \$9,000,000
6: Large-Scale, Community-Wide Demonstrations to Achieve Zero Net Energy	Up to \$15,000,000



Group 1: Applied Research and Development - Emerging Building Technology and Approaches for Existing Buildings

Minimum Award: \$500,000

Maximum Award: \$2 million

Applications

Existing residential, small commercial and multifamily buildings



Requirements for Group 1 Projects

- Must identify and include at least one pilot test site (existing building) to be located in electric IOU service territory.
- Must include innovative, integrated retrofit packages with technologies that are past the proof of concept stage and ready for pilot testing.
 - **Past proof of concept: At least 3 months of testing completed which verifies energy saving potential and initial prototypes ready for real-world applications.**
- Proposed energy efficiency technologies must exceed applicable 2016 Title 24 and/or 2015 Title 20 energy efficiency standards.
- Must provide performance and benefits evaluation of proposed integrated retrofit packages for at least 12 months post-installation.



**Group 2: Applied Research and Development -
Emerging Technology Pilots for Zero Net Energy
New Buildings**

Minimum Award: \$500,000

Maximum Award: \$2 million

Applications

New residential, commercial, and
multifamily buildings



Requirements for Group 2 Projects

- Must identify and pilot test innovative pre-commercial measures to achieve ZNE for new residential and commercial buildings.
- Must identify and include at least one pilot test site located in an electric IOU service territory.
- Proposed energy efficiency technologies must be past the proof of concept stage and ready for pilot testing in new buildings.
- Exceed applicable 2016 Title 24 and/or 2015 Title 20 energy efficiency standards.
- Must provide performance and benefits evaluation of proposed integrated packages for at least 12 months post-installation.



**Group 3: Applied Research and Development –
Cost-Effective Approaches to Achieve California’s
Zero Net Energy Buildings Goals**

Minimum Award: \$500,000

Maximum Award: \$1 million

Applications

New residential, commercial, and
multifamily buildings



Requirements for Group 3 Projects

- Must evaluate the cost (construction and infrastructure), benefits and feasibility of all-electric ZNE homes and/or subdivisions compared to homes and/or subdivisions with both electricity and natural gas utilities.
- Must analyze off-site renewable energy to meet ZNE building goals.
 - Determine the technical and economic feasibility of using off-site renewable energy to meet ZNE building goals versus on-site resources.
 - Determine the circumstances and reasons where off-site renewable energy resources will be needed to meet ZNE building goals or is more economically viable.
 - Identify barriers and issues associated with use of off-site renewable energy.



Group 4: Applied Research and Development - Zero Net Energy Cost Effectiveness Models by Climate Zone for Multifamily and Commercial Buildings

Minimum Award: \$500,000

Maximum Award: \$1.0 million

Applications

New multifamily and commercial buildings



Requirements for Group 4 Projects

- Must identify and model integrated designs using EnergyPlus based software to determine the optimal levels of energy efficiency that can cost effectively be implemented for multifamily (single and multi-story) and commercial (mix of the most common building types) buildings in all 16 climate zones.
- Each modeled design (for each building type) must include detailed cost-benefit analysis to define the optimal level of efficiency to cost-effectively achieve ZNE, or “near ZNE.”



Group 5: Technology Demonstration and Deployment - Integrated Demand-Side Management Demonstrations to Achieve Maximum Efficiency

Minimum Award: \$2.0 million

Maximum Award: \$5.0 million

Applications

New or existing buildings in disadvantaged communities, high-energy-using commercial facilities, small commercial buildings, large-scale residential deployment of measures in retrofit applications



Requirements for Group 5 Projects

- Must identify and demonstrate innovative pre-commercial measures to achieve near-ZNE in targeted large scale new or existing buildings and facilities.
- Demonstrate technologies that are past pilot-scale testing.
 - **Must have already completed pilot-scale tests, and have at least 3 months of peer-reviewed (by reputable organizations such as ACEEE or ASHRAE) or independent M&V data that shows actual energy and cost savings and other benefits in buildings.**
 - **Must be in a building of at least 25,000 square feet or at least five buildings of any square footage for demonstration.**
- Proposed energy efficiency technologies must exceed applicable 2016 Title 24 and/or 2015 Title 20 energy efficiency standards.
- Must provide independent performance and benefits evaluation of proposed measures for at least 12 months post- installation.



**Group 6: Technology Demonstration and
Deployment - Large-Scale, Community-Wide
Demonstrations to Achieve Zero Net Energy
Minimum Award: \$2.0 million
Maximum Award: \$5.0 million**

Applications

New single-family residential communities (subdivisions), disadvantaged and market-rate multifamily, commercial, military bases, college campuses



Requirements for Group 6 Projects

- Must demonstrate technologies beyond pilot-scale testing and ready for large-scale/community-wide deployment.
- Must include at least five buildings of any square footage.
- Must provide independent performance and benefits evaluation of proposed integrated packages for at least 12 months post- installation.
- Must investigate the benefits and barriers (e.g., energy and economic) of implementing ZNE packages in large scale deployments in communities and subdivisions, including documentation of any utility (electric, natural gas, water) infrastructure benefits.



Application Requirements

Every Applicant must complete and include the following:

1. Application Form	7. Budget
2. Executive Summary (limit 2 pages)	8. CEQA Compliance Form
3. Fact Sheet (limit 2 pages)	9. References and Work Product (one page for each reference; two pages for project descriptions)
4. Project Narrative (limit 20 pages)	10. Contact List
5. Project Team (two pages for each resume)	11. Commitment and Support Letters (two pages, excluding the cover page)
6. Scope of Work	



Project Narrative (Attachment 4)

- Project Narrative form follows the Proposal Scoring Criteria
- Complete the form by providing a detailed response addressing the following areas:
 1. Technical Merit and Need
 2. Technical Approach
 3. Impacts and Benefits for California IOU Ratepayers
 4. Team Qualifications, Capabilities and Resources
 5. Budget and Cost Effectiveness
 6. EPIC Funds Spent in California
 7. Ratio of Direct Labor and Fringe Benefits to Loaded Rates
 8. Match Funding
 - a. Applicable to groups 1, 2, 3 and 4
 - b. Applicable to groups 5 & 6 with match funds above the 20% minimum
 9. Disadvantaged Communities (applicable to Groups 1, 2, 5 & 6)
- Provide sufficient detail so that reviewers will be able to evaluate the proposal against each of the scoring criteria.



Scope of Work (Attachment 6)

- Identifies the tasks required to complete the project. It includes a project schedule that lists all products, meetings, and due dates.
- All tasks in black are mandatory – please do not revise
 - Task 1: General Project Tasks
 - Other mandatory tasks: Evaluation of Project Benefits, Technology/Knowledge Transfer Activities, Production Readiness Plan (applicable to projects with technologies/products that may be commercialized)
- Technical tasks begin with Task 2:
 - The “Recipient Shall” section of each technical task must indicate specific actions to be performed (should be major items).
 - “Products” are documents, plans and reports (tangible items that can be submitted to the Energy Commission).
 - “Products” are not equipment and other items that cannot be delivered and stored at the Energy Commission.



Budget (Attachment 7)

Every Applicant must complete and include the budget forms for its team

- ✓ Category Budget
- ✓ Task Budget
- ✓ Direct Labor
- ✓ Fringe Benefits
- ✓ Travel
- ✓ Equipment
- ✓ Materials and Misc
- ✓ Subcontracts
- ✓ Indirect Costs and Profit
- ✓ Rates Summary

Don't delete rows, columns or worksheets. Leave unused cells blank. You may hide unused rows.

The Applicant must submit information on **all** of the Attachment 7 budget forms, and this will be deemed the equivalent of a formal Cost Application.



Commitment and Support Letters (Attachment 11)

Commitment letters are required for:

- **Match funding.** Commitment letter must be signed by each representative of the entity or individual that is committing to providing match funding. Letter must: (1) identify the source(s) of the funds; and (2) guarantee the availability of the funds for the project. **At least 20% match funding required for Groups 5 & 6.**
- **Project site.** Commitment letters to be signed by an authorized representative of each proposed **testing/demo site**.
- **Project partner.** Commitment letters for those making contributions other than match funding or testing/demo site. Letter must be signed by an authorized representative and: (1) identifies how the partner will contribute to the project; and (2) commits to making the contribution.

All applicants should include at least one support letter.



Application Evaluation

- Consists of Two Parts
 - Part 1 –Screening (Section IV.E)
 - Part 2 –Scoring (Section IV.F)



Screening

Application Screening Process (Section IV.E of Application Manual)

- 1. Energy Commission staff screens applications per criteria listed in Section IV.E of Application Manual**
- 2. Criteria is evaluated on a pass/fail basis.**
 - ✓ Applicants must pass all screening criteria or the applicant will be disqualified**



Scoring

% of Possible Points	Interpretation	Explanation for Percentage Points
0%	Not Responsive	<ul style="list-style-type: none"> The response does not include or fails to address the criteria. The omission(s), flaw(s), or defects() are significant and unacceptable.
10-30%	Minimally Responsive	<ul style="list-style-type: none"> The response minimally addresses the criteria. The omission(s), flaw(s), or defect(s) are significant and unacceptable.
40-60%	Inadequate	<ul style="list-style-type: none"> The response addresses the criteria. There are one or more omissions, flaws, or defects or the criteria are addressed in a limited way that results in a low degree of confidence in the proposed solution.
70%	Adequate	<ul style="list-style-type: none"> The response adequately addresses the criteria. Any omission(s), flaw(s), or defect(s) are inconsequential and acceptable.
80%	Good	<ul style="list-style-type: none"> The response fully addresses the requirements being scored with a good degree of confidence in the applicant's response or proposed solution. There are no identified omission(s), flaw(s), or defect(s). Any identified weaknesses are minimal, inconsequential, and acceptable.
90%	Excellent	<ul style="list-style-type: none"> The response fully addresses the criteria with a high degree of confidence in the applicant's response or proposed solution. The applicant offers one or more enhancing features, methods, or approaches that exceed basic expectations.
100%	Exceptional	<ul style="list-style-type: none"> All requirements are addressed with the highest degree of confidence in the applicant's response or proposed solution. The response exceeds the requirements in providing multiple enhancing features, a creative approach, or an exceptional solution.



How will my application be scored?

- Evaluation Committee applies the scoring scale to the scoring criteria
- **A minimum passing score of 70% is required for criteria 1 to 4—equivalent to a score of 49 in order for to be considered for funding, and**
- **A total minimum passing score of 70 out of 100 points is needed for criteria 1 to 7**
- Applicants must review the Evaluation and Award Process section of the solicitation and ensure that their application provides a clear and complete response to each scoring criteria in the project narrative.

Scoring Criteria	Maximum Points
1. Technical Merit and Need	20
2. Technical Approach	20
3. Impacts and Benefits to California IOU Ratepayers	20
4. Team Qualifications, Capabilities & Resources	10
5. Budget & Cost Effectiveness	10
6. EPIC Funds Spent in California	15
7. Ratio of Direct Labor and Fringe Benefit Rates to Loaded Labor Rates	5
Total	100
Minimum points to pass	70



Project Match Funds (Criteria 8)

- For Groups 1, 2, 3 & 4, match funding not required. However, applications that include match funding may receive additional points.
- **For Groups 5 & 6, match funding is required in the amount of at least 20% of requested Energy Commission project funds.** Applicants that provide more may receive additional points.
- See section I.E.2 and IV.F/Scoring Criteria 8 of Application Manual for details on Match Funding Requirements.



Disadvantaged Communities (Criteria 9)

- Additional points will be provided to projects that meet the following requirements for Groups 1, 2, 5 and 6:
 1. All test or demonstration sites located in disadvantaged communities, and
 2. Justification is provided on how the project will benefit low income residents within the disadvantaged community.
- Please refer to Section IV.F/Scoring Criteria 9 of Application Manual for additional details.



Potential Grounds for Rejection

- The Energy Commission reserves the right to reject an application or cancel an award for the following reasons:
 - ✓ Application contains false or misleading statements
 - ✓ Application is intended to mislead the State in its evaluation
 - ✓ The application does not comply with the solicitation requirements
 - ✓ The applicant is a business entity that is not in good standing with the California Secretary of State.
 - ✓ Applicant is not in compliance with royalty provisions from previous Energy Commission awards



Potential Grounds for Rejection Continued...

- ✓ Applicant has received unsatisfactory evaluations from the Energy Commission or another California state agency
- ✓ Applicant has not demonstrated that it has the financial capability to complete the project
- ✓ The application is not submitted in the format specified in Part III, Sections A, B, and C of the solicitation
- ✓ The project date extends past the anticipated agreement end date specified in the “Key Activities Schedule” in Part I
- ✓ **The applicant fails to meet CEQA compliance within 30 calendar days of the NOPA release date**



CEQA Compliance

- This solicitation requires that all CEQA compliance documents be complete within 30 calendar days after the NOPA is released.
- CEQA documents submitted with application (with Attachment 8) must show progress towards achieving CEQA compliance within 30 calendar days after the NOPA is posted which will be considered in scoring phase under Criteria 1.
- See Section II.A.2, III.C.4 and III.C.8 of Application Manual for more information.



Key Dates

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Solicitation Documents

- **The latest solicitation related documents may be found here, including addendums, responses to questions and answers and the sign up sheet:**
<http://www.energy.ca.gov/contracts/GFO-15-308/>



Questions and Answers

- Please send all GFO related questions in written form to:

Cory Irish

Commission Agreement Officer

cory.irish@energy.ca.gov

**Deadline to submit questions is
5:00 PM PDT, October 8, 2015!**