

CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov



NOTICE OF PROPOSED AWARD (NOPA) REVISED

Reduce the Environmental and Public Health Impacts of Electrical Generation and Make the Electricity Systems Less Vulnerable to Climate Impacts: Phase II GFO-15-309 March 11 ~~February 11~~, 2016

On October 5, 2015 the California Energy Commission (Energy Commission) released a competitive solicitation to fund applied research and development projects that meet the following objectives: Improve indoor air quality while advancing the next generation end-use energy efficiency technologies and strategies for the building sector and to reduce the environmental and public health impacts of electricity generation and make the electricity system less vulnerable to climate impacts. Up to \$9,551,000 in Electric Program Investment Charge (EPIC) funding is available to fund applications in the following groups:

- Group 1: Indoor Air Quality: Assess the Impact of Ventilation on Indoor Environmental Quality (IEQ), Health, and Human Performance in New and Retrofit Buildings
- Group 2: Real World Electrification Options of Energy Services and Environmental Justice (EJ) Considerations
- Group 3: Public Health Research Roadmap
- Group 4: Carbon Balance with Renewable Energy
- Group 5: Environmentally Preferred Areas for Distributed Generation
- Group 6: Experimental Mitigation Strategies for Plants and Animals
- Group 7: Energy-Groundwater Nexus
- Group 8: Barriers to Adaptation & Climate Resilience Performance Metrics for the Energy Sector
- Group 9: Investigating Barriers to the Use of Cal-Adapt and Strategies to Support Actionable Science in Decision-Making for the Electricity Sector
- Group 10: Probabilistic Seasonal and Decadal Forecast for the Electricity System
- Group 11: Grant Projects for Energy-related Environmental Research

The Energy Commission received forty-five proposals by the due date of December 18, 2015. Each proposal was screened, reviewed, evaluated and scored using the criteria in the solicitation. Forty-five proposals passed the Stage One Application Screening. Of these, twenty-one proposals were received for Group 11. This NOPA does not include awards for Group 11, which will be released in a separate NOPA in ~~February~~ March 2016.

The attached “Notice of Proposed Award” identifies each applicant selected and recommended for funding by Energy Commission staff and includes the recommended funding amount and score. The total amount recommended is ~~\$7,622,508~~ \$7,820,373.

Funding of proposed projects resulting from this solicitation is contingent upon the approval of these projects at a publicly noticed Energy Commission Business Meeting and execution of a grant agreement. If the Energy Commission is unable to timely negotiate and execute a funding agreement with an Applicant, the Energy Commission, at its sole discretion, reserves the right to cancel or otherwise modify the pending award, and award the funds to another applicant.

In addition, the Energy Commission reserves the right to: 1) add to, remove, or shift funding between the different groups if there are insufficient passing proposals in one group and 2) negotiate with successful applicants to modify the project scope, schedule, and/or level of funding.

This notice is being mailed to all parties who submitted an application to this solicitation and is also posted on the Energy Commission's website at: www.energy.ca.gov/contracts/.

For information, please contact Phil Dyer at (916) 654-4651 or at Phil.Dyer@energy.ca.gov.

Phil Dyer
Commission Agreement Officer



California Energy Commission GFO-15-309

Reduce the Environmental and Public Health Impacts of Electrical Generation and Make the Electricity Systems Less Vulnerable to Climate Impacts: Phase II

Project Group 1 – Indoor Air Quality: Assess the Impact of Ventilation on Indoor Environmental Quality (IEQ),
Health, and Human Performance in New and Retrofit Buildings

Notice of Proposed Award (REVISED)

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Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
Proposed Award							
1	Lawrence Berkeley National Laboratory	Smart Ventilation for Advanced California Homes	\$1,500,000	\$1,500,000	\$1,300,000	90	Awardee
2	Regents of the University of California, Davis	Ventilation Solutions for Energy Efficient California Schools: Improving Indoor Air Quality through Advanced, High Performance HVAC	\$1,500,000	\$1,500,000	\$0	89	Awardee
Total Funding Recommended			\$3,000,000	\$3,000,000	\$1,300,000		
Passed but Not Funded							
3	University Enterprises, Inc. on behalf of CSU Sacramento	Experimental data to Support Development of Pre-commercial Technologies for Modeling the Effects of Air Exchange Design Variables on IAQ Energy Efficiency in Low-Cost, Single Family ZNE Homes	\$803,400	\$0	\$168,183	78	Finalist
Total			\$803,400	\$0	\$168,183		
Grand Total			\$3,803,400	\$3,000,000	\$1,468,183		



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Project Group 2 – Real World Electrification Options of Energy Services and Environmental Justice (EJ) Considerations

Notice of Proposed Award (REVISED)

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Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
Proposed Award							
1	Electric Power Research Institute, Inc.	Real World Electrification Options of Energy Services and Environmental Justice(EJ) Considerations	\$799,444	\$799,444	\$759,213	88	Awardee
Total Funding Recommended			\$799,444	\$799,444	\$759,213		
Passed but Not Funded							
2	Energy and Environmental Economics, Inc (E3)	Real World Electrification Options and Environmental Justice Consideration in the San Joaquin Valley	\$800,000	\$0	\$0	84	Finalist
Total			\$800,000	\$0	\$0		
Grand Total			\$1,599,444	\$799,444	\$759,213		



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Project Group 3 – Public Health Research Roadmap

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Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
<i>Proposed Award</i>							
1	Public Health Institute	Public Health Research Roadmap	\$151,000	\$151,000	\$0	87	Awardee
Total Funding Recommended			\$151,000	\$151,000	\$0		
<i>Passed but Not Funded</i>							
2	Electric Power Research Institute (EPRI)	Development of a Public Health Research Roadmap Related to the Energy System of the Future	\$124,609	\$0	\$34,616	84	Finalist
Total			\$124,609	\$0	\$34,616		
Grand Total			\$275,609	\$151,000	\$34,616		



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Project Group 4 – Carbon Balance with Renewable Energy

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Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
Proposed Award							
1	The Regents of the University of California, Berkeley Campus	Carbon Balance With Renewable Energy: Effects of Solar Installations on Desert Soil Carbon Cycle	\$499,181	\$499,181	\$72,000	88	Awardee
Total Funding Recommended			\$499,181	\$499,181	\$72,000		
Passed but Not Funded							
2	The Regents of the University of California, on behalf of its Riverside Campus	Carbon Balance of Large Scale Solar Renewable Deployment in California Deserts	\$497,690	\$0	\$71,109	85	Finalist
Total			\$497,690	\$0	\$71,109		
Did Not Pass							
3	USGS	The impacts of solar energy ecosystem carbon storage and loss in California deserts in a changing climate	\$498,232	\$0	\$175,923	68	Did Not Pass
Total			\$498,232	\$0	\$175,923		
Grand Total			\$1,495,103	\$499,181	\$319,032		



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Project Group 5 – Environmentally Preferred Areas for Distributed Generation

Notice of Proposed Award (REVISED)

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Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
<i>Proposed Award</i>							
1	Black & Veatch Corporation	Distributed Generation Environmental Planner	\$199,976	\$199,976	\$0	71	Awardee
Total Funding Recommended			\$199,976	\$199,976	\$0		
Grand Total			\$199,976	\$199,976	\$0		



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Project Group 6 – Experimental Mitigation Strategies for Plants and Animals

Notice of Proposed Award (REVISED)

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Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
Proposed Award							
1	Regents of the University of California, Los Angeles Campus	Development of a genoscape framework for Assessing population-level Impacts of Renewable Energy Development on Migratory Bird Species in California	\$599,236	\$599,236	\$888,250	95	Awardee
2	Zoological Society of San Diego d/b/a San Diego Zoo Global	Assessing California's mitigation guidelines for burrowing owls impacted by habitat development and project activities: better science, better conservation, better economic outcomes	\$598,671	\$598,671	\$654,820 <u>\$602,936</u>	88	Awardee
3	Regents of the University of California, Davis Campus	Optimizing solar facility configuration effects on habitat, managed plants, and essential species interactions	\$597,865	\$400,000 <u>\$597,865</u>	\$54,940	82	Awardee
Total Funding Recommended			\$1,795,772	\$1,597,907 \$1,795,772	\$1,595,010 \$1,546,126		
Did Not Pass							
4	Regents of the University of California, Davis Campus	Restoring Aridland Ecosystems and Mitigating Impacts of Solar Energy Transmission Corridor Development on Plants and Animals	\$600,000	\$0	\$220,000	66	Did Not Pass

5	Sandia National Laboratories	Evaluating deterrence at solar power towers: the importance of understanding solar flux sensory landscapes, and bird activity	\$554,785	\$0	\$562,765	66	Did Not Pass
6	U.S. Geological Survey, Southwest Biological Science Center	Is long-term wind energy operation compatible with survival of resident hatchling desert tortoises and ultimately population recruitment	\$586,182	\$0	\$257,184	65	Did Not Pass
Total			\$1,740,967	\$0	\$1,039,949		
<i>Disqualified</i>							
Total			\$0	\$0	\$0		
Grand Total			\$3,536,739	\$1,597,907	\$2,634,959		
				\$1,795,772	\$2,586,075		



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Project Group 7 – Energy-Groundwater Nexus

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Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
Proposed Award							
1	Lawrence Berkeley National Laboratory	Clarifying and Quantifying Current and Near-Term Groundwater Pumping Energy Use and Costs in California to Improve Energy and Water Systems Reliability	\$625,000	\$625,000	\$0	89	Awardee
Total Funding Recommended			\$625,000	\$625,000	\$0		
Passed but Not Funded							
2	GEI Consultants, Inc.	Energy Intensity of California's Groundwater Production	\$624,792	\$0	\$48,000	83	Finalist
3	Tetra Tech, Inc.	Statewide Energy Requirements for Groundwater Pumping in California	\$624,894	\$0	\$29,359	82	Finalist
4	The Regents of the University of California - Davis	An Empirical Analysis of the Energy-Groundwater Nexus	\$624,991	\$0	\$146,825	77	Finalist
Total			\$1,874,677	\$0	\$224,184		
Grand Total			\$2,499,677	\$625,000	\$224,184		



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Project Group 8 – Barriers to Adaptation & Climate Resilience Performance Metrics for the Energy Sector

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Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
Proposed Award							
1	The Regents of the University of California, Berkeley Campus	Risk Modeling and cognitive science characterization of barriers to climate change adaptation in California Power Sector	\$350,000	\$350,000	\$0	86	Awardee
Total Funding Recommended			\$350,000	\$350,000	\$0		
Passed but Not Funded							
2	ICF Incorporated, L.L.C.	Reduce the Environmental and Public Health Impacts of Electrical Generation and Make the Electricity Systems Less Vulnerable to Climate Impacts: Phase II	\$349,983	\$0	\$0	81	Finalist
Total			\$349,983	\$0	\$0		
Grand Total			\$699,983	\$350,000	\$0		



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Project Group 9 – Investigating Barriers to the Use of Cal-Adapt and Strategies to Support Actionable Science in Decision-Making for the Electricity Sector

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Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
<i>Proposed Award</i>							
No applications received for this project group.							
Total Funding Recommended			\$0	\$0	\$0		
Grand Total			\$0	\$0	\$0		



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Project Group 10 – Probabilistic Seasonal and Decadal Forecast for the Electricity System

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Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
<i>Proposed Award</i>							
1	Eagle Rock Analytics	Probabilistic Seasonal and Decadal Forecasts Using Linear Inverse Modeling	\$400,000	\$400,000	\$0.00	86	Awardee
Total Funding Recommended			\$400,000	\$400,000	\$0		
Grand Total			\$400,000	\$400,000	\$0		