

## CALIFORNIA ENERGY COMMISSION

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

**NOTICE OF PROPOSED AWARD (NOPA) (Revised)****Novel Solutions to Accelerate Deployment of Small and  
Micro-Scale Combined Cooling Heating and Power Systems  
GFO-16-503  
November 23, 2016**

On July 28, 2016, the California Energy Commission (Energy Commission) released a competitive solicitation to fund research, development, and demonstration projects that advance the state of technology of small and micro-scale combined heat and power (CHP) systems and complementary enabling technologies. Up to \$5,200,000 in the Natural Gas Program funding was available. **As the Energy Commission reserves the right to increase or reduce the amount of funds available, the Energy Commission added \$256,659 to this solicitation for a total funding amount of \$5,456,659** for applications in:

- Group 1: Novel Systems for Small and Micro-CHP Application;
- Group 2: Advance Systems for Small and Micro-CHP with Thermally-Driven Cooling;
- Group 3: Advance Systems for Small and Micro-CHP with Thermal Energy Storage; and
- Group 4: Combined Cooling Heat and Power Technical and Market Assessment.

In addition, due to recent events at the Aliso Canyon gas storage facility in Southern California, prioritization of funding was given to projects which will perform a pilot-scale demonstration in the Los Angeles Basin.

The Energy Commission received twelve proposals by the due date of September 30, 2016. Each proposal was screened, reviewed, evaluated and scored using the criteria in the solicitation. Twelve proposals passed the Stage One Application Screening.

The attached “Notice of Proposed Awards” 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 **\$5,456,659**.

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/](http://www.energy.ca.gov/contracts/).

For information, please contact Sandra Raymos at (916) 654-4584 or  
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**Sandra Raymos**  
Commission Agreement Officer



## California Energy Commission GFO-16-503

### Novel Solutions to Accelerate Deployment of Small and Micro-Scale Combined Cooling Heating and Power Systems

#### Notice of Proposed Awards (Revised)

November 23, 2016

Group 1 – Novel Systems for Small and Micro-CHP Application  
Group 2 – Advance Systems for Small and Micro-CHP with Thermally-Driven Cooling  
Group 3 – Advance Systems for Small and Micro-CHP with Thermal Energy Storage

Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
<b>Proposed Awards</b>							
1	All Power Labs, Inc.	Development and Demonstration of an Innovative Micro-scale Biomass Gasifier Combined Cooling, Heating, and Power System	\$1,500,000	\$1,500,000	\$308,272	91.0	Awardee
2	Element 16 Technologies, Inc.	Small-CCHP Packaged System with Innovative Quick-Response, Compact, and High-Temperature Thermal Energy Storage	\$1,500,000	\$1,500,000	\$150,000	88.1	Awardee
3	The Regents of the University of California, Merced	A Novel Low-Cost, High-Efficiency Solar Powered Micro-CHP System for Electricity, Hot Water, and Space Heating	\$816,659	\$816,659	\$118,472	82.9	Awardee
4	Be Power Tech, Inc.	Electricity Producing Novel HVAC: Micro Combined Cycle Fuel Cell with Thermal Energy Storage	\$1,440,000	<b>\$1,440,000</b>	\$1,152,000	79.3	Awardee
<b>Total Funding Recommended</b>			<b>\$5,256,659</b>	<b>\$5,256,659</b>	<b>\$1,728,744</b>		
<b>Passed but Not Funded</b>							
5	Pyro-E LLC	Localized Efficient Adaptive Power System for Small Buildings	\$1,445,487	\$0	\$759,495	79.1	Finalist
6	University of California, Irvine	Integration and Demonstration of a Flexible, Low Emission Exhaust Enthalpy Control Unit and Thermal Energy Storage System with a Capstone C-65 Microturbine and an Adsorption Chiller to Decouple Electricity and Chilling Load Profiles	\$1,499,848	\$0	\$219,045	77.8	Finalist
<b>Total</b>			<b>\$2,945,335</b>	<b>\$0</b>	<b>\$978,540</b>		



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- Group 1 – Novel Systems for Small and Micro-CHP Application**  
**Group 2 – Advance Systems for Small and Micro-CHP with Thermally-Driven Cooling**  
**Group 3 – Advance Systems for Small and Micro-CHP with Thermal Energy Storage**

<b>Did Not Pass</b>							
	NLine Energy, Inc.	NLine Energy Novel Micro-Scale Energy Recovery CHP Demonstration and Validation Project	\$870,102	\$0	\$89,835		Did Not Pass
	Benz Air Engineering, Co., Inc	Engine-Based CHP Accessory for Integration with Existing Industrial Boilers	\$953,098	\$0	\$309,333		Did Not Pass
	Willdan Energy Solutions, Inc.	City of Norwalk Publicly Owned Nanogrid Project	\$1,494,990	\$0	\$182,615		Did Not Pass
	Abocado LLC	Modeling and Pilot Testing of a Phase Change Material-based Thermal Energy Storage System	\$1,250,868	\$0	\$278,030		Did Not Pass
<b>Total</b>			<b>\$4,569,058</b>	<b>\$0</b>	<b>\$859,813</b>		
<b>Grand Total</b>			<b>\$12,771,052</b>	<b>\$5,256,659</b>	<b>\$3,567,097</b>		



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**Group 4 – Combined Heat and Power Technical and Market Assessment**

Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
<b>Proposed Awards</b>							
1	ICF Incorporated, LLC	A Comprehensive Assessment of Small Combined Heat and Power Technical and Market Potential in California	\$200,000	\$200,000	\$20,000	80.1	Awardee
<b>Total Funding Recommended</b>			<b>\$200,000</b>	<b>\$200,000</b>	<b>\$20,000</b>		
<b>Did Not Pass</b>							
	Lifetime Energy, LLC	Techno-economic and Market Assessment of CHP and CCHP for Small and Micro-Scale Applications in California	\$189,771	\$0	\$10,000		Did Not Pass
<b>Total</b>			<b>\$189,771</b>	<b>\$0</b>	<b>\$10,000</b>		
<b>Grand Total</b>			<b>\$389,771</b>	<b>\$200,000</b>	<b>\$30,000</b>		