



REVISED NOTICE OF PROPOSED AWARD

Advanced Refrigeration and Heat Pumps for the Industrial Sector GFO-19-304 March 17, 2020

On December 4, 2019, the California Energy Commission (CEC) released a competitive solicitation to fund applied research and development projects that enable cost-effective decarbonization of California's industrial sector. Up to \$6 million in Electric Program Investment Charge funding is available to fund applications in three groups:

- Group 1: Fractional freezing, freeze distillation, or freeze concentration
- Group 2: Industrial heat pumps for waste heat harvesting
- Group 3: Emerging refrigeration technologies

The CEC received 8 proposals by the due date, January 29, 2020. No proposals were received for Group 1. Each proposal in Group 2 and Group 3 was screened, reviewed, evaluated, and scored using the solicitation criteria. Seven proposals passed the stage one application screening. **One application was disqualified.**

On March 6, 2020, the CEC issued a Notice of Proposed Awards (NOPA) that identified each applicant selected and recommended for funding by CEC staff and included the recommended funding amount and score. The total amount recommended for funding was is \$7,974,146. **This revised Notice of Proposed Awards adds information on the disqualified application.**

Funding of proposed projects from this solicitation is contingent upon the approval of these projects at a publicly noticed CEC business meeting and execution of a grant agreement. If the CEC is unable to timely negotiate and execute a funding agreement with an applicant, the 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 CEC 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, or level of funding.

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

For information, please contact Marissa Sutton, Commission Agreement Officer, at (916) 651-9409, or Marissa.Sutton@energy.ca.gov

Revised Notice of Proposed Awards

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GFO-19-304

ADVANCED REFRIGERATION AND HEAT PUMPS FOR THE INDUSTRIAL SECTOR

Project Group 2 – Industrial heat pumps for waste heat harvesting

Rank Number	Project Applicant	Title	CEC Funds Requested	CEC Funds Recommended	Match Funds	Score	Award Status
<i>Proposed Awards</i>							
1	Electric Power Research Institute, Inc.	Development of an Advanced High Temperature Heat Pump for the Efficient Recovery of Low Grade Industrial Waste Heat	\$1,999,483	\$1,999,483	\$405,848	98.68	Awardee
2	Gas Technology Institute	Booster Ejector Enhancement of Compressor Refrigeration Facilities Utilizing Industrial Process Waste Heat	\$1,621,556	\$1,621,556	\$173,707	92.29	Awardee
3	UC Merced	Stirling Cycle Heat Pumps for Industrial Heat Recovery	\$656,630	\$656,630	\$135,927	91.34	Awardee
Total Funding Recommended			\$4,277,669	\$4,277,669	\$715,482		
<i>Passed but Not Funded</i>							
4	UC Irvine	Supercritical CO2 Heat Pumps for High Temperature Industrial Applications Developing Pathways to Decarbonize Industrial Processes	\$1,991,659	\$0	\$281,553	86.53	Finalist
Total			\$1,991,659	\$0	\$281,553		

Rank Number	Project Applicant	Title	CEC Funds Requested	CEC Funds Recommended	Match Funds	Score	Award Status
<i>Did Not Pass</i>							
5	Energy Concepts Company LLC	Heat Integrated Rectifier Heat Pump (HIRHP) for Industrial Applications	\$1,183,282	\$0	\$236,801	76.74	Did Not Pass
Total			\$1,183,282	\$0	\$236,801		
<i>Disqualified</i>							
<u>6</u>	<u>Renewable Technology Developments Inc.</u>	<u>System Validation of a Very High Temperature Heat Pump in an Industrial Setting</u>	<u>\$1,513,890</u>	<u>\$0</u>	<u>\$450,319</u>	<u>N/A</u>	<u>Disqualified</u>
Total			\$1,513,890	\$0			
Group Total			\$7,452,610	\$4,277,669	\$1,684,155		

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ADVANCED REFRIGERATION AND HEAT PUMPS FOR THE INDUSTRIAL SECTOR

Project Group 3 – Emerging refrigeration technologies

Rank Number	Project Applicant	Title	CEC Funds Requested	CEC Funds Recommended	Match Funds	Score	Award Status
<i>Proposed Awards</i>							
1	Nelumbo, Inc.	Ice-Nein™ Advanced Heat Exchanger Coatings for the Improved Efficiency of Industrial Refrigeration	\$1,997,411	\$1,997,411	\$893,927	110.72	Awardee
2	General Engineering & Research LLC	High Efficiency Magnetic Refrigeration for Industrial Cryogenic Applications	\$1,699,066	\$1,699,066	\$545,658	106.61	Awardee
Total Funding Recommended			\$3,696,477	\$3,696,477	\$1,439,585		
Group Total			\$3,696,477	\$3,696,477	\$1,439,585		
Grand Total			<u>\$12,662,977</u>	\$7,974,146	<u>\$3,123,740</u>		