

CALIFORNIA ENERGY COMMISSION

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

**NOTICE OF PROPOSED AWARD (NOPA)**

**Advancing Cutting-Edge Technologies and Strategies to Reduce Energy Use and
Costs in the Industrial, Agriculture and Water Sectors: Phase 1
GFO-16-305
December 13, 2016**

On August 4, 2016 the California Energy Commission (Energy Commission) released a competitive solicitation to fund applied research and development projects that would increase energy efficiency and address demand response in the industrial, agriculture and water sector. Up to \$25 million in Electric Program Investment Charge (EPIC) Program funding is available to fund applications in the following project groups:

- Group 1: Pilot Tests of Innovative Energy Efficiency Technologies
- Group 2: Develop and Validation of Demand Response Technologies and Strategies

The Energy Commission received twenty proposals for Group 1 and nine proposals for Group 2 by the due date of October 21, 2016. Each proposal was screened, reviewed, evaluated and scored using the criteria in the solicitation. Twenty-eight 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 for Group 1 is \$12,063,828. The total amount recommended for Group 2 is \$9,936,172.

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) increase or decrease the available funding and the group minimum/maximum award amounts described in the solicitation 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 Crystal Presley-Willis at (916) 653-6110 or Crystal.Presley-Willis@energy.ca.gov

Crystal Presley-Willis
Commission Agreement Officer



California Energy Commission GFO-16-305

**Advancing Cutting-Edge Technologies and Strategies to Reduce Energy Use
and Costs in the Industrial, Agriculture and Water Sectors: Phase 1**

Notice of Proposed Awards

December 13, 2016

Group 1: Pilot Tests of Innovative Energy Efficiency Technologies							
Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
Proposed Awards							
1	PowWow Energy	Increased Energy Efficiency via Programmable Irrigation and Fertigation	\$2,992,660	\$2,992,660	\$348,047	86.36	Awardee
2	Terzo Power Systems, LLC	Hyper Efficient Pump Motor Unit with Fully Integrated Permanent Magnet Motor and Motor Controls with Combined Liquid Cooling	\$2,311,050	\$2,311,050	\$126,100	85.40	Awardee
3	The Regents of the University of California (UC Riverside)	Enabling Energy Efficient Data Centers in Smart Power Distribution	\$1,783,118	\$1,783,118	\$297,064	84.96	Awardee
4	Institute of Gas Technology dba Gas Technology Institute	Pilot Testing of Isothermal Compression	\$2,570,946	\$2,570,946	\$238,700	83.39	Awardee
5	Electric Power Research Institute	Development and Testing of an Energy Efficient Ultra-low Charge Ammonia Refrigeration System in a Food Processing Plant	\$3,000,000	\$2,406,054	\$605,000	83.21	Awardee
Total			\$12,657,774	\$12,063,828	\$1,614,911		



California Energy Commission GFO-16-305

**Advancing Cutting-Edge Technologies and Strategies to Reduce Energy Use
and Costs in the Industrial, Agriculture and Water Sectors: Phase 1**

Notice of Proposed Awards

December 13, 2016

Passed but Not Funded							
6	Black & Veatch	Ultrafiltration and Electrodialysis Treatment of Oil and Gas Produced Water for Energy Reduction and Water Recovery	\$1,382,683	\$0	\$162,000	76.82	Finalist
7	Altex Technologies Corporation	Self-Powered Environmentally Sound Energy Efficient System (SPESEES) for Industrial Applications	\$2,091,487	\$0	\$0	74.61	Finalist
Total			\$3,474,170	\$0	\$162,000		
Did Not Pass							
	California State University, Fresno Foundation	Future Farm: Cutting Edge Farm Scale Technologies and Optimization Strategies to Reduce Agricultural Energy and Water Use	\$1,752,321	\$0	\$369,373		Did Not Pass
	Fetzer Vinyards	Integrating Cutting Edge Wastewater Treatment and Water Reuse Technologies to Advance Energy and Water Savings for the Agriculture Sector (aka Water, Worms & Wine)	\$1,776,829	\$0	\$227,050		Did Not Pass
	University of California, Riverside	A New Paradigm for Energy- and Water-Efficient Agriculture in California	\$2,355,308	\$0	\$131,091		Did Not Pass
	DewH20, Inc.	Energy Efficient Sustainable Water and Food Production	\$1,300,400	\$0	\$936,520		Did Not Pass
	Nrgtek, Inc.	Low-cost, energy-efficient industrial water treatment.	\$1,282,262	\$0	\$175,000		Did Not Pass
	Institute of Gas Technology dba Gas Technology Institute	Development, Lab and Field Testing, and Demonstration of an Innovative Hydro-Drive System	\$2,627,286	\$0	\$58,732		Did Not Pass
	The Board of Trustees of the Leland Stanford Junior University	Liquid cooling the small-to-medium data center: A case study using warm water solutions	\$2,800,931	\$0	\$0		Did Not Pass
	Wexus Solutions, LLC.	Advancing Cutting-Edge Energy Efficiency Technologies and Strategies in the Agricultural Irrigation Sector	\$3,000,000	\$0	\$240,292		Did Not Pass
	McConnell's Fine Ice Cream LLC	Ultra-Efficient On-Site Wastewater Treatment and Recycled Water Production for the Food Processing Industry	\$1,143,293	\$0	\$325,823		Did Not Pass
	Nautilus Data Technologies	Advanced Energy Efficient Water-Cooled System Data Center Pilot Project (Data Center Pilot Project)	\$3,000,000	\$0	\$14,684,266		Did Not Pass
	FarmX, Inc.	Agricultural Electrical Load Shifting using Non-Invasive Crop Water Stress Monitoring	\$1,632,489	\$0	\$328,489		Did Not Pass
	Full Cycle Bioplastics, LLC	Energy Efficient Conversion of Paper Mill Waste to Cost-Competitive PHA Bio-polymers	\$1,979,350	\$0	\$0		Did Not Pass



California Energy Commission GFO-16-305

Advancing Cutting-Edge Technologies and Strategies to Reduce Energy Use
and Costs in the Industrial, Agriculture and Water Sectors: Phase 1

Notice of Proposed Awards

December 13, 2016

Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
Total			\$24,650,469	\$0	\$17,476,636		
Group 1 Total			\$40,782,413	\$12,063,828	\$19,253,547		
Group 2: Develop and Validation of Demand Response Technologies and Strategies							
Proposed Awards							
1	Antelope Valley Water Storage, LLC	Water/Energy Bank Proof-of-Concept	\$ 1,000,000	\$ 1,000,000	\$ 22,500	89.15	Awardee
2	Polaris Energy Services, INC	Development of new technologies for agricultural loads to participate in renewables integration, RTP programs, and/or new Time of Use rates	\$ 2,884,912	\$ 2,884,912	\$ 641,778	87.80	Awardee
3	Advanced Microgrid Solutions, Inc.	Irvine Ranch Water District Demand Response Pilot Project	\$ 1,403,469	\$ 1,403,469	\$ 760,393	86.46	Awardee
4	Irrigation for the Future	Demonstration, Development, and Validation of a Decision Support System for Irrigation/Energy Management and Demand Response: Facilitating On-farm Participation in Energy Demand Management Programs	\$ 1,647,791	\$ 1,647,791	\$ 126,663	85.95	Awardee
5	Electric Power Research Institute	Develop and Pilot Test Flexible Demand Response Control Strategies for Water Pumping Stations and Industrial Refrigeration Plants.	\$ 3,000,000	\$ 3,000,000	\$ 465,000	85.01	Awardee
Total			\$9,936,172	\$9,936,172	\$2,016,334		
Did Not Pass							
	Siemens Corporation, Corporate Technology	ADRET: Agricultural Demand Response via Distributed Model Predictive Control and General Equilibrium Theory	\$3,000,000	\$0	\$474,298		Did Not Pass
	Lawrence Berkeley National Laboratory	Development and pilot testing of an integrated hardware and software technology for real-time management of agricultural irrigation and demand response	\$ 3,000,000	\$0	\$ 191,310		Did Not Pass
	Enova Water, LLC	Integration of Energy Efficient Controls and Strategies for Peak Demand Management and Load Shifting Using Hybrid Water Treatment and Online Water Quality Monitoring	\$2,308,825	\$0	\$414,984		Did Not Pass
Total			\$8,308,825	\$0	\$1,080,592		
Disqualified							
	Regents of the University of California, Davis	Advancing Demand Response in the Water Sector	\$2,999,883	\$0	\$90,865		Disqualified



**California Energy Commission
GFO-16-305**

**Advancing Cutting-Edge Technologies and Strategies to Reduce Energy Use
and Costs in the Industrial, Agriculture and Water Sectors: Phase 1**

Notice of Proposed Awards

December 13, 2016

Total	\$2,999,883	\$0	\$90,865		
Group 2 Total	\$21,244,880	\$9,936,172	\$3,187,791		
Grand Total	\$62,027,293	\$22,000,000	\$22,441,338		