

CALIFORNIA ENERGY COMMISSION

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



NOTICE OF PROPOSED AWARDS (NOPA)
Improving Performance and Cost Effectiveness of Small Hydro, Geothermal and Wind
Energy Technologies
GFO-16-301
October 3, 2016

On June 15, 2016, the California Energy Commission (Energy Commission) released a competitive solicitation to fund innovative research and development for in-conduit hydropower, geothermal and wind technologies that will result in improving the performance and cost-effectiveness of renewable energy sources. Up to \$8.5 million in Electric Program Investment Charge (EPIC) funding is available to fund applications in:

- Group 1: Expanding California's Use of In-Conduit Hydrokinetic Power.
- Group 2: Improving the Cost-Effectiveness and Operational Flexibility of Geothermal Energy Production.
- Group 3: Upgrading California's Aging Wind Turbines.

The Energy Commission received thirty two proposals by the due date of August 17, 2016. Each proposal was screened, reviewed, evaluated and scored using the criteria in the solicitation. Thirteen proposals from group 1, nine proposals from group 2 and eight proposals from group 3 passed the Stage One Application Screening.

The attached three tables, one for each project group, titled "Notice of Proposed Awards" identify each applicant selected and recommended for funding by Energy Commission staff and includes the recommended funding amount and score. The total amount recommended is \$8,335,457.

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 to make additional awards 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 Gordon Kashiwagi at (916) 654-5131 or gordon.kashiwagi@energy.ca.gov.

Gordon Kashiwagi
Commission Agreement Office



California Energy Commission

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Notice of Proposed Awards

Group 3: Upgrading California's Aging Wind Turbines

October 3, 2016

Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
Proposed Awards							
1	UC Davis	RenewALL	\$810,438	\$810,438	\$124,916	76.73	Awardee
2	San Diego State Foundation	Flexible Blade for Small and Medium-Sized Vertical Axis Wind Turbines	\$1,375,246	\$1,375,246	\$0	75.58	Awardee
Did Not Pass							
3	Pacific Sky Productions, LCC	Increasing Energy Density and Optimizing California Floating Offshore Wind Platforms to Minimize Levelized Cost of Energy and Maximize Economic Benefit to California	\$638,817	\$0	\$128,279		Did Not Pass
4	Wind Harvest International	Improving VAWT Capacity Factors and Proving the Applicability for Use in Existing Wind Farms to Reduce Renewable Energy Costs for CA Ratepayers	\$1,027,876	\$0	\$350,946		Did Not Pass
5	Primo Wind	Pioneering Distributed Wind in the City of Chula Vista	\$514,500	\$0	\$0		Did Not Pass
6	UCLA	Wind-Capture: Adaptive System for High-Efficiency Wind Integration	\$1,468,862	\$0	\$282,518		Did Not Pass
7	Leviathan Wind Energizer	Wind Turbine Enhancement	\$997,201	\$0	\$108,600		Did Not Pass
8	Tangram Motor Corporation	Rotary Jet Technoogy	\$900,000	\$0	\$300,000		Did Not Pass
Disqualified							
	Gowindpower	V12 Wind Turbine					DQ
Grand Total			\$7,732,940.00	\$2,185,684.00	\$1,295,259.00		



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Notice of Proposed Awards

Group 2: Improving the Cost-Effectiveness and Operational Flexibility of Geothermal Energy Production

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Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
Proposed Awards							
1	Lawrence Berkeley National Laboratory	High-Resolution Micro-Earthquake Imaging of Flow Paths Using a Dense Seismic Network and Fast-Turnaround, Automated Processing	\$1,672,639	\$1,672,639	\$50,000	77.30	Awardee
2	SRI International	Recovery of Lithium from Geothermal Brines	\$873,387	\$873,387	\$0	76.20	Awardee
3	Lawrence Berkeley National Laboratory	Coupled Reservoir-Wellbore Thermal-Hydrological-Mechanical-Chemical Modeling	\$999,032	\$999,032	\$0	75.80	Awardee
Did Not Pass							
4	Imageair, Inc	Monitoring of Surface Deformation and Induced Seismicity as a Geothermal Operational Tool	\$510,436	\$0	\$211,005		Did Not Pass
5	Clean Energy System, Inc	Pressurized Oxy-Fuel in-Line Reheater for Geothermal Plants	\$1,994,390	\$0	\$422,540		Did Not Pass
6	GreenFire Energy	Demonstration of Closed-Loop Geothermal Energy Using Supercritical Carbon Dioxide	\$1,962,671	\$0	\$0		Did Not Pass
7	AltaRock Energy	Optimizing Performance of the Bottle Rock Power Geothermal Plant	\$951,234	\$0	\$50,685		Did Not Pass
8	Combined Power LLC	Geothermal/CSP Hybrid Power Production and Thermal Energy Storage	\$500,000	\$0	\$0		Did Not Pass
9	Cal Poly Ponomo Foundation	Enhanced Reliability and Cost-Effective Material Solutions	\$2,000,000	\$0	\$0		Did Not Pass
Disqualified							
	Green Globe Technology Inc.	In Situ Geothermal Energy					DQ
Grand Total			\$11,463,789.00	\$3,545,058.00	\$734,230.00		



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Notice of Proposed Awards

Group 1: Expanding California's Use of In-Conduit Hydrokinetic Power

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Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
Proposed Awards							
1	San Gabriel Valley Water Company	San Gabriel Valley Water Company "Plug and Play" In-Conduit Hydropower Development Project (SGVWC Project)	\$500,000	\$500,000	\$782,000	99.50	Awardee
2	Amador Water Agency	The Amador Water Agency In-Conduit Hydropower Development Project (AWA Project)	\$750,000	\$750,000	\$1,115,000	90.80	Awardee
3	NATEL ENERGY	Cost-Effective and Climate Resilient In-Conduit Hydropower and Civil Works Innovation	\$954,715	\$954,715	\$954,715	85.00	Awardee
4	MWH Americas, Inc	California's In-Conduit Hydropower Implementation Guidebook	\$720,000	\$400,000	\$114,914	77.00	Awardee
Passed but Not Funded							
5	Water Energy Innovation, Inc.	CalWaterWatts	\$765,000	\$0	\$0	73.10	Finalist
Did Not Pass							
6	Mojave Water Agency	Mojave Water Agency In-Conduit Small Hydropower Development and Demonstration Project (MWA Project)	\$750,000	\$0	\$2,595,000		Did Not Pass
7	San Diego County Water Services	Water Authority Critical Infrastructure In-Conduit Hydropower Demonstration and Validation Project (Water Authority Project)	\$2,000,000	\$0	\$5,490,578		Did Not Pass
8	Emrgy	Capturing Hydrokinetic Energy in Existing Infrastructure Utilizing Modular & Portable Systems	\$995,897	\$0	\$366,897		Did Not Pass
9	UCLA	HyPERS: Power Boosting System for Small In-Conduit Hydropower Applications	\$1,509,947	\$0	\$282,268		Did Not Pass



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Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
10	Antelope Valley Water Storage, LLC	Water/Energy Bank Proof-Concept	\$1,000,000	\$0	\$225,000		Did Not Pass
11	Tangram Motor Corporation	Rotary Jet Technoogy	\$900,000	\$0	\$300,000		Did Not Pass
12	Lifetime Energy	Demonstration of Pre-Commercial Vertical Axis Autorotation Current Turbine (VAACT) with Integrated Energy Storage and Energy Management System to Extract Hydrokinetic Energy from California's Rivers/Canals	\$1,227,312	\$0	\$100,845		Did Not Pass
13	Mark Clemens	Apparatus for Converting Water Current into Electricity	\$580,000	\$0	\$0		Did Not Pass
Grand Total			\$12,652,871.00	\$2,604,715.00	\$12,327,217.00		