

CALIFORNIA ENERGY COMMISSION

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



NOTICE OF PROPOSED AWARD - Amended

Electric Program Investment Charge (EPIC) Program

Grant Solicitation PON-13-302

**Developing Advanced Energy Storage Technology Solutions
to Lower Costs and Achieve Policy Goals**

October 19, 2015

On April 16, 2014, the California Energy Commission (Energy Commission) released a Grant Solicitation and Application Package entitled “Developing Advanced Energy Storage Technology Solutions to Lower Costs and Achieve Policy Goals” under the Electric Program Investment Charge (EPIC) Program. The purpose of this solicitation is to fund applied research and development projects that meet the following objectives:

- 1) Optimize grid-level energy storage deployment with respect to location, size, and type; and
- 2) Develop innovative utility-scale and generation energy storage technologies and applications to mitigate intermittent renewables and meet peak demand.

Projects funded under this solicitation will help to address technical and market barriers as well as support the CPUC’s procurement targets by: (1) developing computer models for the CPUC’s energy storage use cases (i.e., energy storage use scenarios that take into account the location and regulatory function of the energy storage technology or system) to determine which storage technologies and systems are most optimal (modeling initiative); and (2) developing advanced energy storage technologies and systems that can be demonstrated and deployed by the investor-owned utilities (technology initiative).

The grant solicitation stated that there was a total of \$6,000,000 available for agreements resulting from this solicitation. As the Energy Commission reserves the right to increase or reduce the amount of funds available. **As of the July 23, 2015 amended NOPA**, the Energy Commission added \$1,873,474 **and now adds \$4,285,100** to this solicitation for a total funding amount of ~~\$7,873,474~~ **\$12,158,574**. Of these funds, \$1,000,000 is allocated to fund the modeling initiative of this solicitation and ~~\$6,873,474~~ **\$11,158,574** is allocated to fund the technical initiative of this solicitation.

The attached tables entitled “PON-13-302/S8.1: Developing Advanced Energy Storage Technology Solutions to Lower Costs and Achieve Policy Goals (modeling initiative)” and “PON-13-302/S8.2: Developing Advanced Energy Storage Technology Solutions to Lower Costs and Achieve Policy Goals (technology initiative)” identifies the applicants who submitted an application for this solicitation, their score, and, if appropriate, their recommended level of funding. If more funds become available, the Energy Commission reserves the right to fund additional passing projects. This notice is being mailed to all parties who submitted an application for this solicitation and is also posted on the Energy Commission’s website at: <http://www.energy.ca.gov/contracts>.

Funding of proposed projects resulting from this solicitation is contingent upon the approval of these projects at a publicly noticed Business Meeting at the Energy Commission in Sacramento, California, 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 the pending award and recommend funding to the next highest ranking eligible application. Applicants will be notified of such changes in a revised notice.

Questions about this solicitation, including requests for scoring debriefs, should be directed to: Crystal Presley-Willis, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
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PON-13-302/S8.1: Developing Advanced Energy Storage Technology Solutions to Lower Costs and Achieve Policy Goals (modeling initiative)

Available Funding: \$1,000,000

Minimum Award Amount: \$250,000

Maximum Award Amount: \$1,000,000

Applicant	Proposal #	Proposed ES Project	Requested Funding			Total Score	Award Status	Proposed Award
			EPIC	Match	Total			
EPRI	32	Validated and Transparent Energy Storage Valuation and Optimization Tool	\$1,000,000.00	\$901,944.00	\$1,901,944.00	85.00	Awardee	\$ 1,000,000.00
UC Davis	16	Modeling of Grid-Level Energy Storage for Use with Renewable Generation	\$642,908.00	\$0.00	\$642,908.00	72.40	Finalist - But not funded	
UC Berkeley	25	Optimal Investment and Operations Strategies	\$523,662.00	\$0.00	\$523,662.00	71.00	Finalist - But not funded	
UC Riverside	8	Optimal Grid-level Energy Storage Deployment in CA with Energy Storage Portfolio Optimization Model	\$250,000.00	\$76,505.00	\$326,505.00	70.40	Finalist - But not funded	
Integral Analytics	4	Developing Advanced Energy Storage Technology Solutions to Lower Costs and Achieve Policy Goals	\$483,100.00	\$900,000.00	\$1,383,100.00	69.40	Did not Pass	
Energieia Consulting LLC	11	Energy Storage Evaluation and Optimization Model	\$299,000.00	\$0.00	\$299,000.00	64.40	Did not Pass	
Fortify Energy Company	15	Modeling Optimized Advanced Energy Storage at Remote	\$256,722.00	\$40,000.00	\$296,722.00	38.20	Did not Pass	
California Institute of Technology	3	Optimize Grid-Level Energy Storage Deployment	\$400,000.00	\$120,000.00	\$520,000.00	36.20	Did not Pass	
Open Access Technologies International, Inc.	13	webStorageOptimization	\$992,924.00				Disqualified	
California State University, Long Beach Research Foundation	18	Model Development for Optimizing Energy Storage Systems in Behind-the Meter Applications	\$328,822.00				Disqualified	

PON-13-302/S8.2: Developing Advanced Energy Storage Technology Solutions to Lower Costs and Achieve Policy Goals (technology initiative)

Available Funding: ~~\$6,873,474~~ \$11,158,574

Minimum Award Amount: \$1,000,000

Maximum Award Amount: \$3,000,000

Applicant	Proposal #	Proposed ES Project	Requested Funding			Total Score	Award Status	Proposed Award
			EPIC	Match	Total			
Eos Energy Storage LLC	20	Battery ES System	\$2,156,704.00	\$1,167,607.00	\$3,324,311.00	92.40	Awardee	\$2,156,704.00
Congenra Solar	37	Advanced Thermal Storage	\$2,530,952.00	\$2,350,650.00	\$4,881,602.00	88.60	Awardee-Declined Award	\$2,530,952.00
UC Regents (UCLA Campus)	23	High Temperature Hybrid CAES	\$1,621,628.00	\$0.00	\$1,621,628.00	86.80	Awardee	\$1,621,628.00
Eos Energy Storage, LLC	24	Distributed ES Systems	\$1,894,866.00	\$1,437,301.00	\$3,332,167.00	86.40	Finalist-But not Funded Awardee	\$1,894,866.00
Lightsail Energy/UC San Diego	39	Isothermal Compressed Air System	\$1,200,276.00	\$779,400.00	\$1,979,676.00	86.20	Finalist-But not Funded Awardee	\$1,200,276.00
Lightsail Energy/UC Irvine	38	Isothermal Compressed Air System	\$1,085,125.00	\$811,645.00	\$1,896,770.00	86.00	Finalist-But not Funded Awardee	\$1,085,125.00
Amber Kinetics	26	Fly Wheel System	\$2,000,000.00	\$12,000,000.00	\$14,000,000.00	85.80	Finalist-But not Funded Awardee	\$2,000,000.00
FuelCell Energy, Inc.	27	Battery/Fuel Cell Hybrid System	\$1,199,975.00	\$1,169,580.00	\$2,369,555.00	85.80	Finalist-But not Funded Awardee	\$1,199,975.00
Olivine, Inc.	35	Li-ion/CAES System	\$1,499,076.00	\$1,021,972.00	\$2,521,048.00	85.00	Finalist - But not Funded	
Utility Savings & Refund LLC	29	Vanadium Flow Battery System	\$1,875,000.00	\$1,200,000.00	\$3,075,000.00	82.20	Finalist - But not Funded	
Farasis Energy, Inc.	36	Advanced Li-ion System	\$2,921,847.00	\$731,960.00	\$3,653,807.00	82.00	Finalist - But not Funded	
Electric Power Research Institute	31	Used EV Battery System	\$1,911,289.00	\$250,000.00	\$2,161,289.00	81.00	Finalist - But not Funded	
Gridtential Energy, Inc.	30	Lead Acid Battery System	\$3,000,000.00	\$1,156,073.00	\$4,156,073.00	80.60	Finalist - But not Funded	
Trans Power, Inc.	9	Reconfigurable Battery ES System	\$2,500,000.00	\$751,820.00	\$3,251,820.00	80.00	Finalist - But not Funded	
Halotechnics, Inc.	1	Modular Thermal ES System	\$2,992,595.00	\$39,380.00	\$3,031,975.00	79.60	Finalist - But not Funded	
Green Charge Networks, LLC	14	Intelligent Energy Storage Unit	\$2,520,400.00	\$1,948,950.00	\$4,469,350.00	79.40	Finalist - But not Funded	
Cumulus Energy Storage	33	Battery Specific Membranes	\$3,000,000.00	\$600,000.00	\$3,600,000.00	78.60	Finalist - But not Funded	
Andromeda Power LLC	10	Plug Electric Vehicle Distributed Storage	\$1,713,437.00	\$225,691.00	\$1,939,128.00	78.40	Finalist - But not Funded	
Halotechnics, Inc.	22	Molten salt ES System	\$3,000,000.00	\$39,380.00	\$3,039,380.00	77.80	Finalist - But not Funded	
SunEdison	19	Integrated Battery/PV System	\$1,876,773.00	\$574,094.00	\$2,450,867.00	76.00	Finalist - But not Funded	
LaunchPoint Technologies, Inc.	21	Gravity Power Module	\$1,522,254.00	\$0.00	\$1,522,254.00	74.00	Finalist - But not Funded	
UC Regents	7	Hydrogen Based Argon Power Cycle	\$1,565,000.00	\$0.00	\$1,565,000.00	73.40	Finalist - But not Funded	
Helix Power Corp.	5	High Power Flywheel	\$1,999,561.00	\$0.00	\$1,999,561.00	72.60	Finalist - But not Funded	
Firm Clean Energy LLC	6	Combined RE and Battery ES System	\$2,665,376.00	\$0.00	\$2,665,376.00	69.60	Did Not Pass	
Hysteresis, Inc.	12	Steam & Thermal ES System	\$1,317,340.00	\$0.00	\$1,317,340.00	69.00	Did Not Pass	
Radback Energy Inc.	17	Liquid Air ES System	\$900,500.00	\$0.00	\$900,500.00	68.60	Did Not Pass	
Electricore, Inc.	28	Smart Compressed Air ES System	\$2,490,880.00	\$0.00	\$2,490,880.00	65.80	Did Not Pass	
Cleantech Institute, Inc.	34	A new Organic Redox Flow Battery for Grid Scale Energy Storage Application	\$2,216,842.00				Disqualified	