



**Storage Monitoring, Smart Shutoff and 3D Mapping  
Technologies for Safer Natural Gas Infrastructure  
GFO-19-502  
February 6, 2020**

On October 30, 2019, the California Energy Commission (CEC) released a competitive solicitation to fund research to improve the safety and integrity of natural gas infrastructure by advancing sensors monitoring, smart shutoff, and 3D mapping technologies for natural gas systems, including pipelines and storage facilities. These technologies will be demonstrated either in a laboratory setting or at existing natural gas facilities. The advancements of these technologies will help address the current gaps and challenges in California's natural gas industry. Up to \$9,600,000 in Natural Gas Research Program funding is available to fund research on:

- Group 1: Sensor and Monitoring Technologies for Natural Gas Storage Facilities
- Group 2: Smart Shutoff Technology for Residential and Commercial Buildings
- Group 3: Locating and 3D Mapping of Underground Pipelines with Better Accuracy

The CEC received seven proposals by the due date, December 23, 2019. Each proposal was screened, reviewed, evaluated, and scored using the solicitation criteria. Five proposals passed the stage one application screening.

The attached Notice of Proposed Awards identifies each applicant selected and recommended for funding by CEC staff and includes the recommended funding amount and score. The total amount recommended is \$4,034,930.

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

For information, please contact Tonya Heron, Commission Agreement Officer, at (916) 654-4484 or [Tonya.Heron@energy.ca.gov](mailto:Tonya.Heron@energy.ca.gov)



# California Energy Commission

GFO-19-502

Storage Monitoring, Smart Shutoff and 3D Mapping Technologies for Safer Natural Gas Infrastructure

Project Group 1: Sensor and Monitoring Technologies for Natural Gas Storage Facilities

Notice of Proposed Awards

February 6, 2020

Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
<b>Proposed Awards</b>							
1	Paulsson, Inc.	An All Optical Multi-Sensor Well Monitoring System to Secure Gas Storage Operations	\$1,500,000	\$1,500,000	\$1,500,000	101.62	Awardee
2	Lawrence Berkeley National Laboratory	Natural Gas Storage - Safety Monitoring with Autonomous Reflectometry Technologies	\$1,500,000	\$1,500,000	\$780,000	95.81	Awardee
<b>Total Funding Recommended</b>			<b>\$3,000,000</b>	<b>\$3,000,000</b>	<b>\$2,280,000</b>		
<b>Disqualified</b>							
	Storesund	Pilot Program to Field-Test and Validate Advance Monitoring	\$1,080,320	\$0	\$216,775		Disqualified
<b>Total</b>			<b>\$1,080,320</b>	<b>\$0</b>	<b>\$216,775</b>		
<b>Grand Total</b>			<b>\$4,080,320</b>	<b>\$3,000,000</b>	<b>\$2,496,775</b>		



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Storage Monitoring, Smart Shutoff and 3D Mapping Technologies for Safer Natural Gas Infrastructure

Project Group 2: Smart Shutoff Technology for Residential and Commercial Buildings

Notice of Proposed Awards

February 6, 2020

Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
<b>Proposed Awards</b>							
1	Gas Technology Institute	Smart Shut-off Tech for Residential and Commercial Buildings	\$1,034,930	\$1,034,930	\$251,000	83.34	Awardee
<b>Total Funding Recommended</b>			<b>\$1,034,930</b>	<b>\$1,034,930</b>	<b>\$251,000</b>		
<b>Did Not Pass</b>							
	Errigal Inc.	Smart Shutoff Technology for Residential and Commercial Buildings	\$1,056,000	\$0	\$211,200		Did Not Pass
<b>Total</b>			<b>\$1,056,000</b>	<b>\$0</b>	<b>\$211,200</b>		
<b>Grand Total</b>			<b>\$2,090,930</b>	<b>\$1,034,930</b>	<b>\$462,200</b>		



# California Energy Commission

GFO-19-502

Storage Monitoring, Smart Shutoff and 3D Mapping Technologies for Safer Natural Gas Infrastructure

Project Group 3: Locating and 3D Mapping of Underground Pipelines with Better Accuracy

Notice of Proposed Awards

February 6, 2020

Rank Number	Project Applicant	Title	Energy Commission Funds Requested	Energy Commission Funds Recommended	Match Funds	Score	Award Status
<b>Did Not Pass</b>							
	Gas Technology Institute	Enhancing 3D Mapping Tech for safer NG Infrastructure	\$2,581,323	\$0	\$517,634		Did Not Pass
<b>Total</b>			<b>\$2,581,323</b>	<b>\$0</b>	<b>\$517,634</b>		
<b>Disqualified</b>							
	Bakhtar Engineering	Forced Resonance Imaging for 3D Mapping	\$2,831,114	\$0	\$371,828		Disqualified
<b>Total</b>			<b>\$2,831,114</b>	<b>\$0</b>	<b>\$371,828</b>		
<b>Grand Total</b>			<b>\$5,412,437</b>	<b>\$0</b>	<b>\$889,462</b>		