

**CALIFORNIA ENERGY COMMISSION**1516 Ninth Street  
Sacramento, California 95814Main website: [www.energy.ca.gov](http://www.energy.ca.gov)

**NOTICE OF PROPOSED AWARDS**  
**Advanced Natural Gas Engine Research and Development for Class 3 through**  
**Class 7 Applications**  
**Solicitation PON-12-504**  
**February 27, 2013**

On December 4, 2012, the California Energy Commission's Public Interest Energy Research (PIER) Program released a Program Opportunity Notice (PON-12-504) entitled "Advanced Natural Gas Engine research and Development for Class 3 through Class 7 Applications." The purpose of the solicitation is to accelerate research and development of natural gas engine concepts for application in light heavy-duty vehicles (LHDV) and medium heavy duty vehicles (MHDV) operated in fleets throughout California. This solicitation seeks projects that demonstrate promising technologies that advance the performance, fuel efficiency, and competitiveness of natural gas engines, based on existing gasoline and diesel engines of approximately 6-8 liters displacement suited to power Class 3-7 Vehicles. Advancements sought under this solicitation will focus on improving power density and engine control technologies. The solicitation announced that \$3,000,000 in funding was available for a maximum award size of \$1,000,000 per project.

The proposals were screened, reviewed, evaluated, and scored using the criteria prescribed in the solicitation. Based on the Review Team's scores and suggested funding level, the Energy Commission proposes to award \$2,600,000 and fund all three of the passing projects under this solicitation. This Notice of Proposed Awards is hereby issued pursuant to these recommendations.

The attached table titled "Notice of Proposed Awards and Results of Submitted Proposals" identifies each of the applicants recommended to receive funding, the project title, the recommended amount of Energy Commission funding, and scoring information.

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 Commission is unable to timely negotiate and execute a funding agreement with an Applicant, the Commission, at its sole discretion, reserves the right to cancel the pending award and shift the available funds. Applicants will be notified of such changes in a revised notice.

This notice is being mailed to all parties who submitted a proposal to this solicitation and is also posted on the Energy Commission website at:

<http://www.energy.ca.gov/contracts/>

For further information about this matter, please contact:

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**California Energy Commission**  
**PON-12-504**  
**Notice of Proposal Awards and Results of Submitted Proposals**  
 Advanced Natural Gas Engine Research and Development for  
 Class 3 through Class 7 Applications



Rank	Prime Applicant	Title	PIER Funds Requested	PIER Funds Recommended	Match Funds	Score	Score Status
<b>Proposed Awards</b>							
1	Institute of Gas Technology dba Gas Technology Institute	Advanced 6.7 Liter Natural Gas Engine Development	\$1,000,000	\$1,000,000	\$2,164,736	<b>85.70</b>	<b>Awardee</b>
2	Quantum Fuel Systems Technologies Worldwide, Inc.	Development of an Advanced Low-Cost 8.8L Natural Gas Engine for Class 3 to 7 Vehicles	\$1,000,000	\$1,000,000	\$750,000	<b>82.10</b>	<b>Awardee</b>
3	The Regents of the University of California	Benefits of Dynamic Skip Fire (DSF) for Improved Natural Gas Engine Performance	\$600,000	\$600,000	\$125,000	<b>75.20</b>	<b>Awardee</b>
<b>Did Not Pass</b>							
4	Carbo Plus Technologies, LLC	Application of ARI (Active Radical Initiator) Combustion Technology for Natural Gas Engines to Achieve a Diesel-Like Performance and Fuel Economy While Meeting 2010 Emissions without Nitric Oxides and Particulate After-treatment	\$950,000			<b>64.50</b>	<b>Did Not Pass</b>
5	Greenkraft, Inc.	Natural Gas Multiport Injection Engine at a Lower Cost	\$900,000			<b>57.45</b>	<b>Did Not Pass</b>
6	Motiv Power Systems, Inc.	CNG truck Configured as a Separable Series Hybrid for High Efficiency and Near-Zero Emissions	\$912,171			<b>53.70</b>	<b>Did Not Pass</b>
7	Greenkraft, Inc.	Converting a Diesel Engine Into Natural Gas with Greenkraft's System	\$502,240			<b>49.55</b>	<b>Did Not Pass</b>
<b>Did Not Pass Administrative Screening</b>							
	Robert Bosch LLC	Advancements in Combustion & Injections of Natural Gas (ACING)	\$998,604				<b>Disqualified</b>
	Kan Cheng	Fuel-Air Hybrid (FAH) Engine Development	\$450,000				<b>Disqualified</b>
	Westport Fuel Systems, Inc.	Next Generation MD Natural Gas Engine with Variable Valve Actuation and High-Frequency Ignition	\$1,096,000				<b>Disqualified</b>
<b>Total Funds Recommended for Advanced NG Engine Project</b>			<b>\$2,600,000</b>		<b>\$3,039,736</b>		