

BOARD MEETING DATE: August 7, 2020

AGENDA NO. 5

**PROPOSAL:** Amend Contract to Clarify Ownership of Equipment Funded by South Coast AQMD in High Efficiency and Low-NOx Combo Ribbon Burner Combustion System Demonstration

**SYNOPSIS:** In January 2019, the Board awarded a contract to Gas Technologies Institute (GTI) to demonstrate the EcoZone Low-NOx combustion system on an existing multi-zone baking oven located at a host site within the jurisdiction of the South Coast AQMD. This contract was part of 26 emission reduction and technology demonstration projects funded by South Coast AQMD Special Revenue Funds. This action is to amend the contract with GTI to clarify that GTI will own the equipment funded under the contract and does not increase the cost of this contract.

**COMMITTEE:** Administrative, June 12, 2020; Recommended for Approval

**RECOMMENDED ACTION:**

Authorize the Executive Officer to amend the contract with Gas Technology Institute (GTI) to clarify that GTI will own the equipment funded under the contract.

Wayne Nasti  
Executive Officer

PF:SN:MK:GQ:SW

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**Background**

On January 4, 2019, the Board approved 26 stationary and mobile source emission reduction projects to implement emission reduction and demonstration projects that deploy, commercialize, and/or advance clean technologies. One of the projects included a contract with Gas Technology Institute (GTI) for a High Efficiency and Low-NOx Combo Ribbon Burner Combustion System Demonstration project. Gas Technology Institute was awarded \$1,282,000 from Fund 27 to purchase and demonstrate the EcoZone Low-NOx combustion system (EcoZone System) on an existing 7 MMBTU/hour multi-zone baking oven owned by Kroger Company/Ralphs Grocery

Company (Kroger). The project focuses on improvements to the combustion system focusing on efficiency and emissions. According to the Field Test Agreement between GTI and Kroger, it is intended for GTI to leave the EcoZone System installed on the existing multi-zone baking oven and transfer ownership of the EcoZone System to Kroger on an “as is” basis following the completion of this project.

Most technology demonstration projects co-funded by South Coast AQMD are with entities who already own the underlying equipment or technology (intellectual property), or South Coast AQMD is acting as a pass-through entity or South Coast AQMD’s funding contribution is a small percentage of the total project cost. As such, South Coast AQMD typically does not claim ownership of equipment or supplies purchased as part of these technology demonstration projects because ownership has already been established or someone else has a stronger ownership claim. In this case, however, the contract is with a research entity who does not own the underlying equipment (Kroger owns the existing oven) or technology to be demonstrated (Flynn Burner has a patent pending for the burner technology), and most of the funding for the project is coming from the South Coast AQMD. It is therefore necessary to clarify who owns the equipment comprising the EcoZone System funded under the South Coast AQMD contract. The South Coast AQMD also does not have the need or capacity to store, maintain or dispose of the demonstration equipment. By allowing Kroger to continue operating this low-NOx oven, air quality benefits would continue. This project conservatively estimates NOx emission reductions of approximately 25% when compared to the current levels required by Rule 1153.1 – Emissions of Oxides of Nitrogen from Commercial Food Ovens.

This is an ongoing project with a contract end date of October 1, 2022. To date, GTI has performed an assessment of the host site, conducted baseline emissions testing, and engineered the demonstration equipment. Currently, GTI and project partners are working to assemble the system and complete installation of the equipment. Delivery of the final results to the South Coast AQMD are expected during the first quarter of 2022.

### **Proposal**

This action is to authorize the Executive Officer to amend the contract with GTI to clarify that GTI will own the equipment funded under the contract. Upon completion of the demonstration project, it is anticipated that GTI will transfer ownership of the EcoZone System to Kroger on an “as is” basis.

### **Resource Impacts**

No fiscal impact is associated with this contract amendment.

### **Attachment**

Stamped Approved Board Letter from January 4, 2019 Agenda Item #2



# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • www.aqmd.gov

BOARD MEETING DATE: January 4, 2019

AGENDA NO. 2

**PROPOSAL:** Execute Contracts for Emission Reduction Projects Using Incentive Funding from SCAQMD Special Revenue Funds, and Reimburse General Fund for Administrative Costs for Contract Administration

**SYNOPSIS:** In January 2018, the Board released an RFP to solicit stationary and mobile source projects that will result in emission reductions of NOx, VOC, and PM, in accordance with the approved control strategy in the 2016 AQMP. Project funding is proposed from existing special revenue funds related to mitigation fees, settlements, or grants from other agencies, and was approved for up to \$61 million. Twenty-six proposals are being recommended for a total amount not to exceed \$47,385,792. The remaining balance of the \$61 million allocated for this RFP will be reserved to expand or continue implementation of the awarded projects or for other future needs. This action is to execute contracts for air quality emission reduction projects in a total amount not to exceed \$47,385,792. This action is to also reimburse the General Fund up to 6.25 percent for administration of the projects.

**COMMITTEE:** Administrative, December 14, 2018; Recommended for Approval

## RECOMMENDED ACTIONS:

1. Authorize the Chairman to execute contracts for air quality emission reduction projects from the Special Revenue Funds as listed in Table 3 in a total amount not to exceed \$47,385,792;
2. Authorize the Executive Officer to reallocate any funding that becomes available due to unexecuted or reduced-cost contracts among the recommended projects as listed in Table 3 as appropriate; and
3. Authorize reimbursement to the General Fund for administrative costs of up to 6.25 percent from the various Special Revenue Funds to cover the program administration of emission reduction projects.

APPROVED  
by the  
South Coast Air Quality  
Management District Board  
Date: January 4, 2019  
Denise Legano  
Clerk of the Board

Wayne Natri  
Wayne Natri  
Executive Officer

PMF:SR:ZP:KC:KTC

## **Background**

The South Coast Air Quality Management District (SCAQMD) is committed to achieving healthful air in the South Coast Air Basin and Coachella Valley. The 2016 AQMP seeks to achieve and maintain federal air quality standards within attainment deadlines by the earliest date achievable to comply with Federal Clean Air Act requirements. In particular, the region must meet the 8-hour ozone, 1-hour ozone, 24-hour PM<sub>2.5</sub>, and annual PM<sub>2.5</sub> National Ambient Air Quality Standards over the next 5 years. Although great strides have been made in air pollution control programs, these health-based air quality standards cannot be achieved without significant further emission reductions. In order to meet these goals, the 2016 AQMP includes an integrated control strategy addressing multiple objectives for a more efficient path in meeting all air quality standards. The 2016 AQMP uses a variety of implementation approaches to meet air quality standards such as regulation, accelerated deployment of available cleaner technologies (e.g., zero emission and near-zero emission technologies), and co-benefits from existing programs (e.g., climate and energy efficiency). Additional demonstration and commercialization projects will be crucial to help deploy and reduce costs for zero and near-zero emission technologies. A key element of the 2016 AQMP is to make available private and public funding to help further the development and deployment of these advanced technologies. Further, many of the same technologies will address both air quality and climate goals, such as increased energy efficiency and reduced fuel usage.

The SCAQMD is taking an initial step toward establishing an incentive funding program for stationary sources as well as continuing mobile source incentive funding to achieve emission reductions, in accordance with the approved control strategy in the 2016 AQMP. Incentives can be best applied where controls are cost-effective overall, but not necessarily affordable to the affected sector, especially when controls are considered for smaller businesses or residences. Incentive funds can be used to subsidize low-emitting equipment purchases or encourage the use of alternative approaches. For example, replacement of older, high-emitting vehicles with the cleanest vehicles available through incentive funding is one of the most effective control strategies. Programs that expand supporting infrastructure for implementation of cleaner fuels (e.g., charging infrastructure, alternative fueling stations, etc.) also help to accelerate the use of ultra-low emitting vehicles. The SCAQMD will continue to support technology demonstration projects for both mobile and stationary sources and will work to create new or expanded funding opportunities for early deployment of cleaner technologies. The SCAQMD will also prioritize distribution of incentive funding in environmental justice (EJ) areas and seek opportunities to expand funding to benefit the most disadvantaged communities.

## **RFP Proposal**

On January 5, 2018, the Board approved the release of RFP #P2018-06 to announce the availability of funds and solicit proposals for emission reduction projects in accordance with the approved control strategy in the 2016 AQMP. The broad-based RFP was open

to a wide variety of project types including but not limited to zero and near zero technologies, equipment replacement/repower/retrofit, infrastructure, energy efficiency improvement, and technology demonstration to achieve NOx, PM, and VOC emission reductions with up to \$61 million available from a combination of several SCAQMD Special Revenue Funds.

### **Outreach**

A significant effort was made to conduct outreach to potential applicants including five community meetings held in each of the four counties with two meetings in the proximity of refineries in the South Bay (Table 1). Approximately 60 representatives from local communities, environmental groups, consulting firms, local governments and utilities attended the community meetings.

**Table 1. List of Public Community Meetings**

<b>Date</b>	<b>Location</b>	<b>Venue</b>	<b>Meeting Time</b>
Tues 2/20/18	Torrance	Torrance Community Center Garden Room 3330 Civic Center Dr, Torrance, CA 90503	1PM – 3PM
Tues 2/20/18	Wilmington	Wilmington Senior Center 1371 Eubank Ave, Wilmington, CA 90744	6PM - 8PM
Wed 2/21/18	Buena Park	Buena Park Community Center 6688 Beach Blvd., Buena Park, CA 90621	2PM – 4PM
Thurs 2/22/18	San Bernardino	San Bernardino County Transportation Authority 1170 W 3rd St, San Bernardino, CA 92410	9:30AM – 11:30AM
Thurs 2/22/18	Riverside	Louis Rubidoux Public Library 5840 Mission Blvd., Jurupa Valley, CA 92509	2PM – 4PM

In accordance with SCAQMD's Procurement Policy and Procedure, a public notice advertising the RFP and inviting bids was published in the Los Angeles Times, the Orange County Register, the San Bernardino Sun, and Riverside County's Press Enterprise newspapers and sent to over 900 email recipients. Additionally, a bidder's conference was held at the SCAQMD Headquarters on January 24, 2018 with approximately 60 people in attendance.

Staff also developed a webpage specific to the incentive funding program and RFP with supporting documents such as a project summary sheet, frequently asked questions, community meetings, and bidders conference times, locations and presentations.

### **Proposals Received**

Eighty-two proposals were received by the submittal deadline of April 11, 2018, requesting a total of more than \$385 million in SCAQMD Special Revenue funds. A list of all proposals received is provided in Attachment A. Of the eighty-two proposals, one proposal was withdrawn and one proposal failed to meet the minimum standards for evaluation as it was not legible, resulting in eighty proposals requesting for a total of \$310 million in funding. The twenty-six proposals recommended for funding meet the

technical merits of the RFP, complement existing SCAQMD funding portfolios, and meet the policy objectives of the District. One project has been added to those recommended for approval after the matter was considered by the Administrative Committee, Item 69, Alcal Specialty Contracting.

### **Fund Restrictions**

The SCAQMD Special Revenue Funds for this RFP were established with monies from various sources including settlements, mitigation fees, or monies from other agencies. A majority of the Special Revenue Funds are reserved for projects that achieve NOx emission reductions or have other specific restrictions, such as being available for VOC or PM2.5 reductions. A limited number of these funds require funded projects to be “in proximity” of particular emission sources such as refineries, peaker plants or chemical plants. Since “in proximity” is not clearly distinguished, staff recommends defining it as a 6-mile radial distance from the boundary of an emission source. The 6-mile radial distance definition has been previously used to identify emission mitigation projects in proximity of power plants for the AB 1318 program.

### **RFP Evaluation**

The broad-based nature of the RFP allowed for a wide variety of proposed projects, with no particular restriction on the types of projects, process or methodology to achieve emission reductions. As a result, the 80 proposals evaluated were from a variety of disciplines, varying from mobile source to stationary source, and implementation projects to technology demonstrations. To streamline the evaluation process, the eighty eligible proposals were categorized into four categories: (1) mobile source replacement/repower/retrofit and related infrastructure, (2) mobile source technology demonstration and infrastructure, (3) stationary source replacement/repower/retrofit, efficiency improvement and related infrastructure, and (4) stationary source technology demonstration and infrastructure. By grouping proposals together into one of the categories, each proposal was evaluated along with other similar projects. Each of the evaluation panels consisted of four members, including three internal SCAQMD staff and one external member from either CARB or U.S. EPA. Proposals were evaluated using criteria as outlined in the RFP and shown in Table 2. Panel members were selected based on their knowledge and expertise.

**Table 2. Project Evaluation Criteria**

<b>Project Evaluation Criteria</b>	<b>Maximum Points</b>
Aids in achievement of SCAQMD's regional air quality goals in the jurisdiction of the SCAQMD and/or promotes long-term emission reduction technologies/strategies associated with state/federal regulatory clean air plans	35
Experience and expertise of proposer or other evidence of capacity to complete the project	20
Effective use of funds (e.g. cost effectiveness and/ or funding partnerships)	15
Co-contaminant reduction benefits (e.g. control/mitigation of toxics or GHGs)	10
EJ Area benefits	10
Job creation within the jurisdiction of the SCAQMD	5
Community/government support	5
<b>Total</b>	<b>100</b>
<b>Additional Points (17 maximum)</b>	
Small Business or Small Business Joint Venture	10
DVBE or DVBE Joint Venture	10
Use of DVBE or Small Business Subcontractors	7
Low-Emission Vehicle Business	5
Local Business (Non-Federally Funded Projects Only)	5
Off-Peak Hours Delivery Business	2
Most Favored Customer Pricing	2

As outlined above, priority for distribution of incentive funding was placed on cost-effective and feasible projects that aid in achieving SCAQMD's air quality goals. Additional points were also awarded to projects in EJ areas and to projects which provide co-benefits of other air contaminants including greenhouse gases and air toxics as well as projects having local and community support. Evaluators used the criteria listed in Table 2 to rank the proposed projects. Projects which did not result in a minimum technical score of 70 percent (56 points) were not considered for funding since the evaluation panels believed that proposals below this threshold lacked information demonstrating a likelihood of success in achieving emission reductions and thus should not be considered for funding at this time. The technical score was comprised of the first four criteria listed in Table 2. In addition, for the purpose of this RFP, schools and local governments were considered as local businesses in the evaluation.

### **Proposed Awards and Recommendations**

Based on the panel evaluations, 58 proposals received a technical score at or above the 70 percent threshold, totaling approximately \$211 million in requested funding. The 58 qualifying proposals were further considered in terms of certainty and permanency of emission reductions, number of projects already funded / proposals to be funded for a particular source category or technology, the eligibility of funding opportunities from other sources such as utilities or federal grants, if proposals complemented the existing SCAQMD funding portfolio, and other policy considerations.

As a result, a total of 26 proposals are recommended for funding for an amount not to exceed \$47,385,792 from the Special Revenue Funds as shown in Table 3. The funding amount for each recommended project has been matched to the RFP funding sources<sup>1</sup>, as outlined in the original release of the RFP (Table 1–RFP Funding Sources by Fund #). The recommended projects support AQMP goals, have a long-term positive impact on air quality goals of the SCAQMD, complement other incentive programs, and provide the basis for new incentive programs to expand the District’s funding portfolio. Staff recommends the Board approve the projects in Table 3 for up to the amount indicated. Several of the recommended project funds are contingent on the proposer obtaining additional funding or forming project partnerships. For these projects (denoted with an asterisk in Table 3), the recommended funding amount will be set aside for a period of up to 18 months to complete contract negotiations. If additional funding or partnerships cannot be established or projects are awarded/completed at a reduced amount, then these funds will be released to continue or expand on the awarded projects or for other future projects. Therefore, staff recommends authorizing the Executive Officer to reallocate this funding to continue or expand on the awarded projects as appropriate. Furthermore, staff recommends partial funding for some of the proposals based on implementation of a portion of the projects or minor changes to the scope of work, as denoted in Table 3. The Special Revenue Funds and amounts listed in Table 4 have been identified as eligible sources of funding for the projects selected for this RFP program.

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<sup>1</sup> Exact amount from each funding source is subject to change based on the available funding balance at the time of Board approval



**Table 3. List of SCAQMD Staff Recommended Projects**

#	Project Proponent	Project Title	Requested Funding Amount	Recommended Funding Amount (up to)	SCAQMD Funding Source^
1	Institute of Gas Technology	Ultra Low-NOx Commercial Foodservice Deep Fat Fryer Development	\$321,970	\$321,970	Fund 27 (AQIP Prefunding) \$93,650
					Fund 27 (Rule 1110.2) \$213,708
					Fund 27 (Rule 1121) \$14,612
3	Institute of Gas Technology	High Efficient and Low-NOx Combo Ribbon Burner Combustion System Demonstration	\$1,282,000	\$1,282,000	Fund 27 (Rule 1111) \$1,282,000
5	Nett Technologies	Commercial Harbor Craft Nox and PM Emission Reduction Technology Demonstration	\$1,785,000	*\$1,338,750	Fund 54 (Rule 1118) \$1,338,750
6	Rialto Bioenergy Facility, LLC	Rialto Bioenergy Facility RNG Upgrading and Interconnection Project	\$4,365,801	\$4,365,801	Fund 27 (Rule 1111) \$4,365,801
7	Chanje Energy, Inc.	Chanje Zero-Emission Panel Van Deployment Project	\$11,793,135	***\$3,000,000	Fund 27 (EO Mitigation) \$3,000,000
8	Grant Farm	AMPCaddy Deployment Program	\$722,060	*\$361,030	Fund 54 (Rule 1118) \$361,030
12	Harley Marine Services	Electric Drive Tugboat Technology Project	\$3,000,000	\$3,000,000	Fund 54 (Rule 1118) \$3,000,000
14	Beckett Gas, Inc.	Application of Swirl-Pattern Burner Head Technology (Rule 1111)	\$791,992	\$791,992	Fund 27 (Rule 1111) \$791,992
16	BioFuels Energy, LLC	Aquarium of the Pacific 1320 kW Fuel Cell Power Generation System	\$650,000	\$650,000	Fund 27 (EO Mitigation) \$650,000
23	University of Redlands	Microgrid System at University of Redlands	\$1,962,000	\$1,962,000	Fund 27 (EO Mitigation) \$1,962,000
24	Transportation Power, Inc.	Electric Class 8 Refuse Trucks Using Advanced Charging and Renewable Energy	\$5,999,988	***\$2,250,000	Fund 27 (Rule 1111) \$2,250,000
34	Port of Long Beach	The Port of Long Beach Zero-Emission and Hybrid Terminal Equipment Deployment and Demonstration Project	\$11,570,713	***\$2,500,000	Fund 54 (Rule 1118) \$2,500,000
38	FuelCell Energy, Inc.	Riverside Flare Reduction Project: Producing Renewable Hydrogen & Power and Avoiding NOx and VOC	\$3,767,380	\$3,767,380	Fund 27 (Rule 1111) \$3,767,380
41	Southern California Gas Company	Midstream Commercial Water Heating Incentive Program	\$1,221,237	\$1,221,237	Fund 20 (Air Quality Assistance) \$610,619
					Fund 27 (Rule 1121) \$610,618
43	Southern California Gas Company	Residential Fuel Cell Demonstration with PV and Storage	\$490,000	\$490,000	Fund 27 (EO Mitigation) \$490,000
44	University of Southern California	Transient Pulsed Plasma Technology for Retrofit Treatment of Diesel Emissions	\$688,045	\$688,045	Fund 27 (Rule 1111) \$354,313
					Fund 41 (State Backup Generator Program) \$333,732
47	Clean Energy	Market Acceleration Program (MAP) (HD NZ NG Truck Replacement)	\$6,000,000	***\$3,000,000	Fund 54 (Rule 1118) \$3,000,000

**Table 3. List of SCAQMD Staff Recommended Projects (Concluded)**

#	Project Proponent	Project Title	Requested Funding Amount	Recommended Funding Amount (up to)	SCAQMD Funding Source <sup>^</sup>
62	Lantec Products	Next Generation Ultra Low NOx Forced Air Forced Air Furnace	\$340,000	\$340,000	Fund 27 (Rule 1121) \$340,000
65	Healthy Hearth, LLC	HearthCAT Retrofit Program	\$4,560,000	****\$2,280,000	Fund 27 (Rule 1121) \$934,800
					Fund 27 (EO Mitigation) \$205,200
					Fund 27 (Rule 1111) \$1,140,000
66	PureFlame Technologies, LLC	Restaurant Emissions - PM Reduction Program	\$1,072,000	*****\$100,000	Fund 27 (Rule 1111) \$100,000
69	Alcal Specialty Contracting	Residential Energy Efficiency Retrofit Project (Coachella Valley)	\$3,866,667	*\$966,667	Fund 27 (EO Mitigation) \$966,667
70	Coachella Valley Association of Governments	Regional PM-10 Street Sweeping Operations in Coachella Valley	\$1,100,000	**\$1,150,000	Fund 35 (AES Settlement) \$750,320
					Fund 36 (Rule 1309.1 Priority Reserve) \$189,496
					Fund 45 (CBE/OCE Settlement) \$210,184
71	Association for Energy Affordability, Inc.	Multifamily Affordable Housing Electrification Project: Zero-NOx Water Heating, Space Heating, Cooking and Laundry Systems	\$7,740,000	\$7,740,000	Fund 27 (Rule 1111) \$2,534,926
					Fund 37 (CARB ERC Bank) \$561,074
					Fund 54 (Rule 1118) \$4,644,000
76	Advanced Energy Machines	Zero emission transport refrigeration at Heart of Compassion Distribution	\$338,920	\$338,920	Fund 27 (Rule 1121) \$338,920
81	Bloom Energy, Corp.	Fuel Cells Integrated with Energy Storage on College of the Canyons Campus	\$3,000,000	\$3,000,000	Fund 27 (EO Mitigation) \$3,000,000
82	Alcal Specialty Contracting	Residential Energy Efficiency Retrofit Project (San Fernando Valley)	\$1,933,333	*\$480,000	Fund 27 (EO Mitigation) \$480,000
<b>Total Recommended Funding Amount (Up To)</b>					<b>\$47,385,792</b>

\* Recommended funding is contingent on proposer obtaining additional co-funding or forming project partnerships for the remaining portions of the requested amount.

\*\* Recommend funding for 1 out of the 5 years requested, and allocating an additional \$50,000 for a study to improve program efficiency, with remaining funds released once report is completed.

\*\*\* Partial funding for a subset of the proposals including, but not limited to, reduced recommended amount or reduced number of equipment.

\*\*\*\* Recommend to start with 500 units, and reserve funds for up to 2000 additional installations and for project expansion to other areas.

\*\*\*\*\*Recommend funding for certification package and then subsequent installations of up to 10 units.

<sup>^</sup> Fund 20 - Restricted to provide small business assistance

Fund 27 - Restricted to NOx mitigations

Fund 36 - Restricted to offset PM10 emissions

Fund 37 - Restricted to provide emission reductions in vicinity of new or expanded peaker plants

Fund 41 - Restricted to reduction in toxics exposure and NOx emissions

Fund 45 - Restricted to NOx / PM10 mitigations

Fund 54 - Restricted to offset refinery flare emissions

**Table 4. Proposed Project Funding by Funding Source**

Fund #	Fund Description	Funding Source with Estimated Fund Balance Approved by Governing Board on Jan. 5, 2018	Proposed Funding Source for Recommended Proposals		
			Amount*	SCAQMD 6.25% Administrative Cost (up to)**	Grand Total
20	Air Quality Assistance	\$1,590,230	\$610,619	\$38,164	\$648,783
27	AQIP Prefunding	\$99,503	\$93,650	\$5,853	\$99,503
27	Rule 1110.2	\$227,065	\$213,708	\$13,357	\$227,065
27	Rule 1121	\$2,385,065	\$2,238,950	\$139,934	\$2,378,884
27	EO Mitigation	\$11,428,260	\$10,753,867	\$672,117	\$11,425,984
27	Rule 1111	\$15,025,150	\$16,586,412	\$1,036,651	\$17,623,063***
35	AES Settlement	\$554,469	\$750,320	\$46,895	\$797,215***
36	1309.1 Priority Reserve	\$3,732,020	\$189,496	\$11,844	\$201,340
37	CARB ERC Bank	\$596,141	\$561,074	\$35,067	\$596,141
38	LADWP Settlement**	\$397,266	-	-	-
41	State Backup Generator Program	\$354,590	\$333,732	\$20,858	\$354,590
44	Rule 1173 Mitigation Fee	\$3,322,166	-	-	-
45	CBE/OCE Settlement	\$223,320	\$210,184	\$13,136	\$223,320
54	Rule 1118 Mitigation	\$18,931,843	\$14,843,780	\$927,736	\$15,771,516
62	Rule 1470 Risk Reduction Fund	\$2,454,935	-	-	-
<b>Total</b>		<b>\$61,322,023</b>	<b>\$47,385,792</b>	<b>\$2,961,612</b>	<b>\$50,347,404</b>

\* Exact amount from each funding source is subject to change based on the available funding balance at the time of Board approval.

\*\* Funds were used for other contracts approved by Board actions subsequent to Board approval on January 5, 2018.

\*\*\* Additional funds were received subsequent to Board approval on January 5, 2018, which were more appropriate for the proposed projects.

### Administration

Staff proposes to reimburse the General Fund for administrative costs up to 6.25 percent from the Special Revenue Funds listed in Table 4 to cover the program administration of the emission reduction projects. This administration cost is consistent with the cost for administering other incentive programs such as the Carl Moyer Program. Additional staff may be requested in the next budget to handle contract management and tracking emission reductions to ensure they are creditable to the State Implementation Plan and develop guidelines for future stationary source incentive programs.

**Benefits to SCAQMD**

A total of 26 stationary and mobile source projects are recommended for funding. Of the 26 projects, 15 are selected to implement commercially available zero or near zero control technology as well as to support infrastructure for implementation of cleaner fuels. These projects are anticipated to result in approximately 88 tons per year (tpy) of NOx and 2 tpy of PM2.5 emissions reductions in the Basin with the majority of projects in EJ communities. Additionally, 11 technology demonstration projects are recommended for funding. Upon successful demonstration and deployment, these projects have the potential to provide long term emission reduction benefits of up to 1,369 tpy of NOx. Out of the \$47,385,792 of the recommended funding, over \$36 million are allocated for implementation/deployment projects, of which 80% of the funding will be spent in EJ areas and disadvantaged communities. The remainders of the recommended funding (over \$11 million) is allocated for technology demonstration projects, which would provide benefits to EJ areas and disadvantaged communities upon successful demonstration and deployment.

**Resource Impacts**

A total of \$61 million from SCAQMD Special Revenue Funds was identified by the Board on January 5, 2018. The total cost for the recommended projects is not to exceed \$47,385,792 from the various Special Revenue Funds. The remaining will be reserved for this RFP to expand or continue implementation of the awarded projects or for other future projects. Staff also recommends reimbursement to the General Fund for administrative costs up to 6.25 percent from the various Special Revenue Funds to cover the program administration of the emission reduction projects.

**Attachments**

- A. List of Proposals Received
- B. Scores of Proposals Evaluated

**Attachment A**  
**Table A-1**  
**List of Proposals Received**

Proposal Number	Project Title	Proposer Name	Requested Funding Amount
1	Ultra Low-Nox Commercial Foodservice Deep Fat Fryer Development	Institute of Gas Technology	\$ 321,970
2	Retrofit of Diesel Tugboat with Natural Gas & Diesel Blends	Blue Gas Marine	\$ 150,000
3	High Efficient and Low-Nox Combo Ribbon Burner Combustion System Demonstration	Institute of Gas Technology	\$ 1,282,000
4	Novel Efficient Combustion for Char broilers with Reduced Particulate Emissions	Institute of Gas Technology	\$ 258,000
5	Commercial Harbor Craft Nox and PM Emission Reduction Technology Demonstration	Nett Technologies	\$ 1,785,000
6	Rialto Bioenergy Facility RNG Upgrading and Interconnection Project	Rialto Bioenergy Facility, LLC (RBF)	\$ 4,365,801
7	Chanje Zero-Emission Panel Van Deployment Project	Chanje Energy, Inc.	\$ 11,793,135
8	AMPCaddy Deployment Program	Grant Farm	\$ 722,060
9	Zero-Emission RTG Advanced Infrastructure Program	Grant Farm	\$ 10,118,010
10	Battery-Electric Truck Ferry Project	Curtin Maritime	\$ 11,322,365
11	Combustion System Optimization on a Gas-Fired Residential Heat Pump Water Heater (5ng/J)	Stone Mountain Technologies	\$ 317,195
12	Electric Drive Tugboat Technology Project	Harley Marine Services	\$ 3,000,000
13	Selective Cool Particulate Regeneration Technology Demo for Marine/Diesel Engines	Global Clean Diesel	\$ 2,869,036
14	Application of Swirl-Pattern Burner Head Technology (Rule 1111)	Beckett Gas, Inc.	\$ 791,992
15	Greater Ontario Convention & Visitors Bureau Airport Shuttle Project (12 ZEV Shuttle Buses)	Greater Ontario Convention and Visitors Bureau (GOCVB)	\$ 9,149,024
16	Aquarium of the Pacific 1320 kW Fuel Cell Power Generation System	BioFuels Energy, LLC	\$ 650,000
17	The Solar for Schools Pilot Program	City of Anaheim, Public Utilities Department	\$ 6,122,344
18	Fuel Cells at Owens Corning Roofing Plant	Bloom Energy, Corp.	\$ 1,000,000
19	Near-Zero Aftertreatment System for Medium/Heavy Duty Natural Gas Truck Engines	Tecogen Inc.	\$ 785,220
20	Auxiliary Catalytic Converter for LD Gasoline Cars and Trucks	Compliance and Research Services	\$ 125,000
21	Playground Repair, Solar PV, Lighting Retrofit, Heating and A/C Replacement	Los Angeles Unified School District	\$ 43,620,177
22	Integrated Microgrid Emission Reduction Project	Applied Medical Resources, Inc.	\$ 640,000
23	Microgrid System at University of Redlands	University of Redlands	\$ 1,962,000
24	Electric Class 8 Refuse Trucks Using Advanced Charging and Renewable Energy	Transportation Power, Inc.	\$ 5,999,988
25	New Indy Containerboard's (NICB) Ontario Mill Repowering Project	New-Indy Ontario, LLC	\$ 2,617,500
26	Green Street Asbestos Abatement & Mobility Improvements	City of Pasadena, Dept. of Public Works	\$ 1,480,950
27	Emergency Standby Generator Bi-Fuel Retrofit	Diesel 2 Gas Solutions, LLC	\$ 7,000,000
28	Electric Landscape Equipment Trial & Evaluation Program	Wildan Energy Solutions	\$ 948,973

**Table A-1**  
**List of Proposals Received (Continued)**

Proposal Number	Project Title	Proposer Name	Requested Funding Amount
29	BYD-SCAQMD Zero-Emission Incentive Project (17 ZE TRU Trucks Replacement)	BYD Motors, Inc.	\$ 2,125,000
30	Deploying Hydrogen in Heavy-Duty Trucks and Ancillary Markets in Southern California	Robert V. Jensen, Inc.	\$ 10,967,373
31	Deployment of 5 Electrified Power Take-Off Units	Viatec, Inc.	\$ 1,110,807
32	C2P Consolidated Interstate Pipeline	Guillette & Cos., LLC	\$ 1,290,000
33	Solar Renewable Energy Project	City of South Pasadena	\$ 3,295,670
34	The Port of Long Beach Zero-Emission and Hybrid Terminal Equipment Deployment and Demonstration Project	Port of Long Beach	\$ 11,570,713
35	San Pedro Bay Ports' Clean Air Action Plan Ocean-Going Vessel Emissions Reduction Program	San Pedro Bay Ports	\$ 10,000,000
36	#ElectrifyAnaheim: Changing the Transit Paradigm in Southern California	Anaheim Transportation Network (ATN)	\$ 28,617,000
37	Portable Off-Grid Solar Wireless Charging System	Wireless Advanced Vehicle Electrification, Inc.	\$ 2,846,592
38	Riverside Flare Reduction Project: Producing Renewable Hydrogen & Power and Avoiding NOx and VOC	FuelCell Energy, Inc. (FCE)	\$ 3,767,380
39	Deployment of 20 Heavy-Duty Commercial Zero-Emissions Trucks and Associated EV Charging Infrastructure	Daimler Trucks North America	\$ 15,670,072
40	Schools Energy Efficiency Program (SEEP) - Direct Installation of Advanced Low-NOx Technologies	Southern California Gas Company (SoCalGas)	\$ 246,193
41	Midstream Commercial Water Heating Incentive Program	Southern California Gas Company (SoCalGas)	\$ 1,221,237
42	New CNG Stations: Fast-Fill, Heavy-Duty, Public Access	Southern California Gas Company (SoCalGas)	\$ 4,800,000
43	Residential Fuel Cell Demonstration with PV and Storage	Southern California Gas Company (SoCalGas)	\$ 490,000
44	Transient Pulsed Plasma Technology for Retrofit Treatment of Diesel Emissions	University of Southern California, Dept. of Contracts and Grants	\$ 688,045
45	Reducing Harbor Craft Emissions with Nanosecond Pulsed Plasma Treatment	University of Southern California, Dept. of Contracts and Grants	\$ 688,045
46	Restaurant Smoke Emissions Remediation using Transient Pulsed Plasma	Transient Plasma Systems	\$ 474,618
47	Market Acceleration Program (MAP) (HD NZ NG Truck Replacement)	Clean Energy	\$ 6,000,000
48	SCR Operation R&D and Demonstration	Fossil Energy Research Corp. (FERCo)	\$ 732,309
49	Battery Energy Storage System	City of Glendale Water & Power	\$ 10,000,000
50	Clean Energy Automotive Training	San Bernardino Valley College Foundation	\$ 1,415,000
51	Replacement of Caterpillar Scrapers (Tier 4)	Sukut Equipment, Inc.	\$ 10,280,452
52	Replacement of Caterpillar Scraper (Tier 4)	Sukut Equipment, Inc.	\$ 1,468,636
53	Replacement of Caterpillar Crawler Dozers (Tier 4)	Sukut Equipment, Inc.	\$ 616,518
54	Replacement of Caterpillar Crawler Dozers (Tier 4)	Sukut Equipment, Inc.	\$ 932,200
55	Replacement of Caterpillar Dozers (Tier 4)	Sukut Equipment, Inc.	\$ 759,392

**Table A-1**  
**List of Proposals Received (Concluded)**

Proposal Number	Project Title	Proposer Name	Requested Funding Amount
56	Replacement of Caterpillar Dozers (Tier 4)	Sukut Equipment, Inc.	\$ 844,300
57	Replacement of Caterpillar Wheel Loaders (Tier 4)	Sukut Equipment, Inc.	\$ 183,864
58	Replacement of Caterpillar Off-Highway Trucks (Tier 4)	Sukut Equipment, Inc.	\$ 636,769
59	Repower of Caterpillar Scrapers	Sukut Equipment, Inc.	\$ 2,598,350
60	Replacement of Caterpillar Tractor/Loader/Backhoes (Tier 4)	Sukut Equipment, Inc.	\$ 54,160
61	Replacement of Caterpillar Dozers (Tier 4)	Sukut Equipment, Inc.	\$ 355,203
62	Next Generation Ultra Low Nox Forced Air Forced Air Furnace	Lantec Products	\$ 340,000
63	Zero Emission Battery Switcher Locomotive	Rail Propulsion Systems	\$ 1,872,425
64	Demonstration of Game Changer Technology Platform for Cost-effective Emissions Mitigation in Refineries and EJ Communities	T2M Global, LLC	\$ 4,989,975
65	HearthCAT Retrofit Program	Healthy Hearth, LLC	\$ 4,560,000
66	Restaurant Emissions - PM Reduction Program	PureFlame Technologies, LLC	\$ 1,072,000
67	Solvent Absorption and Electrochemical Reduction (SAER) Process Demonstration	RealEnergy	\$ 927,500
68	Landfill Gas Treatment and Upgrade Project	US Biogas	n/a
69	Residential Energy Efficiency Retrofit Project (Coachella Valley)	Alcal Specialty Contracting, Inc.	\$ 3,866,667
70	Regional PM-10 Street Sweeping Operations in Coachella Valley	Coachella Valley Association of Governments	\$ 1,100,000
71	Multifamily Affordable Housing Electrification Project (MAHEP): Zero-NOx Water Heating, Space Heating, Cooking and Laundry Systems	Association for Energy Affordability, Inc.	\$ 7,740,000
72	Electric Vehicle Charging Project	LA County Dept of Public Works	\$ 247,320
73	Commercial Cooking Emissions Reduction Project	Frontier Energy	\$ 365,810
74	Adaptive Camless Technology Demonstration	UCLA	\$ 2,250,000
75	Beta Offshore - Nox Reduction Plan	Beta Offshore	\$ 7,400,000
76	Zero emission transport refrigeration at Heart of Compassion Distribution	Advanced Energy Machines (AEM)	\$ 338,920
77	Equity, Health and Pollution Controls Program (EHPC)	Build It Green	\$ 10,135,892
78	Zero Emissions Multi-Family Swimming Pools Demonstration	Energx Controls Incorporated	\$ 1,075,850
79	Implementation of Immediate Total Solar Conversion of SCAQMD	Harvey Eder / Public Solar Power Coalition	\$ 61,000,000
80	Fuel Cells at San Manuel Casino	Bloom Energy, Corp.	\$ 5,000,000
81	Fuel Cells Integrated with Energy Storage on College of the Canyons Campus	Bloom Energy, Corp.	\$ 3,000,000
82	Residential Energy Efficiency Retrofit Project (San Fernando Valley)	Alcal Specialty Contracting	\$ 1,933,333

**Attachment B**

**Table B-1**

**Scores of Proposals Evaluated\* - Panel A (Mobile Source Replacement/Repower/Retrofit and Related Infrastructure)**

Final Score	Technical Score	Proposal Number	Project Title	Proposer Name	Requested Funding Amount
100	64	7	Chanje Zero-Emission Panel Van Deployment Project	Chanje Energy, Inc.	\$ 11,793,135
88	68	34	The Port of Long Beach Zero-Emission and Hybrid Terminal Equipment Deployment and Demonstration Project	Port of Long Beach	\$ 11,570,713
87	68	59	Repower of Caterpillar Scrapers	Sukut Equipment, Inc.	\$ 2,598,350
86	64	36	#ElectrifyAnaheim: Changing the Transit Paradigm in Southern California	Anaheim Transportation Network (ATN)	\$ 28,617,000
84	65	61	Replacement of Caterpillar Dozers (Tier 4)	Sukut Equipment, Inc.	\$ 355,203
84	65	58	Replacement of Caterpillar Off-Highway Trucks (Tier 4)	Sukut Equipment, Inc.	\$ 636,769
84	61	15	Greater Ontario Convention & Visitors Bureau Airport Shuttle Project (12 ZEV Shuttle Buses)	Greater Ontario Convention and Visitors Bureau (GOCVB)	\$ 9,149,024
84	65	60	Replacement of Caterpillar Tractor/Loader/Backhoes (Tier 4)	Sukut Equipment, Inc.	\$ 54,160
83	64	53	Replacement of Caterpillar Crawler Dozers (Tier 4)	Sukut Equipment, Inc.	\$ 616,518
83	64	52	Replacement of Caterpillar Scraper (Tier 4)	Sukut Equipment, Inc.	\$ 1,468,636
83	64	57	Replacement of Caterpillar Wheel Loaders (Tier 4)	Sukut Equipment, Inc.	\$ 183,864
82	63	51	Replacement of Caterpillar Scrapers (Tier 4)	Sukut Equipment, Inc.	\$ 10,280,452
82	63	55	Replacement of Caterpillar Dozers (Tier 4)	Sukut Equipment, Inc.	\$ 759,392
82	63	56	Replacement of Caterpillar Dozers (Tier 4)	Sukut Equipment, Inc.	\$ 844,300
80	64	47	Market Acceleration Program (MAP) (HD NZ NG Truck Replacement)	Clean Energy	\$ 6,000,000
80	61	54	Replacement of Caterpillar Crawler Dozers (Tier 4)	Sukut Equipment, Inc.	\$ 932,200
78	60	29	BYD-SCAQMD Zero-Emission Incentive Project (17 ZE TRU Trucks Replacement)	BYD Motors, Inc.	\$ 2,125,000

Technical Score Below 70% Cutoff (56 points):

n/a	30	50	Clean Energy Automotive Training	San Bernardino Valley College Foundation	\$ 1,415,000
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\* Proposals selected for award are highlighted in gray



## Attachment B

### Table B-2

#### Scores of Proposals Evaluated\* - Panel B (Mobile Source Technology Demonstration and Infrastructure)

Final Score	Technical Score	Proposal Number	Project Title	Proposer Name	Requested Funding Amount
100	65	76	Zero emission transport refrigeration at Heart of Compassion Distribution	Advanced Energy Machines (AEM)	\$ 338,920
96	66	8	AMPCaddy Deployment Program	Grant Farm	\$ 722,060
95	66	10	Battery-Electric Truck Ferry Project	Curtin Maritime	\$ 11,322,365
93	64	9	Zero-Emission RTG Advanced Infrastructure Program	Grant Farm	\$ 10,118,010
90	62	63	Zero Emission Battery Switcher Locomotive	Rail Propulsion Systems	\$ 1,872,425
86	60	5	Commercial Harbor Craft Nox and PM Emission Reduction Technology Demonstration	Nett Technologies	\$ 1,785,000
84	65	24	Electric Class 8 Refuse Trucks Using Advanced Charging and Renewable Energy	Transportation Power, Inc.	\$ 5,999,988
82	63	12	Electric Drive Tugboat Technology Project	Harley Marine Services	\$ 3,000,000
78	63	42	New CNG Stations: Fast-Fill, Heavy-Duty, Public Access	Southern California Gas Company (SoCalGas)	\$ 4,800,000
72	58	30	Deploying Hydrogen in Heavy-Duty Trucks and Ancillary Markets in Southern California	Robert V. Jensen, Inc.	\$ 10,967,373

#### Technical Score Below 70% Cutoff (56 points):

n/a	52	31	Deployment of 5 Electrified Power Take-Off Units	Viatec, Inc.	\$ 1,110,807
n/a	51	19	Near-Zero Aftertreatment System for Medium/Heavy Duty Natural Gas Truck Engines	Tecogen Inc.	\$ 785,220
n/a	50	35	San Pedro Bay Ports' Clean Air Action Plan Ocean-Going Vessel Emissions Reduction Program	San Pedro Bay Ports	\$ 10,000,000
n/a	48	37	Portable Off-Grid Solar Wireless Charging System	Wireless Advanced Vehicle Electrification, Inc.	\$ 2,846,592
n/a	45	72	Electric Vehicle Charging Project	LA County Dept of Public Works	\$ 247,320
n/a	44	2	Retrofit of Diesel Tugboat with Natural Gas & Diesel Blends	Blue Gas Marine	\$ 150,000
n/a	44	45	Reducing Harbor Craft Emissions with Nanosecond Pulsed Plasma Treatment	University of Southern California, Dept. of Contracts and Grants	\$ 688,045
n/a	41	28	Electric Landscape Equipment Trial & Evaluation Program	Wildan Energy Solutions	\$ 948,973
n/a	36	13	Selective Cool Particulate Regeneration Technology Demo for Marine/Diesel Engines	Global Clean Diesel	\$ 2,869,036
n/a	25	20	Auxiliary Catalytic Converter for LD Gasoline Cars and Trucks	Compliance and Research Services	\$ 125,000

\* Proposals selected for award are highlighted in gray

**Attachment B**

**Table B-3**

**Scores of Proposals Evaluated\* - Panel C (Stationary Source Replacement /Repower/Retrofit, Efficiency Improvement and Related Infrastructure)**

<b>Final Score</b>	<b>Technical Score</b>	<b>Proposal Number</b>	<b>Project Title</b>	<b>Proposer Name</b>	<b>Requested Funding Amount</b>
99	71	6	Rialto Bioenergy Facility RNG Upgrading and Interconnection Project	Rialto Bioenergy Facility, LLC (RBF)	\$ 4,365,801
95	70	65	HearthCAT Retrofit Program	Healthy Hearth, LLC	\$ 4,560,000
92	72	16	Aquarium of the Pacific 1320 kW Fuel Cell Power Generation System	BioFuels Energy, LLC	\$ 650,000
87	71	71	Multifamily Affordable Housing Electrification Project (MAHEP): Zero-NOx Water Heating, Space Heating, Cooking and Laundry Systems	Association for Energy Affordability, Inc.	\$ 7,740,000
86	66	66	Restaurant Emissions - PM Reduction Program	PureFlame Technologies, LLC	\$ 1,072,000
84	66	82	Residential Energy Efficiency Retrofit Project (San Fernando Valley)	Alcal Specialty Contracting	\$ 1,933,333
82	72	38	Riverside Flare Reduction Project: Producing Renewable Hydrogen & Power and Avoiding NOx and VOC	FuelCell Energy, Inc. (FCE)	\$ 3,767,380
77	68	22	Integrated Microgrid Emission Reduction Project	Applied Medical Resources, Inc.	\$ 640,000
75	56	70	Regional PM-10 Street Sweeping Operations in Coachella Valley	Coachella Valley Association of Governments	\$ 1,100,000
74	56	69	Residential Energy Efficiency Retrofit Project (Coachella Valley)	Alcal Specialty Contracting, Inc.	\$ 3,866,667
73	56	75	Beta Offshore - Nox Reduction Plan	Beta Offshore	\$ 7,400,000
73	67	41	Midstream Commercial Water Heating Incentive Program	Southern California Gas Company (SoCalGas)	\$ 1,221,237
70	57	18	Fuel Cells at Owens Corning Roofing Plant	Bloom Energy, Corp.	\$ 1,000,000
70	66	81	Fuel Cells Integrated with Energy Storage on College of the Canyons Campus	Bloom Energy, Corp.	\$ 3,000,000
67	62	23	Microgrid System at University of Redlands	University of Redlands	\$ 1,962,000
67	57	27	Emergency Standby Generator Bi-Fuel Retrofit	Diesel 2 Gas Solutions, LLC	\$ 7,000,000
66	63	80	Fuel Cells at San Manuel Casino	Bloom Energy, Corp.	\$ 5,000,000
64	61	40	Schools Energy Efficiency Program (SEEP) - Direct Installation of Advanced Low-NOx Technologies	Southern California Gas Company (SoCalGas)	\$ 246,193

*Technical Score Below 70% Cutoff (56 points):*

<i>n/a</i>	<i>54</i>	<i>77</i>	<i>Equity, Health and Pollution Controls Program (EHPC)</i>	<i>Build It Green</i>	<i>\$ 10,135,892</i>
<i>n/a</i>	<i>52</i>	<i>21.2</i>	<i>Solar Photovoltaic (PV) Carport Installations</i>	<i>Los Angeles Unified School District</i>	<i>\$ 8,366,259</i>

# Attachment B

## Table B-3

### Proposals Evaluated - Panel C\* (Stationary Source Replacement /Repower/Retrofit, Efficiency Improvement and Related Infrastructure)

n/a	51	25	New Indy Containerboard's (NICB) Ontario Mill Repowering Project	New-Indy Ontario, LLC	\$ 2,617,500
n/a	49	17	The Solar for Schools Pilot Program	City of Anaheim, Public Utilities Department	\$ 6,122,344
n/a	49	21.3	Energy Efficient Lighting Retrofit	Los Angeles Unified School District	\$ 12,097,385
n/a	49	33	Solar Renewable Energy Project	City of South Pasadena	\$ 3,295,670
n/a	47	21.4	Heating Ventilation and Air Conditioning (HVAC) Replacement	Los Angeles Unified School District	\$ 22,277,130
n/a	44	21.1	Playground Area Repair and Greening	Los Angeles Unified School District	\$ 879,403

\* Proposals selected for award are highlighted in gray

# Attachment B

Table B-4

## Scores of Proposals Evaluated\* - Panel D (Stationary Source Technology Demonstration and Infrastructure)

Final Score	Technical Score	Proposal Number	Project Title	Proposer Name	Requested Funding Amount (\$)
85	67	49	Battery Energy Storage System	City of Glendale Water & Power	\$ 10,000,000
82	67	44	Transient Pulsed Plasma Technology for Retrofit Treatment of Diesel Emissions	University of Southern California, Dept. of Contracts and Grants	\$ 688,045
81	59	48	SCR Operation R&D and Demonstration	Fossil Energy Research Corp. (FERCo)	\$ 732,309
80	68	3	High Efficient and Low-Nox Combo Ribbon Burner Combustion System Demonstration	Institute of Gas Technology	\$ 1,282,000
78	70	1	Ultra Low-Nox Commercial Foodservice Deep Fat Fryer Development	Institute of Gas Technology	\$ 321,970
77	57	46	Restaurant Smoke Emissions Remediation using Transient Pulsed Plasma	Transient Plasma Systems	\$ 474,618
76	59	11	Combustion System Optimization on a Gas-Fired Residential Heat Pump Water Heater (5ng/J)	Stone Mountain Technologies	\$ 317,195
76	63	73	Commercial Cooking Emissions Reduction Project	Frontier Energy	\$ 365,810
75	69	62	Next Generation Ultra Low Nox Forced Air Forced Air Furnace	Lantec Products	\$ 340,000
74	68	43	Residential Fuel Cell Demonstration with PV and Storage	Southern California Gas Company (SoCalGas)	\$ 490,000
73	58	74	Adaptive Camless Technology Demonstration	UCLA	\$ 2,250,000
73	66	4	Novel Efficient Combustion for Char broilers with Reduced Particulate Emissions	Institute of Gas Technology	\$ 258,000
73	68	14	Application of Swirl-Pattern Burner Head Technology (Rule 1111)	Beckett Gas, Inc.	\$ 791,992

### Technical Score Below 70% Cutoff (56 points):

n/a	53	78	Zero Emissions Multi-Family Swimming Pools Demonstration	Energx Controls Incorporated	\$ 1,075,850
n/a	51	67	Solvent Absorption and Electrochemical Reduction (SAER) Process Demonstration	RealEnergy	\$ 927,500
n/a	49	26	Green Street Asbestos Abatement & Mobility Improvements	City of Pasadena, Dept. of Public Works	\$ 1,480,950
n/a	49	64	Demonstration of Game Changer Technology Platform for Cost-effective Emissions Mitigation in Refineries and EJ Communities	T2M Global, LLC	\$ 4,989,975
n/a	47	32	C2P Consolidated Interstate Pipeline	Guillette & Cos., LLC	\$ 1,290,000
n/a	37	68	Landfill Gas Treatment and Upgrade Project	US Biogas	n/a

\* Proposals selected for award are highlighted in gray