



SoCalGas Innovative Kitchen Management Application Test and Learn Project

Project Overview

SoCalGas is introducing a test and learn project called “**SoCalGas Innovative Kitchen Management Application Test and Learn Project (SoCalGas K-MA Project)**” in support of its carbon footprint reduction and energy efficiency goals. The project focuses on proactive energy management and methane (CH₄) detection in the foodservice industry. The project implementation involves offering energy efficiency portfolio diversification through natural gas appliance upgrades, maintenance, and repairs. Knowledge gained and actions taken from the SoCalGas K-MA Project can help not only in fugitive CH₄ detection but also to motivate SoCalGas’ restaurant customers to better manage their energy use through understanding of their natural gas appliance efficiencies or inefficiencies through the utilization of novel sensor technology.* This project is paving the way to serve SoCalGas’ restaurant customers proactively and continuously strengthen SoCalGas’ commitment to safety.

Background

Current legislation includes Senate Bill (SB) 32, the California Global Warming Solutions Act of 2016. SB 32 “requires that there be a reduction in GHG emissions to 40 percent below the 1990 levels by 2030.” Another important statute is the Gas Leak Abatement OIR (R.15-01-008) which is “to carry out the intent of SB 1371 (Leno, 2014), the California Public Utilities Commission (CPUC) initiated this rulemaking to adopt rules and procedures for commission regulated pipeline facilities to minimize natural gas leaks to reduce hazards and to advance greenhouse gas reduction goals.”**

The CPUC conducted a study in the commercial foodservice and inpatient healthcare sectors. These industries represent the largest consumers of natural gas in California. The study concluded that incomplete combustion from gas-fired appliances was the second source of commercial building CH₄ emissions. Findings from the study suggest that “it may be possible to significantly reduce fugitive CH₄ emissions from the commercial foodservice subsector by identifying and repairing a relatively small number of problem areas. Identifying these problem areas may be driving poor performance, relatively quick and limited adjustments could be made to yield a sizeable methane emission reduction.”****

Sources:

*<https://www.energy.ca.gov/publications/2020/characterization-fugitive-methane-emissions-commercial-buildings-california>

**https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB1371

***<https://www.energy.ca.gov/2020publications/CEC-500-2020-035/CEC-500-2020-035.pdf>



How It All Works

Eligible customers will be placed into one of two groups, **Group A** or **Group B**.

STEPS AND REQUIREMENT	
GROUP A	GROUP B
Receive \$250 for signing up and agreeing to participate.	
No cost appliance natural gas detection and consumption sensors, flow meters, and gateway.	
No cost appliance diagnostic and analysis by a SoCalGas Commercial Service Technician.	Receive eligible Energy Efficiency direct install measures at no cost: aerators, pipe insulation, and low flow prerinse spray valves.
If a SoCalGas Technician repairs any of these natural gas appliances: gas range, fryer, charbroiler/grill underfired, convection oven, griddle, wok range, salamander, and storage or tankless water heater, the customer will be entitled to receive up to \$1,000 to pay for the parts replaced (See list replacement parts list on page 3).	N/A
If the customer purchases any of these natural gas appliances: fryer, convection oven, griddle, charbroiler/grill underfired, storage water heater, or tankless water heater, the customer is eligible to receive significant rebates (See rebate schedule on page 4).	
An additional \$250 will be awarded to eligible customers for setting and achieving energy savings goals within one year after the appliance natural gas detection and consumption sensors and gateway have been installed.	

Eligible restaurant owners, managers, or decision-makers will receive an email invitation from **ercfoodsvc@socalgas.com** confirming participation in the **SoCalGas K-MA Project**.

Eligible customers could receive \$250 by signing up and allowing the installation of five gas detection devices and one gateway at the facility associated to the eligible bill account (see Terms and Conditions).



Natural Gas Appliances Parts Replacement Funding

Making sure your appliances are working properly is vital to your restaurant's operation. SoCalGas' Commercial Service Technicians will be able to help you achieve this goal by providing services, such as burner adjustments, calibrations, and repairs, to your natural gas appliances.

Through the SoCalGas K-MA Project, eligible customers can receive up to \$1,000 funding for parts replaced. The offer applies to natural gas ranges, fryers, charbroiler/grill underfired, griddles, convection ovens, woks, salamanders, storage water heaters, and tankless water heaters.

The SoCalGas Commercial Service Technician will diagnose, and as necessary, replace and/or repair natural gas appliances mentioned above. The cost of the parts replaced will show on the customer's bill, then SoCalGas will pay for the cost of the parts replaced via a check sent to the customer. Any questions in regards to this project can be sent to ercfoodsvc@socalgas.com.

List of parts that are eligible for the \$1,000 offer:

- Appliance regulators
- Burner tubing
- Burner valves
- Burners
- Connectors
- Fryer targets
- Gas control valves
- Knee valves
- Manifolds
- Pilot tubing
- Quick disconnects
- Radiants
- Range top burner gaskets
- Shut off valves
- Thermostats

Repairing defective or inefficient appliances could help your business operate more efficiently, saving energy and money and reducing your environmental impact.



Natural Gas Appliance Rebates

Eligible customers can receive rebates for the following natural gas appliances through the Foodservice Rebate Program or Water Heating Rebate Program.

Foodservice Rebate Program

QUALIFYING NATURAL GAS APPLIANCES*	POINT-OF-SALE REBATE AMOUNT	INCREASED REBATE AMOUNTS
FRYER TIER 1	\$900 PER VAT	\$1,000 PER VAT
FRYER TIER 2	\$1,400 PER VAT	\$2,500 PER VAT
CONVECTION OVEN	\$700 PER CAVITY	\$1,500 PER CAVITY
GRIDDLE	\$200 PER FOOT	\$1,100 PER FOOT
UNDERFIRED BROILER	\$650 PER LINEAR FOOT	\$1,250 PER LINEAR FOOT
RACK OVEN	\$2,500 PER CAVITY	
STEAMER	\$2,000 PER CAVITY	
COMBINATION OVEN <15 PAN	\$1,500 PER OVEN	
COMBINATION OVEN 15-28 PAN	\$2,000 PER OVEN	
COMBINATION OVEN >28 PAN	\$3,000 PER OVEN	
PRERINSE SPRAY VALVE	\$20 PER PRSV	
DISHWASHER	\$250 PER UNIT	
CONVEYOR BROILER <20"	\$2,000 PER UNIT	
CONVEYOR BROILER 20-26"	\$2,500 PER UNIT	
CONVEYOR BROILER >26"	\$4,000 PER UNIT	
CONVEYOR OVEN	\$1,400 PER OVEN	

*For the full and most current list of qualifying appliances, download the Qualifying Products list at caenergywise.com/rebates. Funds are limited. Once funds allocated for this project are exhausted, customers will be eligible for rebates at the deemed rates.



Water Heating Rebate Program

QUALIFYING NATURAL GAS APPLIANCES*	SIZE/EFFICIENCY	REBATE AMOUNTS	INCREASED REBATE AMOUNTS**
STORAGE WATER HEATER - SMALL - 30 - 50 GALLON (MEDIUM DRAW)	SMLSTRG-GAS-LTE75KB-TUH-OP64UEF	\$2.00 - \$3.00 PER KBTUH	\$2.25 - \$3.25 PER KBTUH
STORAGE WATER HEATER - SMALL - 30 - 50 GALLON (HIGH DRAW)	SMLSTRG-GAS-LTE75KB-TUH-OP68UEF	\$3.00 - \$6.00 PER KBTUH	\$3.50 - \$6.50 PER KBTUH
STORAGE WATER HEATER - LARGE - TIER 1	LRGSTRG-GAS-GT75KB-TUH-OP83ET	\$2.00 PER KBTUH	\$2.50 PER KBTUH
STORAGE WATER HEATER - LARGE - TIER 2	LRGSTRG-GAS-GT75KB-TUH-OP90ET	\$8.00 PER KBTUH	\$8.00 PER KBTUH
STORAGE WATER HEATER - LARGE - TIER 3	LRGSTRG-GAS-GT75KB-TUH-OP96ET	\$8.00 PER KBTUH	\$12.00 PER KBTUH
TANKLESS WATER HEATER - SMALL - TIER 2	SMLINST-GAS-LT200KB-TUH-LT2G-MD-OP87UEF-40G	\$6.00 PER KBTUH	\$6.50 PER KBTUH
TANKLESS WATER HEATER - SMALL - TIER 1	SMLINST-GAS-LT200KB-TUH-LT2G-MD-OP81UEF-40G	\$3.20 PER KBTUH	\$5.00 PER KBTUH
TANKLESS WATER HEATER - MEDIUM	MEDINST-GAS-76TO200KBTUH-LT2G-OP90ET	\$6.00 PER KBTUH	\$6.50 PER KBTUH
TANKLESS WATER HEATER - LARGE - TIER 1	LRGINST-GAS-GTE200KB-TUH-LT2G-OP80ET	\$5.00 PER KBTUH	\$7.50 PER KBTUH
TANKLESS WATER HEATER - LARGE - TIER 2	LRGINST-GAS-GTE200KB-TUH-LT2G-OP90ET	\$8.00 PER KBTUH	\$10.75 PER KBTUH
TANKLESS WATER HEATER - TIER 3	LRGINST-GAS-GTE200KB-TUH-LT2G-OP96ET	\$8.00 PER KBTUH	\$11.25 PER KBTUH

*For the full and most current list of qualifying appliances, download the Qualifying Products list at caenergywise.com/rebates. Funds are limited. Once funds allocated for this project are exhausted, customers will be eligible for rebates at the deemed rates.

**Water heater rebates are based on type, size, and efficiency rating. Contact SoCalGas to determine specific rebate amount.

Financing Offers

On-Bill Financing: In conjunction with SoCalGas' energy efficiency rebate and incentive programs, qualified customers are offered zero-percent unsecured loans that can be used to finance the installation of eligible energy efficiency upgrades. Loan repayment is conveniently added to your SoCalGas bill. To learn more visit: socalgas.com/zerofinancing

GoGreen Financing: The small business financing program offers affordable options to help eligible businesses reduce their energy bills and shrink their environmental impact. This program eliminates upfront costs and is designed to meet the needs of customers that may not be able to participate in traditional loan programs. Finance can cover 100 percent of project costs, offers a broad list of qualifying measures, and may be used for non-energy upgrades. To learn more visit: gogreenfinancing.com/smallbusiness



Strategic Approach

The project can help determine the effectiveness of energy management tools, such as sensing devices, flow meters, and appliance energy management dashboards. Various incentives, such as cash offers, rebate incentives, parts replacement funding, financing opportunities, and potential to replace inefficient or outdated appliances, are being offered to eligible customers. The propensity model will evolve through time as data is collected from the project. Knowledge gained from this approach can be utilized to cultivate a robust project plan that will be proposed to the California Public Utilities Commission.

Innovative Digital Technologies

The project allows the development of an end-to-end solution for detecting CH₄ leaks and monitoring through a small autonomous sensor that will be mounted on usage natural gas appliances. A minimum of five sensors and one gateway will be placed on specified appliances in the kitchen.

Natural gas detection and consumption sensors: Every natural gas detection and consumption sensor includes advanced hardware-based encryption and trusted execution environments to ensure full data security. Natural gas detection and consumption sensors deployed in the project will include data on temperature, humidity, SO₂, CO₂, CH₄, air particulates, vibration, voltage, current, proximity and more.

Telecommunications: Advanced wireless technologies will be used to provide long-range access for single battery-powered devices and custom satellite modems to deliver remote data using new low earth orbiting satellite constellations. All communications for this project will use 256/128 bit AES end-to-end encryption from device to cloud and will utilize NB-IOT communications from a gateway device to the cloud for low-cost, reliable operation.

Cloud Services: Data storage and instrumentation will be collected through data processing, storage, and analytic engines. These engines will integrate data collection, instrumentation, machine learning, and artificial intelligence to deliver innovative results from sensor data for this project. In addition, innovative approaches to data security, governance, security, and privacy solutions should minimize data access threats while enabling new data monetization opportunities. The cloud services will be used to facilitate ease of data stream processing and integration with other business management and client billing systems. The development and hosting of the initial cloud-based instrumentation platform will be based on SoCalGas' participation in developing appropriate user interfaces and reporting processes.

Installation Services: For this project, each sensor within the kitchen incorporates low power device to device communications, such as Bluetooth or Zigbee, to communicate with a "gateway device" that will aggregate the data and forward it to cloud-based servers using 4G/5G cellular (NB-IOT/CAT-M) technologies. Using this methodology, only a single cellular account will be required per kitchen. The sensor devices themselves will be designed to be placed on appliances operating on their own internal batteries. The project will work with established local companies for the installation of these natural gas detection and consumption sensors within the kitchen and will offer a turnkey solution for initial service and ongoing maintenance.



Frequently Asked Questions

Q. Why is SoCalGas implementing this project?

A. The **SoCalGas K-MA Project** in support of SoCalGas' carbon footprint reduction and energy efficiency goals. The project will focus on proactive energy management and methane (CH₄) detection in the foodservice industry.

Q. Why am I receiving this invitation?

A. Your restaurant has been identified as potentially eligible to participate in this project based on the types of natural gas appliances in your restaurants, your repair history, and your natural gas usage.

Q. What do I need to do in order to participate after receiving the invitation?

A. Click the link in the email you were sent to accept the offer.

Q. What will happen after I accept the offer?

A. A SoCalGas employee or representative will contact you for details and next steps. Be ready to schedule a kitchen appliance diagnostic appointment for a SoCalGas Commercial Service Technician to visit your facility and schedule the installation of the natural gas detection and consumption sensors by a SoCalGas authorized representative.

Q. When will I receive the initial \$250?

A. You will receive the initial \$250 after you accept the terms and conditions, schedule a kitchen appliance diagnostic or an energy efficiency education and outreach appointment. Schedule the installation of five natural gas detection and consumption sensors and gateway, and must stay enrolled for at least six months after installation. You will receive your check within the six-month period.

Q. What is required to qualify and receive the additional \$250?

A. You must visit the dashboard associated with the natural gas detection and consumption sensors that were installed in the facility and/or bill account. Set up your therm savings goals monthly and your one-year goal. You will receive energy savings tips that will help you meet your monthly and annual savings goals. Follow your personalized energy savings tips. Achieve your monthly and annual goals. If you achieved these savings goals, SoCalGas will receive a notification through the dashboard informing us of your accomplishment. SoCalGas will process the check, and you will receive it in the mail. Please allow at least 3-6 months for check processing and mailing.

Q. Is SoCalGas and its authorized representatives sharing my information with anyone else?

A. No. SoCalGas is committed to protecting your personal information and does not share or sell information to unauthorized individuals, companies, or organizations. All such information is protected and in accordance with SoCalGas' information security and privacy policies.

Q. Can I opt out of this project at any time?

A. Yes. You can opt out of this project at any time. However, you may forfeit and no longer be qualified to receive some of the offers, such as the increased rebate amounts, \$250 sign up offer, the \$250 therm savings goal, parts replacement, and maintenance offers and rebates. You will still be eligible for the standard rebate amounts.



Frequently Asked Questions *Continued*

Q. If I have questions or would like to opt out of this project, what should I do?

A. Please call **562-803-7323** or email **ercfoodsvc@socalgas.com**, Attention: **SoCalGas K-MA Project**.

Q. What is fugitive methane (CH₄) emission?

A. Fugitive CH₄ emission is defined as losses, leaks, and other releases of CH₄ to the atmosphere that are associated with industries that are utilizing natural gas, oil, and coal.

Q. What is methane (CH₄)?

A. Methane is a chemical compound with the chemical formula CH₄. It is the main constituent of natural gas.

Q. What is incomplete combustion?

A. A reaction or process that entails only partial burning of a fuel. This may be due to a lack of oxygen or low temperature, preventing the complete chemical reaction. Carbon monoxide is produced as a byproduct from incomplete combustion of carbon.

Q. What do I do if I smell gas in the kitchen?

A. Call SoCalGas from a safe location at **1-800-427-2000** and request a Commercial Service Technician come to your location.

Q. What is a sensor?

A. A device that detects or measures a physical property and records, indicates, or otherwise responds to it. For this project, the installed natural gas detection and consumption sensors will detect and/or measure methane.

Q. What is a gateway?

A. A gateway is a node (router) in a computer network, a key stopping point for data on its way to or from other networks.

Q. What is a gas flow meter?

A. A gas meter is a specialized flow meter used to measure the volume of fuel gases, such as natural gas. Gas meters measure a defined volume, regardless of the pressurized quantity or quality of the gas flowing through the meter.

Q. How do I detect leaking natural gas?

A. Look for signs of a possible leak in your connections, cracked hoses, broken or missing safety straps and more. Seek manufacture instruction and your service providers direction on equipment category proper care and maintenance. Listen for any unusual noise. Smell distinctive, strong odor, which is often compared to rotten eggs or sulfur.

Q. What is GHG?

A. A greenhouse gas (GHG) is a gas that absorbs and emits radiant energy within the thermal infrared range, causing the greenhouse effect. The primary greenhouse gases in the Earth's atmosphere are water vapor, carbon dioxide, methane, nitrous oxide, and ozone.



Frequently Asked Questions *Continued*

Q. What is an Advanced Meter?

A. Advanced metering infrastructure (AMI) is an integrated system of smart meters, communications networks, and data management systems that enables two-way communication between utilities and customers.

Q. What is an Internet of Things (IoT)?

A. The Internet of Things describes the network of physical objects—aka “things”—that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the Internet.

Q. What is a dashboard?

A. A dashboard is a type of graphical user interface that often provides at-a-glance views of key performance indicators relevant to an objective or business process.

Q. What is a combustible gas indicator?

A. A combustible gas detector is a device used to detect the presence of combustible, flammable, toxic, and oxygen-depleting gases in an area.

Q. What is On-Bill financing?

A. On-bill financing allows SoCalGas to incur the cost of the clean energy upgrade, which is then repaid on the utility bill. To learn more visit: www.socalgas.com/zerofinancing

Q. What is GoGreen Financing?

A. GoGreen Financing is the public-facing platform of the California Hub for Energy Efficiency Financing. It offers affordable financing options to help business and nonprofits reduce their energy bill and shrink their carbon footprint. To learn more visit: www.gogreenfinancing.com/smallbusiness

Q. Where do I find the available SoCalGas rebates?

A. You can find rebate information by visiting socalgas.com/for-your-business. However, by enrolling in this project, **SoCalGas K-MA Project** you will receive substantial rebates on specified appliances.

Q. Who do I call if I have any questions about this project?

A. Please call SoCalGas Food Service Equipment Center at **562-803-7323** or email ercfoodsvc@socalgas.com, Attention: **SoCalGas K-MA Project**.

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