

Energy Efficiency

MULTIFAMILY PROGRAMS AND SERVICES 2020

SoCalGas Single Point of Contact Team



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SoCalGas Background

- Investor-owned utility of Sempra Energy
- Regulated by California Public Utilities Commission (CPUC)
- Service territory = Visalia, California to Mexican border
- SoCalGas is the nation's largest natural gas distribution utility, providing energy to 20.9 million consumers through 5.8 million meters in more than 500 communities.



SoCalGas Multifamily Offerings

Don't miss out on no-cost energy efficiency equipment, special rebates and customized incentive programs!

SoCalGas® recognizes how important it is for multifamily property owners and managers to be cost-conscious when considering building upgrades. We offer a suite of multifamily energy efficiency programs to help lower improvement costs and reduce energy use while making properties more profitable and sustainable.



Find out how to benefit from the programs SoCalGas offers just for apartment owners and managers.



Take advantage of zero percent financing available for qualifying energy efficient projects.

Through its dedicated account management team, SoCalGas helps customers receive a comprehensive overview of the many energy efficiency solutions available for their multifamily properties.

SoCalGas Multifamily Offerings

Thinking About Property Improvements? SoCalGas Can Help!

We Offer

DIRECT INSTALL



Direct install programs offering no-cost energy efficiency products including efficient shower heads, faucet aerators, smart thermostat, and controls for recirculation pumps on central water heating systems.

REBATES



Rebates of up to \$3,000 on individual qualifying energy-efficient equipment such as boilers, furnaces, storage tank water heaters, tankless water heaters, attic and wall insulation, pool heaters, smart thermostat controllers for boilers, and fireplace inserts. Rebates are available until Dec. 31, 2020, or until funding runs out. Terms and conditions apply.

BUILDING SOLUTIONS



Customized incentives for whole-building improvements. To start, SoCalGas conducts a free energy assessment for multifamily properties willing to install a variety of upgrades (including gas, electric and water measures) that result in a minimum 10% energy savings at the property. Incentives start at \$300 per apartment unit. Terms and conditions apply.

FINANCING

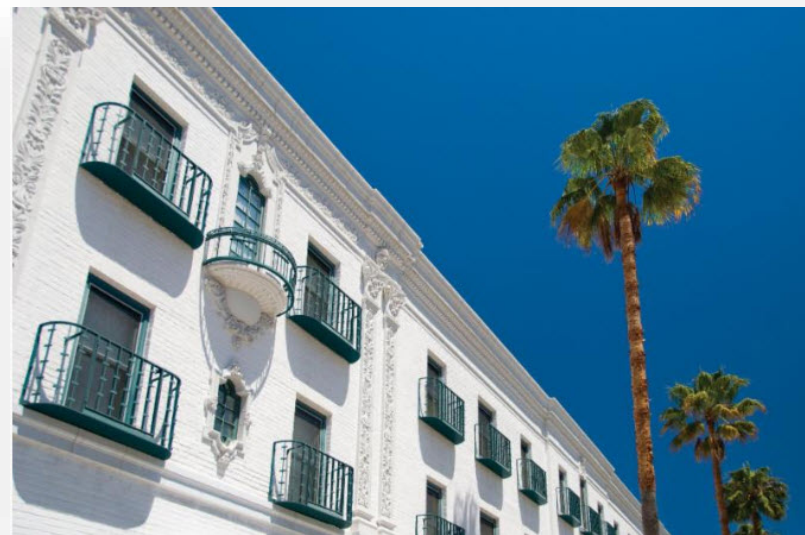


Zero percent loans available for qualifying energy-efficient equipment with simple credit approval terms. Offers interest-free financing for the purchase and installation of measures covered by SoCalGas energy efficiency programs. Allows customers to overcome cost barriers by providing financing and repayment of the loan directly on their gas bill.

SoCalGas Multifamily Energy Efficiency Rebates

- » The MFEER program offers cash incentive energy efficiency products in:
 - Apartment dwelling units
 - Common areas of apartments, condominium complexes, and mobile home parks

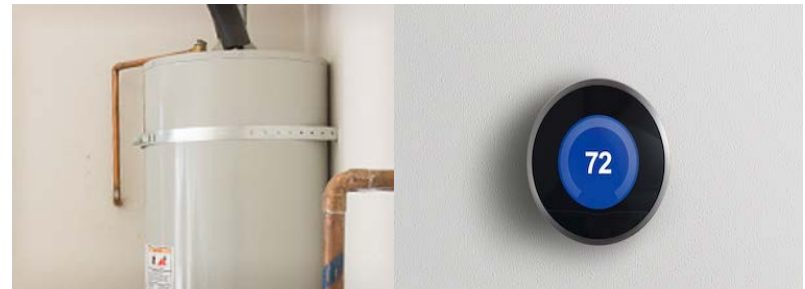
- » Property owners (and managers of existing residential multifamily complexes with two or more dwelling units may apply.



Multifamily Energy Efficiency Rebate (MFEER) Program

» Rebates on individual measures are available for qualifying:

- Boilers
- Controllers for boilers
- Water heaters
- Tank-less water heaters
- Furnaces
- Attic or wall insulation
- Smart Thermostats
- ENERGY STAR® certified dishwashers
- Rebates are available for pool heaters too!



SoCalGas Multifamily Whole Building Programs

Program Eligibility Requirements

- ☒ Natural gas service provided by SoCalGas.
- ☒ Owners of existing multifamily properties.
- ☒ Both market-rate and affordable housing properties are eligible.
- ☒ Property must have three or more dwelling units.
- ☒ Eligible properties are served on first-come, first-served basis.
- ☒ Must use licensed contractor where applicable to install program measures.
- ☒ Must commit and show proof of financial ability to see project completion.
- ☒ Upgrades must be started in 2020 and completion date must be approved by SoCalGas.
- ☒ May only begin work after a confirmation of reservation approval is received from SoCalGas.
- ☒ A minimum of three measures required to be eligible (one core measure minimum).
- ☒ Must install one major capital improvement minimum (referred to as a core measure).
- ☒ Other terms and conditions apply; please see application for full Terms and Conditions for complete Program requirements.

SoCalGas/LADWP Multifamily Whole Building Program

2020 SOCALGAS AND LADWP INCENTIVES

Gas Savings*	SoCalGas Incentive per apartment	Electric Savings	LADWP Incentive per apartment
5%	\$300	5%	\$200
7.5%	\$425	7.5%	\$300
10%	\$570	10%	\$425
12.5%	\$630	12.5%	\$575
15%	\$750	15%	\$750
20%	–	20%	\$950
25%	–	25%	\$1,175

SoCalGas Multifamily Whole Building Program

Energy Efficiency Incentives

The incentive amount corresponds to the level of energy efficiency achieved.

ENERGY SAVINGS ACHIEVED PER SITE*	INCENTIVE PER DWELLING UNIT**
5%	\$300
7.5%	\$425
10%	\$570
12.5%	\$630
15%	\$750

Program Contacts

Manager	Program	Phone
Laura Verduzco	Multifamily Energy Efficiency Programs	(562) 803-7326
Paul Kylo	SoCalGas Single Point of Contact for Multifamily Programs – ICF Consultant	(213) 312-1712
Savi Bassa	SoCalGas Single Point of Contact for Multifamily Programs – ICF Consultant	(619) 787-0736

Programs are funded by California utility customers and administered by Southern California Gas Company under the auspices of the California Public Utilities Commission. Rebates are available on a first-come, first-served basis, until program funds are depleted. Other terms and conditions apply.

Q&A



Innovation

MFEER WEBINAR 5/28/2020

About RHA

- » Richard Heath and Associates, Inc (RHA) is a consulting firm that has been a leader in energy efficiency for four decades.
- » Whole Building Multifamily Program Team
 - Daniel Galvez (Manager)
 - Fernando Ruvalcaba (Engineer)
 - Nicholas Casteloes (Engineer)
- » Program Implementors
 - Perform audits, calculations, health and safety checks, and generate reports

The Whole Building Multifamily Program

- » Applicable to all properties within SoCalGas territory

- » Diverse scope of work options
 - Water Heater Replacements
 - Pool and Spa upgrades
 - Lighting

- » Virtual Audits Available

- » Process simplified to only three steps

Eligible Properties

- » Properties in both SCG and LADWP territory are eligible for gas and electric incentives
- » Properties serviced by other electric utilities are only eligible for gas incentive

2020 SOCALGAS AND LADWP INCENTIVES			
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Common Energy Conservation Measures

» Gas

- Condensing Water Heaters
- Recirculation Pump Controls
- Boiler controllers
- Spa/Pool Heater upgrades
- Low-flow Measures

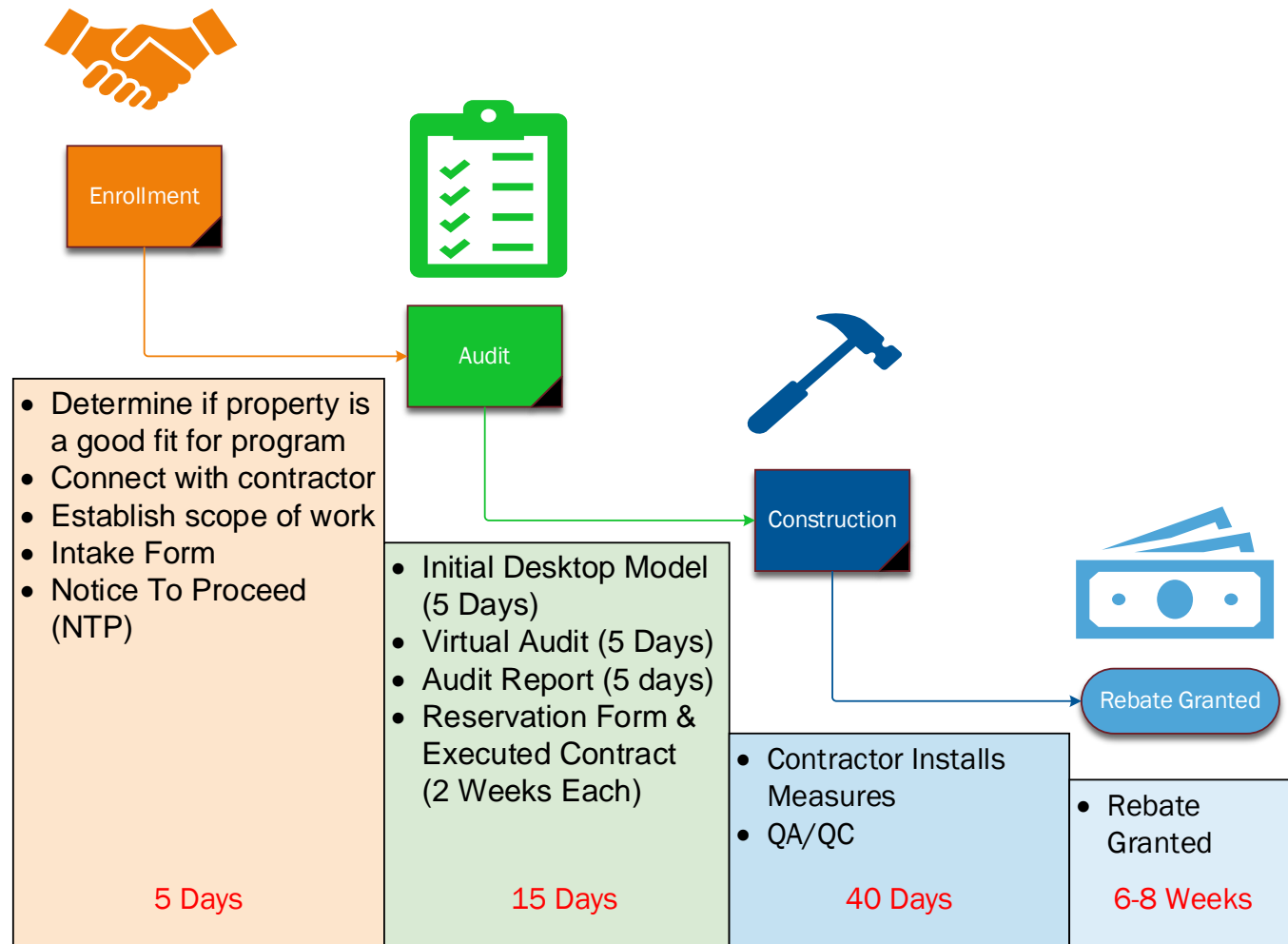
» Electric

- Lighting
- VSDs
- Smart T-stats
- Refrigerators

Virtual Audits

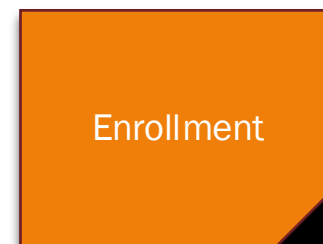
- » Takes place of initial site audit & others if SIP continues
- » Materials needed
 - Phone (With full charge)
 - Screwdriver
 - Measuring apparatus
- » Audits are conducted over the internet
 - Limits amount of people on site
 - Can be conducted by anyone (HOA president, maintenance etc.)
- » Ideal for SIP protocol

WBMF Process



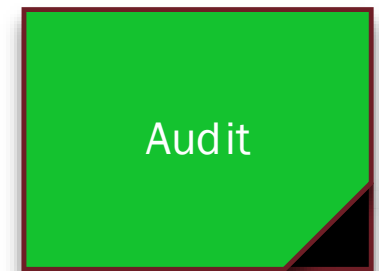
The Enrollment Process

- » Connect with a contractor
- » Establish a scope of work
 - Must include three gas savings measures minimum
 - Must include a core measure (Affects 75% of units)
 - DHW Boiler replacement (90% Thermal Efficiency or higher)
 - Gas fired space heating (90% AFUE or higher)
 - Envelope Improvements (windows, floor, attic, and wall insulation)
 - Non-core measures include but are not limited to;
 - Pool/spa boilers, showerheads/aerators, pipe insulation, controls, pump upgrades, smart thermostats, and appliances
- » Contractor will complete intake form
- » Sign a NTP form



The Audit Process

- » RHA conducts site visits
 - Need access to all equipment and a sample of each type of dwelling unit
 - Health and Safety inspection occurs at this stage
- » Virtual audits are also available
- » RHA models site using gathered data to estimate savings
- » RHA submits findings and estimations to SoCalGas® for approval
- » Once approved, a reservation form will be generated
 - 3-4 weeks to return
 - After two weeks we will request an executed contract



Construction and Closeout

- » Contractor installs selected measures
- » RHA QA/QC's measures
 - If any fails are found, the contractor will address them
- » RHA generates a closeout report and submits it to SoCalGas® for approval
- » Rebate is granted for the project



Example 1

» Measures Installed (Total Cost: \$1,331,290.00)

1. Water Heater Replacements
2. Steam Traps
3. Insulated Pipes
4. F&T Steam traps
5. Recirculation Pumps

» Savings

- 275,825 annual therms saved
 - \$347,539.50 monetary savings assumed \$1.26 per therm

» Incentive Received

- \$673,550.00

Example 2

» Measures Installed

1. Water Heater Replacement
2. Vinyl Windows
3. Energy Star Refrigerators

» Savings

- 631 Therms Saved
 - \$795.06 monetary savings assumed \$1.26 per therm
- 18,137 kWh saved
 - \$3627.40 monetary savings

» Incentive Received

- \$8,400.00

Example 3

» Measures currently being installed

1. Central Domestic Hot Water Heater Replacements
2. Spa Heater Replacement
3. Pipe Insulation

» Projected Savings

- 6005 Therms Saved
 - \$7566.30 monetary savings assumed \$1.26 per therm

» Incentive

- With the measures listed above, this project easily achieved the 5% minimum savings required

Q&A



Central Hot Water Systems for Multifamily Buildings Energy Use and Upgrading

Bateman Water Heating Engineering, Inc.

- » Scott has over 37-years experience with commercial hot water equipment and systems for multifamily buildings.
- » Bateman Water Heating Engineering provides Maintenance, Service, Repair, Troubleshooting, System Design, Consultation, Retrofit and Energy Upgrades for Central Recirculating Hot Water Systems.
- » Scott holds 4-Specialized Trade Licenses and Certifications with the state of California: C4-Boiler, C36-Plumbing, C10-Electrical and HAZ - Hazardous Substance Removal Certification.
- » He is a charter member with the following professional associations: American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE), American Society of Safety Engineers (ASSE) and The International Association of Plumbing and Mechanical Officials (I.A.P.M.O.)

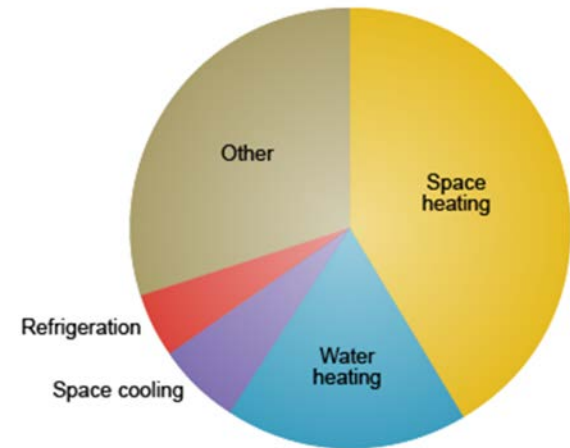
Established 1969 –Los Angeles, CA

1-323-254-4303

www.BatemanWaterHeating.com

Multifamily Energy Use Consumption by End Use

- » These percentages are based on “site” or “delivered” energy, which is the total Btu value of energy at the point when it enters the building. Multifamily dwellings have significant opportunities to increase efficiency, especially in the areas of **water heating**, space heating, and lighting, which collectively account for 72% of total site energy consumption (excluding common area loads such as pool heating) and landscaping, the main source of water consumption.



Data source: U.S. Energy Information Administration. 2012.

The 3-Conventional Multifamily Central Hot Water Equipment Types in Greater Los Angeles Area

- » 100-Gallon Commercial Water Heater
- » Copper-Fin Boiler and Hot Water Storage Tank
- » Semi-Instantaneous Copper-Fin Boiler

The Old Standard: 100-Gallon Commercial



Another Old Standard: Copper-Fin Boiler with Hot Water Storage Tank



60's to Mid 80's Era Copper-Fin Semi-Instantaneous Boiler



Keeping Residents Healthy and Safe

Keeping Tenants Healthy and Safe

- » Keep hot water temperature running at recommended safe settings



Temperature	Time to produce serious burn
120°F	More than 5 minutes
125°F	1-1/2 to 2 minutes
130°F	About 30 seconds
135°F	About 10 seconds
140°F	About 5 seconds
145°F	Less than 5 seconds
150°F	About 1-1/2 seconds
155°F	About 1 second

Settings on water heater thermostat are approximate

Source: Rheem Manufacturing Co
PO Box 244020, Montgomery, AL 36124

For safety, set water heater temperature at 120°F

For burns:

Immediately put burned area in large amount of clean water.

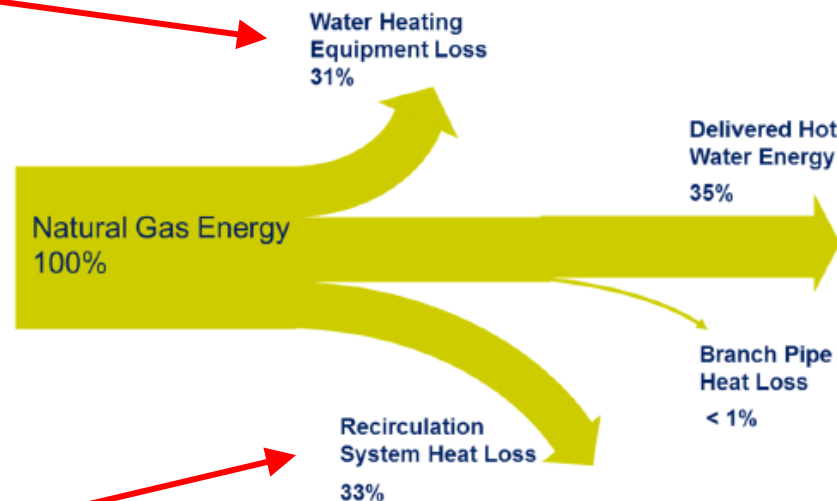
Untreated burns get worse ...
immediate water will stop progression of burn injury

- » (1) Temperature setting are critical – It's important to keep safe hot water temperatures. (2) Follow manufacturer recommended safety settings. (3) Proper commissioning is a best practice. (4) Lower temperatures also save energy and allow longer equipment life!

The Key Items for Improving Energy Efficiency

» Hot Water Equipment Efficiency

Figure 1: Average Energy Flows in Monitored Central DHW Systems



» Hot Water Piping Heat Loss Control

5-Key Items for Improving Energy Efficiency

- » Water heater and boiler efficiency **is still the most important component** to system efficiency *(best to upgrade to higher efficiency equipment when you can)*
- » **It's important to properly size replacement equipment and perform regular maintenance**, this will help reduce standby and short-cycling energy losses
- » **Control and monitoring devices are important** in reducing and maintaining reduction in energy use
- » **The key to energy savings is** to reduce supply and recirculation piping temperatures as much as possible
- » **Pipe insulation** keeps recirculation loop warm for an extended period **and reduce energy loss**

CHOICES TO CONSIDER WHEN REPLACING

- » **Research & budget** for replacement (types, prices & rebates)
- » **Have a game plan in place** with your contractor
- » **Be proactive and replace before the no hot water emergency** (check age of the equipment and incentives available)



Why Tankless?

Be Part of the Future Now

» Condensing High Efficiency Tankless for Central Hot Water Main Advantages

- Better energy efficiency that lowers your energy use up to 40%
- Lower carbon footprint that helps reduce the effects of climate change
- Reduced repair and maintenance costs
- Redundancy because you have more than just one hot water boiler or water heater
- Better warranties
- 20-year plus heater life expectancy
- Quality of water can impact durability of equipment
- Water conditioning should be considered
- If just five percent of the gas water heaters sold each year were Premium High Efficiency Tankless gas condensing models, the U.S. would avoid wasting \$25 million — and 17.2 million Therms of energy — each year,
- That's equivalent to taking almost 17,000 cars off the road

Before



- » A 26-unit condominium in West Los Angeles with the original 31-year old copper-fin semi-instantaneous boiler with an average of 4,001 - therm use per year. That 166.7 average therms per unit or 0.45 therms per day (44,989.3 Btus per day)

After



- » New high efficiency condensing tankless system now with an average of 2,391 - therm use per year. That's 99.6 average therms per unit or 0.27 therms per day (26,993 Btus per day)

Side by Side

Item	31- Year Old Central Hot Water Boiler per Mth	New Condensing Tankless per Mth	Difference
Average Therm Use per Mth	4,000	2,388	40% Avg Savings
The sum of the greenhouse gas emissions equivalent just from natural gas burned	21.2 Metric Tons of Carbon Dioxide or 51,980 of miles driven by an average passenger vehicle	12.7 Metric Tons of Carbon Dioxide or 31,032 of miles driven by an average passenger vehicle	A reduction of 8.5 Metric Tons of Carbon Dioxide or 20,948 miles less driven by an average passenger vehicle
Extra Bonus- Average Electrical Amp Hours	5.7 Amps	3.2 Amps Less now with intermittent operation	43% Avg Savings If running continuously

QUALITY CONTROL AND ENERGY CONTROL CHECKLIST

- » Check water temperatures
- » Check for water leaks
- » Look at your central hot water equipment
- » Listen for unusual sounds and vibrations
- » Be aware of odors; gas leaks or combustion exhaust
- » Check your utility bills for trends and averages
- » Keep flammables away from and out of hot water equipment areas
- » Keep corrosive material away from and out of hot water equipment areas
- » Have your hot water equipment on a proper repetitive maintenance schedule with a licensed commercial hot water equipment specialist

Tools for Property Owners and Managers

- » Benchmarking Energy Audits
- » Easy, Low Cost Energy Efficiency Tips- Lower your thermostat and insulate your pipes
- » Use the Incentives and Rebates and from Your Utility Company
- » Use the Special Financing Available from Your Utility Company
- » Be the Community Champions of Stewards Reducing the Effects of Climate Change
- » Don't Miss the Opportunity to be **Green** and **Sustainable** with your Building

Q&A



Contacts

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