

# Bay Area Multifamily Building Enhancements

Rebates & Free Consulting  
for Energy Savings



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MULTIFAMILY  
PROGRAM

# Agenda

- Bay Area Multifamily Building Enhancements
- What upgrades are covered?
- Free energy consulting for property owners
- Contractors & training opportunities
- Q&A

# Energy Upgrade California Multifamily

- Bay Area Multifamily Building Enhancements
- PG&E whole-building program
- PG&E Multifamily Energy Efficiency Rebates
- PG&E Energy Savings Assistance & Middle-Income Direct Install programs
- Energy Watch – local programs
- MCE Multifamily Energy Efficiency program
- California Solar Initiative

# Bay Area Regional Energy Network

- Collaboration of 9 counties
- Regional multifamily program led by StopWaste
- Free energy consulting provided by Association for Energy Affordability (AEA)



# Bay Area Multifamily Building Enhancements

## Cash Rebates

- Whole-building rebates at \$750 per dwelling unit
- In-unit and common area improvements eligible
- Choose your own contractors

## Free Energy Consulting

- Free energy usage analysis and site visit
- One-stop-shop to connect with incentives & programs

## Low-interest Financing

- Effectively brings interest rate down by half
- Open lender market; requires lender participation

# Bay Area Multifamily Building Enhancements

## Eligibility Criteria

- 5+ attached dwelling units
- Located in 9 county Bay Area
- PG&E service
- Rebate upgrade scope to be approved through free consulting
  - Must save 10% or more on whole building basis
  - Must install multiple improvements



# Get Started Today!

- Limited regional pool
  - 5,000 units in Bay Area
- First-come first served
- Construction deadline **December 2014**

# AEA

## Multifamily Energy Efficiency Experts

- A not-for-profit, mission-driven, technical services & training organization that has been at the forefront of increasing energy efficiency and resource conservation in multifamily buildings for the past 19 years.
- AEA has over 130 professional energy engineers, project managers, building scientists, trainers and technical consultants. 3 locations in NYC, 1 in CA.
- A large and diverse base of clients including utilities, federal, state and local housing agencies, local governments, the DOE, and over a thousand building owners, management companies and developers.





# AEA's 3 Primary Lines of Business

## Technical Services

- Full Service Energy Engineering, including: Energy Audits (ASHRAE Level I, II, and III), Energy Modeling & Building Simulations, Retrofit Design and Design Assistance, Energy & Water Benchmarking, Installation Specs, Bid Evaluations, Construction Management, Cx and RCx, Renewables
- Green Property Needs Assessments, LEED Consulting, GreenPoint Rating, HERS

## Training

- Building Performance Institute (BPI), Passive House, USGBC G|Pro, Air Barrier Association of America (ABBA), Energy Modeling, Weatherization Courses, Workforce Training

## Programs

- Implementers of Bay Area Multifamily Building Enhancements & MCE Multifamily Energy Efficiency Program
- Qualified Rater/Consultant on various other California and out-of-state programs

# Typical Enhancements

- HVAC
- Domestic Hot Water
- Enclosure
- Lighting
- Appliances
- Pools
- Other Enhancements:
  - Water
  - Renewable energy
  - Green building upgrades

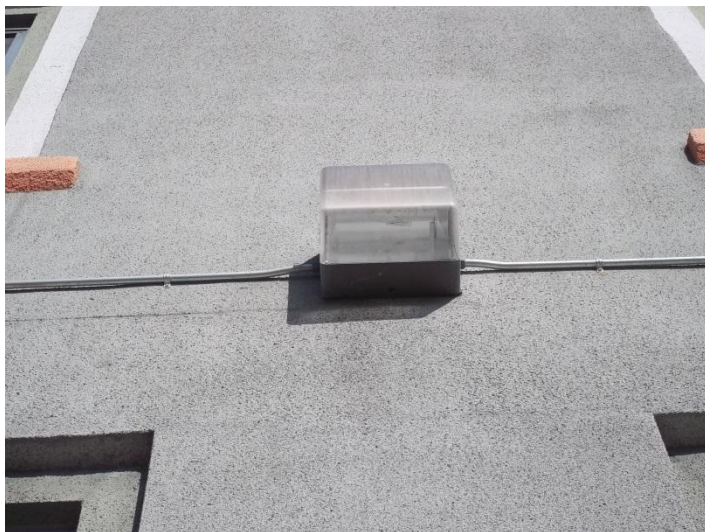
# Ventilation System Before



# Ventilation System After



# Lighting Before



# Lighting After



# DHW System Before



# DHW System After



# Distribution System Before



# Distribution System After



# Cold Water Booster System Before



# Cold Water Booster System After





# Wall Insulation Before

# Wall Insulation After



# Roof Insulation Before



# Roof Insulation After



Real Projects Saving 10% or more

# **SAMPLE UPGRADE SCOPES**

# Sample Upgrade Scope 1

Building Type	Garden-style	Climate Zone	12	Year Built	1960
Floor Area	6,084	Units	8	Stories	2
Improvements				Estimated % Savings	
<b>Wall Insulation</b> – Insulate Wall Stud Cavity with R-13 Insulation				7.3%	
<b>Appliances</b> – Replace Refrigerators w EStar				0.4%	
<b>Domestic Hot Water Heater</b> – Install 95% Efficient Gas Fired Storage Water Heater				5.9%	
<b>Total for All Improvements</b>				<b>13.3%</b>	

# Sample Upgrade Scope 2

Building Type	Garden-style	Climate Zone	3	Year Built	1986
Floor Area	110,796	Units	169	Stories	3
Improvements				Estimated % Savings	
<b>Windows</b> – Replace windows with double pane wood (Low E U-Factor = 0.350 SHGC = 0.4)				4.3%	
<b>Domestic Hot Water Heater</b> – Replace boilers with 95% efficient equipment				7.5%	
<b>Total for All Improvements</b>				<b>11.8%</b>	

# Sample Upgrade Scope 3

Building Type	High-rise	Climate Zone	3	Year Built	1990
Floor Area	23,598	Units	73	Stories	4
Improvements				Estimated % Savings	
Domestic Hot Water Heater – 94% Efficient Boiler				6.5%	
Heating Boiler – 94% Efficient Boiler Gas Fired				6.3%	
<b>Total for All Improvements</b>				<b>12.8%</b>	

# Sample Upgrade Scope 4

Building Type	High-rise	Climate Zone	3	Year Built	1980
Floor Area	84,663	Units	182	Stories	9
<b>Improvements</b>				<b>Estimated % Savings</b>	
<b>Roof Insulation</b> – 6” Concrete Deck – Interior Insulation = R-38				6.1	
<b>Heating Boiler</b> – Lochinvar Corp. KBN900 Gas Fired Efficiency = 0.950%				5.5%	
<b>Total for All Improvements</b>				<b>10.6%</b>	

# Choose the Right Scope for Your Project

## Project Profile

- 40 units
- 1960's
- Central DHW
- In Unit Furnaces
- No insulation
- Single-pane windows
- Old appliances
- Inefficient lighting

## Upgrade Scope 1

- Central DHW boiler replacement
- Added roof insulation
- Duct sealing

Savings = 12%

Rebate = \$30,000

## Upgrade Scope 2

- In-unit furnace replacement
- Window upgrade
- T-8's & LED lighting

Savings = 10%

Rebate = \$30,000

Sample scopes provided to illustrate functions of rebate structure; not indicative of actual scopes





Bay Area Multifamily Building Enhancements

**FREE CONSULTING SERVICES**

# Free Energy Consulting Services

- Discuss your project
  - Collect basic building information, discuss any upgrades Participant is already considering, determine most appropriate program/s to participate in
- Referrals to appropriate programs
- Perform preliminary energy model to determine program eligibility and preliminary scope of work

# Free Energy Consulting Services

- Pre-installation site visit to verify existing conditions and identify any additional energy improvement opportunities
  - interview key building staff
  - sampling of apartments and all common areas
  - minimal performance diagnostics
  - combustion safety testing
- Revise energy model and savings projections
- Contact Participant with a final recommended scope of work (Rebate Reservation Form)

# Free Energy Consulting Services

- Assists during procurement stage
  - provide minimum performance specifications
  - provide recommended contractor qualifications
- 50% and 100% construction verification
  - verify that all equipment is/was installed properly
  - any necessary test-out of combustion appliances
- Track projects from initial intake through project completion

Program Referrals

# **OTHER MULTIFAMILY ENERGY PROGRAMS**

# Program Referral

- PG&E whole-building program
- PG&E Multifamily Energy Efficiency Rebates
- PG&E Energy Savings Assistance
- Local Energy Watch
- California Solar Initiative



# PG&E Whole Building Rebate

## Timing

- Currently in pilot – closed to new applicants
- Full program in 2014

## Eligibility

- 5+ attached units
- PG&E gas + electric service

## Contractor Requirements

- Assessment by participating rater
- Installation by participating contractor(s)

## Assessment Rebate

Number of Units	Market Rate	Affordable Housing
5-30 Units	\$2,500	\$5,000
31-100 Units	\$5,000	\$10,000
100+ Units <sup>(1)</sup>	\$10 per unit	\$20 per unit

Note (1): For every unit over 100, a per unit, incremental incentive will be added to the fixed incentive amount.

## Installation Rebate

Post-Construction Modeled Savings	\$ per unit
10-14.5%	\$600
15-19.5%	\$750
20-24.5%	\$900
25-29.5%	\$1,050
30-34.5%	\$1,200
35-39.5%	\$1,350
> 40%	\$1,500



# Multifamily Properties Program

## Energy Efficiency Rebate Catalog

### Appliances

Rebate Code	Description	Rebate/Unit Measure
B345	<b>High-Efficiency Clothes Washer</b> CEE Tier 3 or higher, MEF of 2.4 or greater, WF of 4.0 or less	\$50/unit
RFEE	<b>High-Efficiency Refrigerator</b> CEE Tier 3 Mid- or full-sized refrigerators 7.75 cubic feet and above	\$75/unit
HA58	<b>ENERGY STAR® High-Efficiency Gas Storage Water Heater</b> EF of 0.67 or greater	\$200/unit
HA47	<b>ENERGY STAR Electric Heat Pump Water Heater</b> EF of 2.0 or greater	\$500/unit

[www.pge.com/multifamily](http://www.pge.com/multifamily)





# Energy Savings Assistance Program

## Improvements

- CFLs
- Caulking
- Showerheads
- Minor home repair
- Refrigerators
- Furnaces
- Water heaters
- Energy savings tips

Household Size	Income Qualification
1	22,980
2	31,020
3	39,060
4	47,100
5	55,140
6	63,180
7	71,220
8	79,260

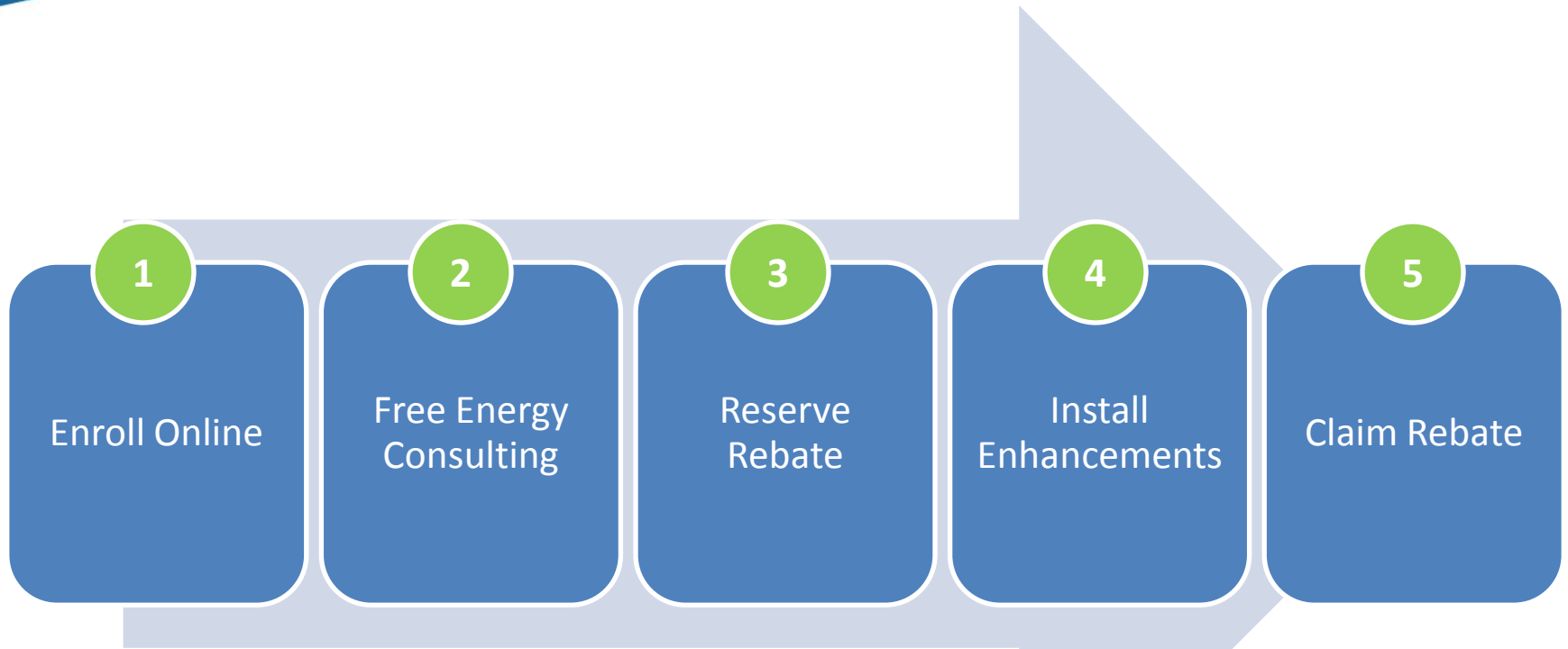
<sup>2</sup>Effective June 1, 2013 to May 31, 2014.

# Example Financing Options

## After rebates, finance remaining balance

- On-Bill Financing (OBF)
- On-Bill Repayment (OBR) *pilot for master metered AH*
- Pay As You Save (PAYS)
- Property Assessed Clean Energy (PACE)
- Bay Area low-interest bank loan pilot

# 5 Simple Steps



or in-person  
today!

# Project Recruitment & Outreach

- County Workshops
  - Sonoma County: Monday Nov. 4
  - North Coast Builders Exchange
  - 1030 Apollo Way, Santa Rosa
- Letters from Counties & Cities
- Local Associations
- Contractors, Building Professionals

# Benefits to Property Owners

- Reduce operating costs
  - Save money on utility bills
  - Save money on operation and maintenance costs
- Increase tenant satisfaction & reduce turnover
  - Improved tenant comfort & utility savings
- Enhance value of property
  - Modernize property features
- Access rebates, services, and financing

# Contractor Training

- Building Performance Institute
- Multifamily-specific contractors
  - General Contractors
  - Central Systems
  - Specialty Trades
- Date TBD (likely early December and in 2014)
- Location TBD (likely Emeryville for first)

# Questions?

[Multifamily.EnergyUpgradeCA.org](http://Multifamily.EnergyUpgradeCA.org)

[multifamily@BayREN.org](mailto:multifamily@BayREN.org)