Objectives

1. Review ordinance
2. Receive input on audit reporting tools
3. Creating on-ramps to efficiency programs
4. Share best practices
### Agenda

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>BESO Overview</td>
<td>10 min</td>
</tr>
<tr>
<td>Multifamily Grant Overview</td>
<td>15 min</td>
</tr>
<tr>
<td>Asset Score Presentation</td>
<td>15 min</td>
</tr>
<tr>
<td><strong>Discussion: Audit Tools</strong></td>
<td>10 min</td>
</tr>
<tr>
<td>Upgrade Programs: BAMBE &amp; EBEW</td>
<td>20 min</td>
</tr>
<tr>
<td><strong>Discussion: Best Practices</strong></td>
<td>10 min</td>
</tr>
<tr>
<td>Closing Remarks</td>
<td>10 min</td>
</tr>
</tbody>
</table>
Began in 2015, to reduce building GHGs
Time of sale & date certain phase-in
Assessments completed:
  • 873 Homes
  • 42 Commercial/Mixed Use
  • 46 Multifamily
Goal Motivate owners to complete upgrades & take advantage of available programs and rebates:

Bay Area Multifamily Building Enhancements
-East Bay Energy Watch
-Your Energy Manager
Phase In Schedule

<table>
<thead>
<tr>
<th>Building Size (sq ft)</th>
<th>Compliance Deadline</th>
<th>Reporting Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>50,000 or more</td>
<td>7/1/2018</td>
<td>Energy Assessment every 5 years AND Annual Benchmarking Report through Energy Star Portfolio Manager</td>
</tr>
<tr>
<td>25,000-49,999</td>
<td>7/1/2019</td>
<td></td>
</tr>
<tr>
<td>15,000-24,999</td>
<td>7/1/2020</td>
<td>Energy Assessment every 10 years. If building sells prior to this deadline, they must comply at Time of Sale.</td>
</tr>
<tr>
<td>5,000-14,999</td>
<td>7/1/2021</td>
<td></td>
</tr>
<tr>
<td>&lt;5,000</td>
<td>7/1/2022</td>
<td></td>
</tr>
</tbody>
</table>

Approximate Building Count

<table>
<thead>
<tr>
<th>Building Use Type</th>
<th>Phase I (2018)</th>
<th>Phase 2 (2019)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>70</td>
<td>120</td>
</tr>
<tr>
<td>Multifamily</td>
<td>70</td>
<td>110</td>
</tr>
<tr>
<td>Mixed Use</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>260</td>
</tr>
</tbody>
</table>
# Assessment Requirements

<table>
<thead>
<tr>
<th>Use Type</th>
<th>Gross Floor Area (ft(^2))</th>
<th>Required Energy Assessment*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial or Predominant Commercial</td>
<td>50,000 and above</td>
<td>ASHRAE Level 2</td>
</tr>
<tr>
<td></td>
<td>25,000 – 49,999</td>
<td>ASHRAE Level 1</td>
</tr>
<tr>
<td>Multifamily or Predominant Multifamily</td>
<td>50,000 and above</td>
<td>ASHRAE Level 2</td>
</tr>
<tr>
<td></td>
<td>25,000 – 49,999</td>
<td>ASHRAE Level 1</td>
</tr>
<tr>
<td>Mixed Use</td>
<td>10,000 and above</td>
<td>Commercial AND Multifamily - ASHRAE Level 1 or 2 depending on square footage of use type (coordinate submission)</td>
</tr>
</tbody>
</table>

* East Bay Energy Watch Lighting Audit required for Commercial Spaces. Covered Buildings List will pre-identify requirement based on eligibility.

- Definition of predominate use type: if other use type < 20% of GFA or <5000 ft\(^2\)
- Mixed Use: Both building use types ≥ 20% gross floor area and >5,000 ft\(^2\)
- Complete Assessment Requirements Chart
Energy Report Requirements

Report Contents:

- Verification of property details
- Estimated costs savings of cost-effective improvements (SPP/NPV analysis)
- Submission of Asset score template (for commercial)
- Building Energy Score (if applicable)
- Benchmarking summary (if complete)
- Full list of requirements in admin regulations on website

Multifamily: sample 1 of 7 for every unit type  
Commercial: rooftop solar potential analysis
BENCHMARKING OVERVIEW

BERKELEY BUILDING ID ON PORTFOLIO MANAGER

1947 Center St.
Portfolio Manager Property ID: 1562857
Berkeley Building ID: XXXX
Year Built: 1947

ANNUAL SUBMISSION THROUGH DATA REQUEST LINK

AB802:

- State required benchmarking submission for 50,000+ ft² buildings
- Obtaining aggregated data
PG&E AB802 Portal

Map multiple meters to a building
Used for buildings >3 electric meters
<3 meters of either fuel type, need to use PG&E Web Services Data Release

Steps:
1. Add a building to the portal and provide ownership documentation
2. Map Meters to building
3. Create the connection in Portfolio Manager
Ordinance Deferrals

Energy Assessment Reporting Cycle Deferrals:
- New or Planned Construction (less than 10 years old)
- Verified Benchmarking Score Deferral – score ≥ 80 on Portfolio Manager
- Low Occupancy Deferral – operating less than 24 hours/week
- High Performance Exemption – certified by a qualified green rating system

Verified multi-measure improvements documenting 10% energy savings

Note: these buildings are still required to benchmark
### Assessment Tools

**Current Spreadsheet**

<table>
<thead>
<tr>
<th>Date</th>
<th>9/26/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Energy Assessor Company</td>
<td>Energy Resources Integration, LLC</td>
</tr>
<tr>
<td>Registered Energy Assessor Name</td>
<td>Ethan Clifford</td>
</tr>
<tr>
<td>Primary Building Address (include city, state, &amp; zip code)</td>
<td>500 Bearden Way, Berkeley, CA 94720</td>
</tr>
<tr>
<td>Building Name (optional)</td>
<td>500 Bearden Way</td>
</tr>
<tr>
<td>Number of Residential Dwelling Units</td>
<td>8</td>
</tr>
<tr>
<td>BESO Building Use Classification (multifamily, commercial), or mixed use</td>
<td>Mixed Use</td>
</tr>
<tr>
<td>Gross Floor Area (sq. ft.)</td>
<td>Medium (9,250,000 sq ft)</td>
</tr>
<tr>
<td>Multifamily Gross Floor Area (sq. ft.)</td>
<td>1,260</td>
</tr>
<tr>
<td>Commercial Gross Floor Area (sq. ft.)</td>
<td>1,260</td>
</tr>
<tr>
<td>Conditioned Floor Area (sq. ft.) (if completing different from Gross Floor Area)</td>
<td>N/A</td>
</tr>
<tr>
<td>Assessment Type (OSHPAD Level 1 or 2)</td>
<td>N/A</td>
</tr>
<tr>
<td>Mixed Use Buildings Only - Assessment Category (multifamily, commercial)</td>
<td>Commercial</td>
</tr>
<tr>
<td>Assessment Software/Version (if applicable)</td>
<td>N/A</td>
</tr>
<tr>
<td>Assessment Cost</td>
<td>$1,799</td>
</tr>
</tbody>
</table>

**Multi-family tool**

Upcoming: Product of CEC grant

**Commercial Tool**

[Image of commercial tool]
StopWaste/Energy Innovation Challenge Proposal:  
Catalyzing Multifamily Building Upgrades

Executive Summary

StopWaste/Energy Council with primary consulting support from the Association for Energy Affordability (AEA) and Build It Green (BIG), is proposing a project for the Energy Innovation Challenge Grant focused on “Accelerating Multifamily Building Upgrades.” Key partners are the Cities of Berkeley, Hayward and Oakland, and UtilityScore. This proposal advances key strategies connected to the Existing Buildings Energy Efficient Action Plan (EBEE Action Plan) specific to the multifamily sector, supports the implementation of SB 350 and the Low-income Barriers Study, and provides foundational support for the implementation of AB 802 in Bay Area jurisdictions.

There is an opportunity and critical need to realize the significant savings embedded in the multifamily sector. There are more than 2.4 million existing multifamily dwelling units in California, which represents 23 percent of California total housing units. In addition, according to the Low-Income Barriers Study (CEC 2016) over 47% of low-income residents in California live in multifamily units. If 25 percent of the state’s MF units were upgraded to improve energy performance by 20 percent, it would reduce annual energy consumption by 437,860 megawatt-hours (MWh) of electricity and 35 million therms of natural gas. Avoided greenhouse gas emissions would be 593,528 MTCO2E annually.

Existing approaches, resources and incentive mechanisms alone will not enable the market to realize the potential of multifamily energy savings. This project will accelerate multifamily building upgrades by: 1. enabling broader consideration of multifamily energy assessment ordinances; 2. ensuring that AB 802 benchmarking and disclosure is feasible in the multifamily sector; and 3. leveraging market-based mechanisms for building energy transparency and financing.

Proposed Scope

1. Multifamily Assessment Policies

This project will address barriers to including multifamily buildings in assessment policies with the development of two key elements: a low-cost multifamily property assessment tool; and a rental housing potential study.

- Develop low-cost and streamlined standardized property assessment protocol and evaluate EnergyPro Lite’s and DOE’s Asset Score for use in mandatory policies
- Assist the City of Berkeley in implementing the multifamily portion of its Berkeley Energy Savings Ordinance (BESO), which a building assessment at time-of-sale.
- Support the Cities of Hayward and Oakland in evaluating and piloting assessment and disclosure policies for multifamily properties, which could include time-of-rental-inspection or date certain trigger events.
- Develop a potential study for rental housing policies, such as the City of Boulder’s SmartRegs that would investigate the opportunity for local governments to adopt policies triggered by the time of rental inspection.
2. **AB 802 implementation and benchmarking assistance**

Currently, there is no consistent delivery of data from utilities that would enable local governments to implement and verify the effectiveness of their programs and policies. Local Governments have yet to see data promised under original intent of AB 802, and there is no determination on the exact data needs and format to support local jurisdictions in their policy implementation in multifamily housing.

- Provide benchmarking assistance to Bay Area property owners for early adoption of AB 802
- Develop recommendations for Energy Data Request Portal (EDRP) integration to ensure that AB 802 works effectively in the multifamily sector.
- Develop benchmarking protocol for multifamily and mixed use buildings in California, to allow more meaningful comparison of among buildings.

3. **Market-Based Mechanisms**

Getting to scale in the multifamily sector will require a complementary suite of strategies. Even when assessment tools and energy usage data are readily available, not all local governments will be willing and able to adopt policies. The MPT will leverage two additional market drivers to increase the demand for building upgrades: driving tenant demand through transparency and financing.

- Compare Utility Score with EProLite, DOE Asset Score and actual utility bill data to determine whether publicly available information can reduce the need for an assessor visit a property.
- Update GreenPoint Rated, the predominant green building certification program for multifamily buildings in California, to include simplified building assessment process.
- Conduct an assessment of 3rd-party apartment rental platforms and recommend steps toward inserting energy efficiency data into unit listings.
- Conduct outreach to housing finance entities and recommend opportunities for coordination

4. **Stakeholder Engagement/Disseminate Results**

The rental inspection potential study, other policy recommendations and tools will be shared through the BayREN Residential Energy Assessment and Disclosure working group, the PG&E Codes & Standards program, the Statewide Energy Efficiency Collaborative, the LGSEC and Green Cities California networks, and the DOE SEED Collaborative. StopWaste will also engage the Multifamily Home Energy Retrofit Coordination Committee (MF HERCC) - a collaborative of utilities, local governments and energy experts that developed consensus recommendations for multifamily building retrofit programs. The original 2011 recommendations were widely adopted and referenced by the CPUC in its energy efficiency proceedings. StopWaste will update the MF HERCC recommendations to include the simplified building assessment process, AB 802 implementation findings, and market scalability recommendations.
Low-Cost Assessment Tool Analysis
January 22nd, 2018
Objectives
Presentation Objectives

• Overview of Low-Cost Assessment Tool (LCAT) - Grant Strategy

• Comparison of Potential Low-Cost Assessment Tools
  
  • EnergyPro Lite (EPL)
  
  • EZ Retrofit
  
  • Department of Energy (DOE) Asset Score

• Learning from BESO Assessors
Grant Strategy

• Creating/adopting a Low-Cost Assessment Tool (LCAT) is one of the key strategies of a CEC Multifamily Grant focused on:
  • accelerating multifamily building upgrades,
  • implementing SB 350, AB 758
  • providing foundational support for the execution of AB 802.
Criteria for LCAT Comparison

• Format of platform (web-based, etc.)
• Developing entity
• Maintenance and user support
• Supported building stock (commercial, mixed-use, multifamily)
• Intended audience
• Accessibility/user friendliness
• Required inputs
• Cost
• Actionable measures
• Data analytics/output/reporting
• Time required for data input
• Accuracy (compared to actual energy use)
• Ability to model renewables
<table>
<thead>
<tr>
<th><strong>Summary</strong></th>
<th>DOE Asset Score</th>
<th>E3 Briefing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software tool created by StopWaste and EnergySoft that uses streamlined data entry API on the EnergyPlus HCD. It assesses the physical and structural energy efficiency of commercial and multifamily residential buildings. Developed by the U.S. Department of Energy and the Pacific Northwest National Laboratory.</td>
<td>National standardized tool for assessing the physical and structural energy efficiency of commercial and multifamily residential buildings.</td>
<td>Excel-based audit tool developed by Stewards of Affordable Housing for the Future (SAHF), in coordination with ICF International and Bright Power.</td>
</tr>
</tbody>
</table>

| **Accessibility** | Web download, installed on workstation, licensed by StopWaste. | Web based | Micro-enable Excel workbook available upon request of SAHF |

| **User Friendliness** | Moderate (knowledge of building characteristics required). Requires exterior excel calculations for lighting and some ECMS. | Moderately (website prompts user to relevant data entry, but knowledge of building characteristics required). | Moderately (knowledge of building characteristics required). Good user guide available in addition to checklist. Requires exterior calculations if user wishes to input any ECMS that are not automatically captured by the tool. |

| **Required inputs** | User entered building characteristics. | General building and systems data. | General building data, utility data, building systems specs. |

| **Data Analytics/output** | Overall baseline energy use, plus predicted energy savings per measure (the 10% savings over baseline). | Scenario-based tool to influence behavior. | Cost evaluation of competing efficiency retrofit measures. |

| **Actionable measures** | Directly models how much energy retrofit will save. | Provides general category recommendations. | Provides thorough review of costs savings involved with retrofit. |

| **Findings** | | | |

| | Customisable accounts for more variables and onsite specifics. | Comparison tool to influence behavior. | Provides suggested measures for each building, based on user input data. Also allows more advanced users to input their own measures and predicted savings, but these must be calculated outside of the tool. |

| | Disadvantages: 1. Makes some geometry assumptions (floor, ceiling, windows) based on user entered wall areas and conditioned square footage. | | Provides recommended equipment specs and costs estimates within tool. |

| | Software only provides energy savings, but not financial analysis. 2. Does not allow user to model the impact of renewable systems. 3. Requires more user knowledge than other tools reviewed for the study, although defaults are available for many system types if the user does not have exact equipment into. | Disadvantages: 1. For amount of time for data entry, results are not substantive for in-depth energy evaluation. 2. Does not allow user to model the impact of renewable systems. | Provides simple default values for most systems, while allowing override options for more advanced users. |

| | Disadvantages: 1. Allows for actual energy usage to be put in for benchmarking, however unclear how this is incorporated in final analysis. 2. Makes geometry assumptions based on total gross sq ft, ceiling height, and number of stories. 3. Potential for inadequate user support, given the tool's design and platform; unknown frequency of updates or availability of support staff if errors are found. 4. Does not allow user to model the impact of renewable systems. | | Disadvantages: 1. High efficiency air source heat pump w/ programmable thermostat. 2. High Efficiency Indirect Gas Storage Tank w/ Insulated Jacket P-9 & Pipe Insulation R-5. 3. Lighting (exterior and interior, controls recommendations). 4. Demand Control Pump for Existing Domestic Hot Water Irrigation Pump. 5. Duct Sealing. |

| | | | Reporting values: Annual kWh, Annual THM, Total Initial Cost, Cost Savings, Payback Year. |

| **Baseline Energy Use** | 27.81 kWh/ft² | 35.04 kWh/ft² | 38.19 kWh/ft² |

| **Time Duration for Data Input** | Medium | Long | Short |

| **ECM Comparison** | ECM's Developed by Assessor. | ECM's Generated by Tool. | ECM's Generated by Tool. |


| | Low Flow Aerators & Showers | Reporting Values: energy savings [Low, medium, high] & cost [x, y, z, $]. | Lighting (exterior and interior, controls recommendations). |

| | Ultralow Efficiency Toilets | Demand Control Pump for Existing Domestic Hot Water Irrigation Pump | Duct Sealing. |

| | | | Reporting values: Annual kWh, Annual THM, Total Initial Cost, Cost Savings, Payback Year. |

---

2 Actual usage, 12 months ending 10/31/17 – 32.76 kWh/ft².
Discussion

• Missing and/or additional criteria for comparison of assessment tools?

• What assessment tools are you currently using?
  • Advantages
  • Disadvantages

• What are the primary issues/pain points in the auditing process?
  • Could a standardized tool help reduce any of these pain points?
What is Asset Score?

Asset Score evaluates the as-built physical characteristics (envelope, HVAC, lighting, service hot water) of a building and its overall energy efficiency, independent of occupancy and operational choices.

ENERGY STAR benchmarks the overall building performance against peers.
Asset Score Platform

- **Preview**
  - 7 Datapoints
  - Bulk building import

- **Full Report**
  - Modeling
  - Asset Score (1-10)
  - Report

- **City Reporting Template**
  - ASHRAE Level 2 Inputs
  - Report directly to City dashboard
How Asset Score Works

Asset Score runs an energy simulation using EnergyPlus through OpenStudio. The simulation normalizes for building operations, occupancy and tenant behavior. Users enter building characteristics through a web interface, which supports mobile devices. A standard Asset Score report is then generated.
### Asset Score Report: About upgrades

#### How to Save Energy?

<table>
<thead>
<tr>
<th>Building Envelope</th>
<th>Energy Savings</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add roof insulation in Office Block</td>
<td>High</td>
<td>$ - $$</td>
</tr>
<tr>
<td>Install high performance triple pane windows in Office Block</td>
<td>High</td>
<td>$$ - $$$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interior Lighting</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade T8 fluorescent lighting in Office Block with LED lighting</td>
<td>Medium</td>
<td>$$</td>
</tr>
<tr>
<td>Add daylighting controls in Office Block</td>
<td>Low</td>
<td>$$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HVAC Systems</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Add air-side economizer in Office Block</td>
<td>Medium</td>
<td>$$ - $$</td>
</tr>
<tr>
<td>Implement demand controlled ventilation (DCV) in Office Block</td>
<td>Medium</td>
<td>$$</td>
</tr>
<tr>
<td>Add variable frequency drive to supply fans in Office Block</td>
<td>Medium</td>
<td>$$</td>
</tr>
</tbody>
</table>

### What is modeled?

#### Current Building
- **Geometry**
  - Above Ground: 2 floors
  - Below Ground: 0 floors
  - Floor-to-Floor Height: 14.00 ft
  - Floor-to-Ceiling Height: 9.00 ft
  - Orientation: 0.0° from North
  - Use Type: Office

- **Surface**
  - Wall Type: Brick/Stone on masonry
  - Wall U-value: Estimated
  - Window Framing Type: Metal
  - Window Glass Type: Single Pane
  - Window Gas Fill Type: None
  - Window Layout: Continuous
There is More: Introducing “Audit Template”

Improve the current audit data reporting process by:
- Standardizing inputs and outputs
- Automating error checking
- Verifying required fields

Other advantages include:
- Seamless data transfer to other tools
- Easy access to previously entered audit reports
- Easy sharing and transferring building records
- Obtaining Asset Score Report
How Audit Template Works

Audit Template

- Input Mode
- Database
  - CSV Output
  - PDF Output
  - BSXML Output
- City Dashboard
  - BSXML
  - SEED Or Other Tools

Auditors
1. Choose City Template
2. Perform Audit
3. Submit

City Admins
- Mark Compliance
- Download Reports
- Track Progress
The Grid view shows individual buildings at a higher level and allows you to add, modify, and view individual buildings. If you wish to work with multiple buildings at once, use the List view.
Audit Template Inputs

One cannot submit before completing all required fields.

- ASHRAE Level 2 (SPC 211) as the basic template.
- Includes additional data fields from NYC, San Francisco (SF), and Atlanta.
- Currently, all ASHRAE Level 2 fields are displayed even if they are not required by cities.
Facility Description

- Building Characteristics
- Building Location Specifications
- Use Types
- Construction
- Lighting
- HVAC
- Service Hot Water System
- Operations
- Process Loads

Please review each section of the forms. Items marked with a ☐ correspond to ASHRAE Level II inputs, and items marked with a ✇ correspond to city inputs. A ✇ indicates a field that is required for city reporting.

Click the Save button for each section to save your data. You may lose information if you leave these reporting pages without saving.
### Energy Savings Opportunities

Packages should only include measures that are affecting the same system.

<table>
<thead>
<tr>
<th>Package</th>
<th>End Use Category</th>
<th>Measure Category</th>
<th>Measure Name</th>
<th>Measure Description</th>
<th>Measure Status</th>
<th>Total Cost Savings</th>
<th>Annual Energy Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Low Cost and No Cost Recommendations**

- Add Measure

**Add a Package**

Be sure to save changes to the table before adding a new package.

- Package Name
- Recommendation Category

Save Refresh
Auditors can download the building in three formats (CSV, PDF, XML) at any time (before/after completion, before/after submission).

An “Audit” building can be converted to an Asset Score model. Note that rectangular footprint shape is presumed and geometry can be edited in the Asset Score user interface.
Asset Score Platform

- Feb 2018: Final edits to San Francisco’s
  - Feb 22, 2018: Reporting Template Webinar
- Mar 2018: BESO Assessor Testing
- TBD: Template Requirement

Asset Scoring Tool: buildingenergyscore.energy.gov
Resources: buildingenergyscore.energy.gov/resources
Help Desk: help.buildingenergyscore.com/support/home
Discussion: Audit Tools

• What aspect of audit tools are most useful to you?
• What audit reporting aspects would you like to see?
• Are there any specific resources or needs to handle mix-use buildings?
Bay Area Multifamily Building Enhancements

Rebates for Energy & Water Savings
Bay Area Regional Energy Network

- Collaboration of 9 counties local governments
- Multifamily (5+units) program led by StopWaste (Alameda County)
- PG&E Service
Bay Area Multifamily Building Enhancements

**Cash Rebates**

- $750 per unit calculated for whole building
- Save 10-15% energy with multiple improvements
- Choose your own contractors
Multifamily Building Energy Use By Type

- Domestic Hot Water: 43%
- Misc Plug Load: 18%
- Space Heating: 17%
- Space Cooling: 4%
- Refrigerators: 5%
- Common Area/Exterior Lighting: 4%
- In-Unit Lighting: 3%
- Fans: 3%
- Pumps: 3%
Typical Upgrades

- HVAC
- Domestic Hot Water
- Insulation
- Windows
- Lighting
- Appliances
- Pools

Ineligible:
  - Renewable energy
Bay area Case study

Real Projects Saving 15% or more
Valle Verde Apartments in Hayward (51 units)

<table>
<thead>
<tr>
<th>Energy Savings</th>
<th>17%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rebate Amount</td>
<td>$38,250 ($750 x 51 units)</td>
</tr>
<tr>
<td>Upgrades Installed</td>
<td>✓ Double Pane Vinyl Windows</td>
</tr>
<tr>
<td></td>
<td>✓ Hot Water Recirculation Controls</td>
</tr>
<tr>
<td></td>
<td>✓ High Efficiency Clothes Washers</td>
</tr>
<tr>
<td></td>
<td>✓ Low-Flow Showerheads &amp; Aerators</td>
</tr>
</tbody>
</table>

“I don’t see a reason not to do it.”
How to Participate
Bay Area Multifamily
Building Enhancements
5 Simple Steps

1. Enroll Online
2. Energy Consulting
3. Reserve Rebate
4. Install Upgrade
5. Claim Rebate

or in-person today!
Enrollment and Contact Information

Enroll online at
bayareamultifamily.org/interest-form

Contact the program:
855-213-2832 or multifamily@BayREN.org
EAST BAY ENERGY WATCH PROGRAM (EBEW)

SUPPORTING SMALL AND MEDIUM BUSINESSES BECOME ENERGY EFFICIENT

Multi-family/Commercial Assessor event on Monday, January 22

Martin Bond, CESC
A PARTNERSHIP FOCUSED ON ENERGY EFFICIENCY AND DRIVEN BY LONG RANGE REGIONAL SUSTAINABILITY GOALS

EAST BAY ENERGY WATCH PARTNERSHIP STRUCTURE

- Local Government Partnership between PG&E, Alameda and Contra Costa Counties
- Programs/services funded by California utility ratepayers under the auspices of California Public Utilities Commission (CPUC)
- Serving the Bay Area since 2002
CATERING TO SMALL AND MEDIUM BUSINESSES

- EAST BAY ENERGY WATCH PROGRAM (EBEW)
- YOUR ENERGY MANAGER
- BOTH AVAILABLE IN ALAMEDA AND CONTRA COSTA COUNTIES
WHY ENERGY EFFICIENCY?

• EBEW PROGRAM is helping small and medium businesses capitalize on the value of long term energy planning

• East Bay Energy Watch Program main goal is: Bend the energy consumption curve through deliberate, cost-effective, and practical strategies

• Typical energy upgrades
  • Indoor and outdoor lighting
  • Refrigeration and compressor motors
  • And refrigeration controls
  • Advanced digital economizers
  • And VFDs for Roof Top Units (RTU)
WHO IS ELIGIBLE?

• The program sets up broad targets and requirements
• Minimum: a commercial utility account with PG&E or MCE (energy usage that would put the business in the small or medium business category)
• Rebates 25% - 75%
• Extra incentives available for “HARD TO REACH” businesses (the rebate amount doubles for this category; up to 100% rebates)
  • Criteria for “HARD TO REACH” – meet two out of three
    1. 10 or less full time employees
    2. Owner/decision maker does not speak English as the primary language
    3. Leases or rents the facility
EBEW PROGRAM – A 3 STEP APPROACH

**STEP 1**  
Energy Assessment / Audit  
Free of Charge  
No commitment

**STEP 2**  
Project Implementation  
Carefully selected network of Contractors

**STEP 3**  
Customer Sign Off and Project Completion  
Focus on maximizing the incentive and focus on offering the support for long run energy efficiency
SEEING IS BELIEVING...

UC Berkeley Student Store
Project focused on lightning
Project Specifications:
• Total Cost $74,293.98
• Net Cost $48,014.27
• Rebate $26,279.71
• Monthly Savings $1,859.21
• Yearly Savings $22,310.53
• Payback Years 6.5

“The EBEW project manager was awesome – she went out of her way to make sure we got the original savings that was quoted.”

-Ashley Wood
Student Store
SEEING IS BELIEVING

Collins Industrial Park (Richmond)

• Revamped the lighting (120 W LED High Bay; 150 W LED High Bay)

• Project Specifications:
  • Total Cost $22,611.09
  • Rebate $17,837.47
  • Net Cost $4,773.62
  • Monthly Savings $873.90
  • Yearly Savings $10,485.89
  • Payback Years 0.5
YOUR ENERGY MANAGER PROGRAM

• 3-6 months of having a “shared” Energy Manager

• Energy Manager will provide –
  - On site assessments
  - Benchmarking and energy data analytics
  - Support sustainability related operations
  - Product purchasing best practices
  - Provide training to the employees to further best practices
  - Assistance to become Certified Green Business

• Qualifications:
  - Alameda or Contra Costa County
  - Have 25+ Employees
  - Have property manager/Ownership Support
  - Have executive level interest in becoming more sustainable business
HOW CAN YOU HELP YOUR COMMUNITY AND EBEW?

• First of all...SPREAD THE WORD about the program
• Get the potential customers information
• Send it to: Save@ebenergy.org
• Or call EBEW at 510 – 981-7750
• EBEW will schedule no-cost assessment
Thank You!

Contact Information for the EBEW Program:

Save@ebenergy.org
510 – 981-7750
Discussion – Best Practices

How to encourage energy efficiency upgrades?
What motivates building owners?
How can we strengthen the bridge to regional upgrade programs?
Thank you for attending!
Please fill out the follow-up survey

BESO Team
www.cityofberkeley.info/beso/
510-981-7465
beso@cityofberkeley.info