

## **WHPA Existing Buildings Energy Efficiency Action Plan 2017 Planning Call with CEC, WHPA Staff, Chairs**

March 7, 2017 Consolidated Notes from Barbara Hernesman and Wendy Worrell

CEC Advisors = Bill Dietrich, Lea Haro, Brian Samuelson

EBEE Co-Chairs = Barbara Hernesman, Tim Mann

WHPA Staff = Ellen Steiner, Wendy Worrell

**The EBEE Action Plan provides a 10-year framework to focus state and local governments, the building, contracting industries, and real estate industries, financial market actors, and other key stakeholders on achieving much greater energy and water efficiency in existing residential, commercial, and public buildings. The California Energy Commission intends to use its authority to the fullest extent, along with its strong partnership with the California Public Utilities Commission, to promote successful implementation of this plan. The EBEE Action Plan covers all existing buildings in the single-family, multifamily, commercial, and public buildings sectors.**

Barbara Hernesman clarified that the EWG's focus is to work on helping create information for a paradigm shift for multifamily buildings and building owners through the EBEE-AP thru the Lens of HVAC /Energy Efficiency Measures that can support 2030 Green House Gas Reduction Goals.

### CEC EBEE-AP Staff suggestions:

1. WHPA EBEE-AP WPIII might be an educational piece to get the building owner thinking along the lines of getting data on the building so the energy assessor can do a better job. Then take advantage of marketplace items to stimulate thinking for energy savings.
  - If advising multifamily building owners what to do, send more data about their building and then do an energy assessment of the building and occupants (use, etc.). Provide advice that the biggest energy users (equipment, etc.) are whatever they are. A lot of people look at payback and not cost effectiveness. They will use those with the "most bang for the buck" or within a 2-3-year payback. Someone with engineering expertise needs to go through the building to figure it out so it is difficult to write guidance for it. Maybe the upfront investigation costs are what is needed? It is not easy to say lighting is first, then HVAC or vice versa since there are too many variables. Guidance should be focused more on information and access to it to make informative decisions.
2. To determine how to collect information to make resources available for knowledge base development, consider reaching out to Enervee to see if they might collaborate for HVAC focus.
  - View [Enervee](#) interfaces. It is not for multifamily housing, but it clarifies what rebates a consumer might get when shopping for appliances or equipment. It shows utilities served based on geography and available incentives. It saves the consumer time and energy in "hunting" for the information.
3. Look a low-income barrier reports.
4. Continue providing pathways to implementation such as was done with Work Product II. Once CEC Staff is on board they will be taking that information and determining what makes sense to implement. The results from WP II are not seen yet, but they will be.

## **Strategy 1.2 (S 1.2) Multifamily Benchmarking your building AB 802**

*“Nonresidential Energy Benchmarking and Disclosure (S 1.2) ☐ Required periodic benchmarking of commercial and **multifamily buildings above 50,000 square feet in floor area**. Energy use metrics reported via ENERGY STAR® Portfolio Manager. Builds on Assembly Bill 1103 (Saldaña, Chapter 533, Statutes of 2007) reporting infrastructure; significantly expands covered building population. ☐ Encourages ongoing performance monitoring and continuous commissioning. Public disclosure for each building at second reporting cycle; disclosure policy informs building market transactions.*

*Multifamily Sector (5+ units) Number of Buildings Total: 3,126,000 (23 percent of residential buildings) Annual Energy Use 11 percent of Building Energy Use (not including industrial) Nearly 24 percent of all residential energy use (includes 2-4 unit buildings) Vintage More than 70 percent of California’s existing multifamily buildings were constructed before there were building energy efficiency standards (pre-1978).*

*Key Building Industry Actors; **Property owners’** Property/facility managers, Architects and engineers, General contractors, Real estate brokers, Lenders, financial brokers, and underwriters Types of Multifamily Buildings come in a variety of physical sub-types and occupant types, which makes it difficult to implement standard energy efficiency solutions. Types include garden-style attached units, apartments, condominiums mixed-use, senior housing/assisted living, special needs, single-room occupancy, co-op housing, and dormitories. (Sources: Department of Finance and National Multi Housing Council Based on 2010 and 2012 data).*

**Opportunities and Challenges for the Multifamily Market. Below is a summary of the opportunities and challenges for the multifamily market. Multifamily Sector Opportunities Potential Savings: Multifamily dwellings have significant opportunities to increase efficiency, especially in the areas of water heating and distribution, space heating, and lighting, which collectively account for 72 percent of total site energy consumption (excluding common area loads such as pool heating) and landscaping, the main source of water consumption.**

*\*The Benningfield Group’s 2009 national report on multifamily energy efficiency potential indicates that there is potential for an estimated 30 percent improvement in energy savings in multifamily buildings, resulting in \$9 billion annually to building owners nationwide.*

**Tenant Star:** *The Federal Energy Efficiency Improvement Act of 2014 creates a free, voluntary certification and recognition program to promote energy efficiency during design and occupancy of leased spaces. The intent of this program is to help property owners and tenants save money through greater energy efficiency inspired by providing knowledge of their usage and promoting the value of energy efficiency.<sup>36</sup>*

**Trigger Events:** *During the life cycle of a multifamily building, there are specific times when it is most cost effective and convenient for the developer or owner to make energy and green upgrades. Upgrade programs can tailor services to take advantage of these entry points, such as:*

**Unit-by-unit upgrades with tenant turnover** (appliances, windows, water measures). *The typical 15-year financing cycle of affordable housing. Roof replacement. Major equipment replacement. Major renovation. Multifamily Sector Challenges Inconsistent Definition of Multifamily: There is inconsistency in the definitions of single-family and multifamily among agencies, utilities, and other stakeholders (that is,*

5+ units in a building compared to Title 24 code definition of three or more stories regardless of units.) Applying California's Building Energy Efficiency Standards presents challenges to multifamily developers, given the hybrid residential/nonresidential character.

**Inadequate Access to Billing Data and Unit Energy Use:** Multifamily buildings either have a master meter where utility costs are simply allocated equally across all units or they are individually metered, in which case usage data is inaccessible to property owners. In both cases, decision-makers (property owners and building managers) have inadequate access to information that could help them identify heavy energy users or system problems that could be addressed by operational, behavioral, or physical improvements.

**Split Incentive:** Eighty-eight percent of multifamily households are renters; most pay utility bills but do not have control over building or equipment improvements that could lower them.<sup>37</sup> Building owners typically pay for common area utilities (garage, lobby, landscape) but may not be able to influence tenant behavior that could help control costs.

**Lack of Financing:** Multifamily buildings typically require several layers of financing from multiple sources to complete major renovations and upgrades. This layering, a general risk-averse underwriting market, and a lack of quantifiable valuation of efficiency make it very difficult to arrange financing for energy efficiency measures. A 2011 CPUC study identifying needs and gaps for energy efficiency financing in California estimates a total investment of \$8.1 billion to achieve a 25 percent reduction in energy use of the existing multifamily building stock.

**Complexity of Affordable Housing Financing:** While similar in most other aspects to market-rate housing, affordable housing financing mechanisms are different, and the developers have more stringent requirements to obtain loans and make investments for high-performance buildings. The U.S. Department of Housing and Urban Development has prioritized building performance in federally assisted housing, and California's agencies will participate in that effort.

**Program Delivery Model:** Many multifamily energy efficiency programs use program contractor delivery models. However, multifamily property owners tend to rely on established relationships with specialty contractors not specifically engaged in energy efficiency. Therefore, contractors may not be as effective a channel for energy efficiency as trained raters and auditors.

### **Educational Piece-Building Owners**

1. Building Data collection \*Real/Actual bench marking/Performance Benchmarking for Nonresidential Buildings
2. Tenants Energy usage information such as \*Utility bills...HOW to engage this relationship and data sharing?
3. Energy Advisor/Assessor engagement and importance, substantive information, include Climate Zone information
4. Capital Cost are there barriers? Identify
5. Financing options and pathways.
6. Existing Buildings Multifamily Best Practices and Deeper Dive Retrofit Practices. Resource of Multifamily Retrofit Models that can provide a quick glance of Best Practices for Building Owners? Heighten awareness of measure-by-measure prioritization on the existing building

project paying attention to Not all size-fits-All. Are there EPIC and/or PIER Project Resources available to examine/point to? Other Existing Building Projects that can be a resource? Housing and Community Development projects information available as it relates to Multifamily Existing Bldg. EE projects.

7. Educational tools for Multifamily EE Retrofitting that can pave a way for Market Transformation and Move-the-Dial for a Paradigm Shift?
8. Web-based tools and services available for Multifamily EE-Retrofitting? Bill mentioned ENERVEE or alike-available for Multifamily? Or are there services being currently developed? Or are there companies interested in providing?

Lea Haro reminded that Energy Efficiency implementation contributes to effect and affect our GHG pathway and goals, hence the importance of the EBEE-AP. Also, focus on the Consumer Guide and/or Guidelines for Energy Efficiency Products and Services.

Bill Dietrich and Brian Samuelson are engulfed in examining and prioritizing SB 350-Low-Income Barriers Study, Part A: Overcoming Barriers to Energy Efficiency and Renewables for Low-Income Customers and Small Business Contracting Opportunities in Disadvantaged Communities; Reviewing the PUC Business Plan; Energy Assessment Developments.

### **Strategy 1.8 Energy Efficiency as a Clean Distributed Energy Resource**

Energy efficiency brings a wide range of benefits to users and communities: bill savings, comfort, property value enhancement, and community economic development, to name a few. In the narrower and critical context of today's electricity grid, efficiency operates alongside other resources, both distributed and large-scale, and where the specific qualities of each determine the respective market value. Procurement-based energy efficiency can, in theory, take into account the particular local and system impacts of energy efficiency alongside those of other resources, comparing, for example, the locational and temporal characteristics, persistence, reliability, and the like.

Procurement-based energy efficiency may be helpful for reaching the Governor's objective to double efficiency gains in existing buildings. In a procurement setting, many of the details around delivery of energy and related grid services would be contained in procurement contracts, rather than emerging from the energy efficiency program portfolio.

Even if a procurement model is successful, it will be a complement to, rather than a replacement of, collaborative and incentive-based program approaches. There will continue to be strong need for a program portfolio focused on energy efficiency market transformation.

***1.8.2 Market Transformation Program Portfolios:** Evolve the energy efficiency program portfolios to focus more explicitly on market transformation activities in the upgrade marketplace. Understand the phenomenon of code shortfall in existing buildings, and mobilize projects to close any gaps. Revisit administration of market transformation efforts*

**\*WHPA EBEE-AP EWG desire for Paradigm Shift**

**Define our meaning, Consumer Guide/Guidelines "At-a-Glance"**

**OVERVIEW Strategy 1.9 Existing Building Efficiency Collaborative** A new collaboration led by the California Energy Commission (Energy Commission) and California Public Utilities Commission (CPUC),

with active engagement of industry stakeholders, will provide plan implementation oversight. Coordination with other relevant agencies will occur, when warranted. Coordinate and align policy between agencies (energy forecasting, energy programs, broader carbon policies). Provide oversight of action plan implementation, evaluation and tracking. ☐ Promote ongoing industry engagement. Collect and maintain data needed to evaluate plan implementation; provide trend analyses.

**Strategy 1.9 Leadership: Existing Building Efficiency Collaborative State, regional, and local governments** provide leadership and proactively coordinate and align their efforts as much as possible.

Active, High-Level Leadership - Governor Brown's call for a doubling of efficiency savings from building energy efficiency projects reinforces the legislative mandate of AB 758 and increases the urgency underpinning this plan and the implementation of it; this is equivalent to a 20 percent reduction in statewide building energy use from 2014 levels by 2030. To ensure ongoing attention and consistency to these collective efforts, the Energy Commission and the CPUC in particular must develop and maintain alignment between themselves. In addition, engagement, access, and input are needed by the ARB, ISO, other relevant agencies—DGS, Department of Water Resources, State Water Resources Control Board, California Community Services and Development, the Departments of Labor, Transportation, Corrections, and others. High-level personnel assigned to lead AB 758 implementation at each agency will engage and coordinate actively with utilities, local and regional governments, water agencies, and industry representatives, as needed. The Energy Commission will keep the Governor's Office and Legislature informed of progress and any high-level barriers that emerge, as a matter of course, as implementation proceeds.

**1.9.2 Agency Coordination and Stakeholder Engagement:** Implement appropriate forums and methods to coordinate analysis, identify promising strategy options, monitor and report on strategy effectiveness, provide public briefings on Action Plan progress, and invite regular stakeholder feedback to identify and resolve issues.

Bill Dietrich: Examine and provide potential partnership interest.

\*\*Local Government Challenge – GFO-16-404

[http://www.energy.ca.gov/contracts/GFO-16-404/00\\_GFO-16-404\\_Local\\_Government\\_Challenge\\_2017-02-15.doc](http://www.energy.ca.gov/contracts/GFO-16-404/00_GFO-16-404_Local_Government_Challenge_2017-02-15.doc)

Can WHPA EBEE-EWG assist in identifying potential Local Governments interested in Pilots?