DOCKETED

Docket Number:	15-IEPR-05
Project Title:	Energy Efficiency
TN #:	205435
Document Title:	BayREN Comments on July 6 Workshop on Governor's Energy Goal
Description:	N/A
Filer:	System
Organization:	BayREN/Gerald Lahr
Submitter Role:	Public Agency
Submission Date:	7/20/2015 2:58:51 PM
Docketed Date:	7/20/2015

Comment Received From: Gerald Lahr
Submitted On: 7/20/2015
Docket Number: 15-IEPR-05

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Additional submitted attachment is included below.

BEFORE THE CALIFORNIA ENERGY COMMISSION

Docket 15-IEPR-05

COMMENTS OF THE SAN FRANCISCO BAY AREA REGIONAL ENERGY NETWORK ON JULY 6, 2015 WORKSHOP ON GOVERNOR'S ENERGY EFFICIENCY GOALS

GERALD LAHR
Association of Bay Area Governments
101 8th Street
Oakland, California 94607
Telephone: (510) 464-7908
E-mail: JerryL@abag.ca.gov

For THE SAN FRANCISCO BAY AREA REGIONAL ENERGY NETWORK

July 20, 2015

I. INTRODUCTION

The Association of Bay Area Governments ("ABAG"), on behalf of the San Francisco Bay Regional Energy Network ("BayREN") is pleased to submit these comments to the California Energy Commission, California Public Utilities Commission, California Independent System Operator, Consumer Services Department, and Governor's Office on the workshop the agencies sponsored on July 6. The BayREN is a collaboration of the nine counties that make up the Bay Area. Led by ABAG, the BayREN implements effective energy saving programs on a regional level and draws on the expertise, experience, and proven track record of Bay Area local governments to develop and administer successful climate, resource, and sustainability programs. Since its inception in 2013, the BayREN has been addressing the three areas indicated by the CPUC in Decision 12-11-015: filling gaps that the investor-owned utilities are not serving; developing programs for hard to reach markets; and piloting new approaches to programs that may have the ability to scale and offer innovative avenues to energy savings. The result of the BayREN programs, to date, is approximately $9.5 million dollars in incentives paid, and savings of 4.0 million kWh and 410,529 therms.

The BayREN is eager to partner more deeply with State agencies to achieve the bold goals identified by the Governor and in policy documents issued by the agencies. We are happy to provide information at future workshops and meetings, and other venues as appropriate.

II. New Models for Achieving Savings in Existing Buildings

Since it launched in 2013, the BayREN has made great progress in increasing the efficiency of existing buildings, particularly in hard-to-reach sectors such as low-to-moderate income multi-family and water-energy. As a mission-based, regional organization of government entities, the BayREN and our members are trusted agents in the community. We have close ties to the community, businesses, and residents, and we integrate climate action planning, community economic development, and community values, leveraging these combined opportunities to foster innovation and new ways to achieve long-term sustained savings. Specific to the Governor's focus on strategies and solutions to address climate change, the BayREN and our members are able to consider and develop services beyond energy efficiency that can address water, transportation, distributed renewable generation, and related areas. And, we can partner with other government agencies and entities to foster stronger opportunities (e.g., Air Quality Management Districts, municipal utilities - water and energy, health departments,

etc.). As a collaborative of local governments, the BayREN is subject to public oversight and is motivated solely for the public benefit of our constituents.

A. Successful Multi-Family Program

The BayREN Multifamily Program provides a good example of a successful program that is targeting existing conditions. The program assists in planning energy saving improvements designed to save 10% or more of a building's energy usage and provides $750 per unit in rebates to help pay for the upgrade. The program is open to multifamily buildings with five or more attached dwelling units in the nine county Bay Area. From the time the program was initiated through 2014, energy upgrades were completed in 8,383 units receiving $6,277,422 in rebates. The total electricity saved through 2014 was 3,400,000 kWh and gas savings were 260,000 therms. Program enrollment has outperformed other multifamily energy upgrade programs in California by a factor of three to four, and stands out as an exemplary environmental improvement program. The CPUC has twice approved additional funding for this program, in order to maintain program continuity.

This successful program indicates the potential demand for, and benefits of, an energy efficiency program **based upon existing conditions**. A few details about the projects:

- Upgrades must meet code
- Total installed work valued at $11,198,026 for 124 projects
- An average year built of 1956 for 126 projects, with 100 projects built before 1978 (when California first implemented the Building Energy Efficiency Standards)
- Average energy savings for participating projects is 16% over existing conditions.

It is worth noting that the range of options (and potential barriers) considered by a multifamily property owner include:

- evaluation of the probability that a rebate will be paid
- the time and cost to navigate the rebate process
- the likelihood that rebate funds will be available upon project completion
- confidence that the contractor's performance will be sufficient to realize savings per engineering estimates.

The BayREN Multifamily program has successfully overcome these barriers.

B. BayREN Findings Provide New Insight on Issues with Codes

Included in the BayREN Portfolio is a Codes and Standards program, designed to identify and share best practices and improve building code enforcement and building performance rates within the region. These efforts allow us to offer keen insight into the discussion on codes and standards.

In 2013–2014, the BayREN launched its Codes & Standards Permit Resource Opportunity Program ("PROP"). The report shows that the way in which local governments view and enforce compliance with the energy code can be very different than how compliance is understood from a statewide regulatory perspective, especially when considering existing conditions of a building. We encourage the CEC and CPUC to collaborate more closely with local governments on work related to codes.

After conducting a survey of stakeholders, the BayREN's energy code experts conducted a series of visits to fifteen Bay Area building departments to learn about energy code enforcement barriers and challenges, identify successful enforcement strategies, and gather data about the impact of discrepancies on building performance. The findings were presented in the PROP Final Report and Resource Guide.[1] Trends identified relating to deferred retrofits and retrofits that avoided code triggers or code compliance include:

- Commercial lighting projects: Comments from Bay Area building departments indicate a significant drop in permit volume for Commercial projects that involve lighting. The BayREN does not currently have a quantitative assessment of this scenario, but the comments received attribute this to the new 2013 energy efficiency standards pushing more commercial lighting projects underground.
- Single measure projects that expand into larger projects – BayREN member agencies have commented that it is common for single measure projects to evolve into larger work scopes that involve non-permitted work – i.e., boiler retrofits that evolve into whole building retrofits where the add-on work does not get permitted.

Other observations from the Report findings are that energy outcome-based codes appeal to local governments because of their ability to capture existing conditions as well as provide a simplified process for evaluation that is based on performance in practice, rather than theoretical modeling or difficult to document engineering expectations. The Report findings indicate that

[1] This Report is viewable at https://www.bayren.org/codes/prop-final-report.

the complexity of the building code results in progressively diminishing code compliance as a project progresses from plan check, to plan review, to field inspection.[2] The ability to incentivize and encourage actual building performance post-construction can be a way to improve compliance by simplifying the review and inspection process.

An issue that impacts this analysis is different meanings attributed to relevant terminology. The terms *compliance* or *compliant building,* for example, can be characterized in a number of ways. The Codes & Standards Evaluation Team views energy compliance as a target minimum, and considers only two outcomes: compliant or non-compliant. Therefore a building constructed to meet its energy budget (based on modeling of the prescriptive package) is considered to be fully compliant. A building that performs better than this minimum is also considered compliant. Conversely, a building that does not achieve compliance can be close to or far away from the point of compliance.

Under this definition of compliance, projects can and typically do exceed compliance, sometimes by a substantial margin. Projects can contain compliance errors and product substitutions and still be deemed compliant. This is largely because few buildings are designed to perform at the exact target energy budget; there is typically a margin above the target that accommodates errors and substitutions during construction. Therefore buildings that just meet the minimum compliance standard (and are deemed 'compliant') are often leaving savings 'on the table.'

Instead of viewing compliance as an absolute point on a scale, another way to view it is as a relative point on a spectrum. In this view, buildings can be seen as *more compliant* or *less compliant* rather than simply compliant or noncompliant. The energy impact associated with discrepancies has the potential to be substantial (and quantifiable). Compliance with the inspection and review process, including submission of complete documentation, installation of required components, and proper testing of required functionality, may affect the building's energy performance.

As identified in the PROP report, only a small fraction of projects found during the 15 jurisdictional investigations were found to have error-free energy documentation at all stages of

[2] *Permit Resource Opportunity Program Final Report*, the Bay Area Regional Energy Network, Codes & Standards Program, April 1, 2015, www.bayren.org/codes/prop-final-report

BayREN's review.[3] Yet errors do not neatly correlate to *compliance* because the baseline (wither code minimum, above code, or below) is not consistent from project to project. Therefore, the way in which local governments view and enforce compliance with the energy code can be very different than how compliance is understood from a statewide regulatory perspective, especially when considering existing conditions of a building.

The Regional Energy Networks were charged at their inception with serving hard-to-reach markets and issue areas. Building codes certainly fall into this category.

From an enforcement standpoint, it still remains that fact that local governments don't have the time, money, or expertise (in general) to enforce the more complex portions of the energy code and green code. If the State is loath to invest in the resources required at the local level, it might consider funding external organizations/special inspectors to take on this task. The BayREN has recently launched a Regional Plan Check pilot that will allow local governments to access a single point of contact regionally that can help them determine whether a plan is in compliance with State codes. The BayREN plans to compliment that with practical enforcement tools and support such as Tablet software, check lists, etc. As a collaboration of local governments, we are well positioned to work with local building departments, particularly the smaller and more resource constrained jurisdictions, to navigate code compliance. This is a very fundable model for getting around the enforcement barriers.

C. Leveraging Relationships and Opportunities

A clear theme at the July 6 workshop was that California collectively needs to think more broadly and differently about ways to increase the efficiency of existing buildings. The workshop focused primarily on programs offered through the investor-owned and municipal energy utilities without a local government representative on any of the panels. Local governments are using a range of other options to facilitate building efficiency, in combination with distributed renewable energy, in their communities. For example, Property Assessed Clean Energy ("PACE") programs are in place up and down the state, authorized by local governments and financed through the private sector. It is not clear that the savings realized from PACE programs are captured in the calculations that State agencies are performing to measure savings.

[3] See the PROP report, Figure 5, page 14. www.bayren.org/codes/prop-final-report

Another example of an innovative approach to both water and energy savings is Pay As You Save®, a BayREN program that works with municipal water utilities to help buildings significantly increased participation in Partner Water Utility conservation programs. The BayREN provides our partners with a way to offer their customers a simple and attractive path to install energy-and water-saving technologies with no up-front cost. Participating customers pay for upgrades through a monthly tariffed surcharge attached to their utility meter, with the assurance that bill savings will exceed the surcharge. Central to the PAYS model's success are specific program assurances that allow customers to purchase cost-effective measures with:

- No up-front payment, no new debt obligation, no credit checks, no liens.
- A utility-approved monthly tariffed surcharge that is lower than estimated bill savings.
- Repayment required only while they are a utility customer at the project location.

  A guarantee that failed measures will be repaired or the payment obligation will end.

These pilots give water owners devices that save both water and energy. BayREN has four partner water utilities to date, and is exploring opportunities to further scale the program.

III. CONCLUSION

The BayREN brings collective experience and success in realizing energy efficiency opportunities in existing buildings. We stand ready to work with the State agencies as you develop new strategies for achieving California's climate change goals.

In addition we add our concurrence to many of the issues raised during recent discussions on meeting the State's energy efficiency and GHG reduction goals, including:

- Better integration of the myriad energy planning processes.
- Expanded regional cooperation
- Increased cooperation among local government agencies, communities, regional organizations, IOUs, businesses and other stakeholders.
- Breaking down funding and planning silos
- Creating GHG reduction metrics
- Calculation and credit for non-resource activities