



California Commissioning Collaborative October Webinar

Martha Brook, P.E.

Existing Buildings Energy Efficiency

mbrook@energy.ca.gov

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Outline

California Energy Efficiency Policy Updates

- California's 2030 GHG reduction goals
- Existing Buildings Energy Efficiency Action Plan (CEC, 2015)
- SB 350 (De Leon, 2015)
- AB 802 (Williams, 2015)

What it means for the Commissioning industry...



California's 2030 Energy Goals

- Governor Brown's inaugural address, January 2015. By 2030:
 - **50% of electricity from renewable sources**
 - Cut petroleum use by vehicles in half
 - **Double EE savings in buildings**; cleaner heating fuels
- Ensure CA trajectory for its long term climate goals
 - Reduce GHG emissions to 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050
- Necessitates additional focus on existing buildings in order to achieve this level of energy savings

(these goals incorporated into state law via AB 350)



Existing Buildings Energy Efficiency Action Plan

- Current efficiency savings trajectory is insufficient to achieve CA's clean energy and emissions reduction goals
- Unlocking EE potential of existing buildings requires market focused solutions
 - Data analytics to support consumer decisions
 - Research to better predict behavior and pricing impacts
 - Goals are too large for just ratepayer & taxpayer funding
 - Leveraging private capital will be required



Existing Buildings Energy Efficiency Action Plan

- Plan focuses on foundational efforts to ensure a credible environment for implementation of energy efficiency at scale
- Success = EE consideration and action embedded into all energy decisions



EBEE AP

VISION

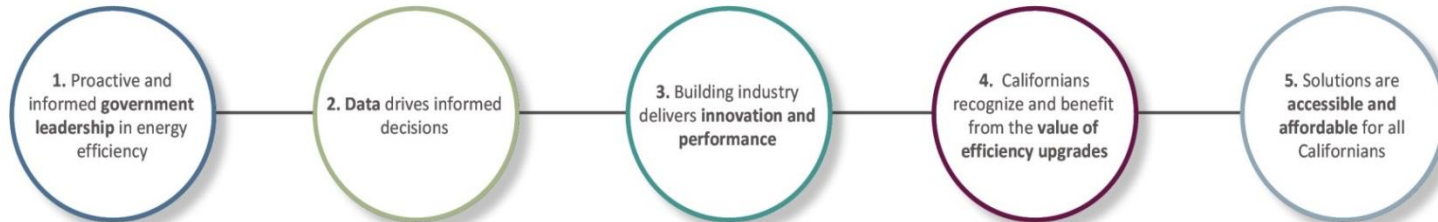
Robust, sustainable efficiency marketplaces that deliver multiple benefits to building owners and occupants through improvements, investments and operation of existing homes, businesses, and public buildings.

Resulting In: Doubling of energy savings from building energy efficiency projects in California. This is equivalent to a 17% reduction of statewide building energy use from 2014 levels by 2030.

GUIDING PRINCIPLES



10-YEAR GOALS



PRIMARY STRATEGIES

- 1.1 State and School Buildings
- 1.2 Benchmarking and Disclosure
- 1.3 Building Performance Assessment Tools
- 1.4 Energy Asset Ratings
- 1.5 Building Energy Efficiency Standards
- 1.6 Plug Load Efficiency
- 1.7 Local Government Leadership
- 1.8 Efficiency as a Clean Energy Resource
- 1.9 Existing Building Efficiency Collaborative

- 2.1 Data for Improved Decisions
- 2.2 Customer Focused Energy Efficiency

- 3.1 Streamlined and Profitable Industry
- 3.2 Performance Driven Value
- 3.3 High Performance Workforce and Education
- 3.4 Zero Net Energy Retrofits

- 4.1 Real Estate Value
- 4.2 Marketing, Education and Outreach

- 5.1 Foster Private Capital Market
- 5.2 Asset Based Financing
- 5.3 Borrower-Based Financing
- 5.4 Integrated Delivery of Efficiency Solutions, Finance & Utility Incentives
- 5.5 Government Building Finance Mechanisms
- 5.6 Leveled Tax Playing Field
- 5.7 Deeper Subsidies for Low Income Households



Senate Bill 350 (De Leon, 2015)

- On or before November 1, 2017:
 - CEC, with CPUC and POU, will establish efficiency and demand reduction goals to achieve x2 efficiency savings in *electricity and natural gas end uses of retail customers* by 2030
 - CEC (for POU) & CPUC (for IOU) will set annual savings targets to meet 2030 goals
- Existing and new activities may be used to meet targets
 - SB 350 includes retrocommissioning as an example



Senate Bill 350 (De Leon, 2015)

- Energy efficiency savings shall be measured at the meter (where *feasible and cost effective*)
- Starting in 2019, CEC will report progress toward 2030 goal in the Integrated Energy Policy Report
 - Statewide savings achievements must be reported
 - Recommendations for course corrections to achieve goals must be included



Assembly Bill 802 (Williams, 2015)

- Two new sections of state law:
 1. Revisions to commercial building energy use benchmarking
 2. New mandate for CPUC to use existing conditions baselines in utility incentive programs



Assembly Bill 802 - Benchmarking

- Defines *covered buildings* for the purposes of tenant meter data aggregation and delivery to building owners:
 - Any building with no residential utility accounts, OR
 - Any building with five or more utility accounts, residential or nonresidential
- Rescinds transaction-based commercial building benchmarking
- Adds new time-certain commercial and multifamily benchmarking program with public disclosure



Assembly Bill 802 - Benchmarking

- On and after January 1, 2016:
 - Utilities shall maintain energy usage data of *all buildings* they provide service to
- On or before January 1, 2017:
 - Utilities shall, upon request, provide building energy use data to *covered* building owners (or their agents, or to ESPM)
 - Utilities shall, WITHOUT tenant consent, aggregate utility account data for *covered* buildings if account number is 3 or higher



Assembly Bill 802 – Existing Condition Baselines

- By January 1, 2016:
 - IOUs shall use existing condition baselines for *high opportunity projects or programs*
- By September 1, 2016:
 - CPUC shall authorize IOUs to implement efficiency programs based on existing condition baselines
 - Meter-based savings must be *considered*



Relevance of CA policies to the Commissioning industry

- RCx includes data collection, baselining and savings attribution processes that are the same/similar to those needed to implement performance-based efficiency programs (e.g. meter-based savings approaches)
- Cx in code includes efficiency documentation processes that could be considered a compliance option (instead of separate compliance forms)



Relevance of CA policies to the Commissioning industry

- RCx investigations could be required as part of benchmarking & audit ordinances, project financing qualifications (e.g. Investor Confidence Project)
- RCx investigations could be used in energy asset rating processes to determine asset improvement potential (e.g. “your score is **X** now but it could be **Y** with RCx”)



DISCUSSION

