CA Energy Efficiency: A look ahead

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An Ambitious Energy Efficiency Goal for California

By 2030,

"double the efficiency of existing buildings"

Source: Governor Brown's Inaugural address, January 5, 2015

Implications of Existing Conditions Baseline

- Allow for a customer-centric approach to energy savings
- Enable targeting of least efficient buildings
- Expand behavioral, retrocommissioning, and operational savings opportunities
- Accelerate adoption of efficiency
- Encourage deeper upgrades

The Future of EE in California

	Today	Future
Energy savings:	▪ EE equipment incentives ▪ Codes and standards	▪ EE equipment incentives ▪ Codes and standards ▪ Retrocommissioning ▪ Operations and maintenance ▪ Financing (OBF, OBR) ▪ Technical assistance ▪ Education & training ▪ Pay-for-performance (non-widget)
Focus:	➔ Codes and widgets	➔ Lowering customer bills ➔ Reducing consumption and waste ➔ Optimizing the energy system

PG&E HOPPs in Development

Commercial Pay-for-Performance

- Builds upon the CWB demonstration to cost-effectively realize deep savings through equipment retrofit, retrocommissioning, automation-driven and behavioral measures in commercial buildings

Targeted RCx

- Leverages remote analytics to identify energy intensive buildings for optimization of existing systems and monitor the persistence of behavioral, retrocommissioning, and/or operational interventions

Residential Pay-for-Performance

- Selects aggregators via competitive bid to work directly with residential customers to achieve energy savings through behavioral, retrofit, and/or operational intervention

On Bill Financing Alternative Pathway

- Finance offering without a Rebate or Incentive option

Other Opportunities

- Repair Indefinitely measures; individual projects

Thank you.

Questions?

Commercial Pay for Performance

Proposal for a:	New program
Description:	• Builds upon the Commercial Whole Building (CWB) Demonstration to create a scalable vehicle to cost-effectively procure deep energy savings in commercial buildings • Equipment retrofit, retrocommissioning, automation-driven and behavioral measures • Incentives tied to post-installation savings estimated using interval meter and other data over an extended period of time, typically 12 months before and after implementation
Budget and Source:	Annual Commercial Program budget of approx. $1.2 million for implementation (excl. admin, marketing and IT) $2.0 million for incentives (accrued in 2016/17 and payable in 2017/18)
Claiming savings?	Ex-post, typically 12 months after implementation
EM&V plan	Pre/post (meter-based or calibrated simulation)
Rationale for proposal as a HOPP	• Aligned with AB802: reduction in normalized metered energy consumption derived from retrofits or operational or behavioral or retrocommissioning activities • Deep savings on a per facility basis • Relevant for SMB customers

Residential Pay-for-Performance

Proposal for a:	New program
Description:	Entice existing market actors to advance and scale residential retrofits; delivering higher savings at less cost • Select aggregators via competitive bid to work with residential customers to achieve energy savings through behavioral, retrofit, and/or operational interventions • Participants tracked through CalTRACK system to establish weather normalized energy savings based on pre/post treatment • CalTRACK provides visibility into individual and aggregator performance • Incentives paid to aggregators ($/therm, $/kWh) annually for portfolio savings
Budget and Source:	3 years – $6M ($5M incentive) – Residential Programs
Claiming savings?	Ex-post, based on CalTRACK reported energy savings
EM&V plan	• Conduct weather normalized pre/post intervention analysis of participant's metered energy consumption • Aggregator is evaluated based on total portfolio performance
Rationale for proposal as a HOPP	• Brings buildings to or above code • Includes operational, behavioral, and retro-commissioning • Aligns with Strategic Plan or Market Transformation goals • New & innovative design, partnerships, concepts or measure mixes • Scalable

OBF w/o Rebate or Incentive

Proposal for a:	Modification to existing program
Description:	• On-Bill Financing (OBF) offering without a Rebate or Incentive option • Provide a customer/contractor driven solution that leverages third party project certification • Contractor required to provide monitoring technology over life of loan
Budget and Source:	• Program will leverage existing OBF functionality and budget (including Revolving Loan Fund) • Incremental budget for Pilot support included in 2016 offering
Claiming savings?	• Projected meter based energy savings would be reported **ex ante**, claimed **ex post**
EM&V plan	Yes
Rationale for proposal as a HOPP	• Cost effective program to generate energy savings opportunities for customers • Project certification and monitoring requirements will advance market and contractor offering • Offering will be coordinated with CAEATFA and 3rd Party Lenders to support the OBR pilots • Large share of loans go to hard-to-reach customers • Leverages smart meters to measure actual energy savings • Highly scalable