



Achieving Aggressive EE Savings- a Six Point Plan from California

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Six Point Plan to Aggressive EE Savings

- (0) Decoupling/incentive mechanism
 - 1. Aggressive EE/GHG Goals
 - 2. A Plan – visionary; real MT targets!
 - 3. Programs aligned with Plan
 - 4. Marketing/media/brand that *engages*
 - 5. Financing - \$\$\$
 - 6. Collaboration





1. Aggressive EE/GHG Goals

CPUC 2020 interim TMG (Total Market Gross) EE goals (July, 2008):

- 16,000 GWh and 620 MMTherms/year
- Equal to nine power plants avoided

California Air Resources Board Scoping Plan Targets for 2020 (Nov, 2008):

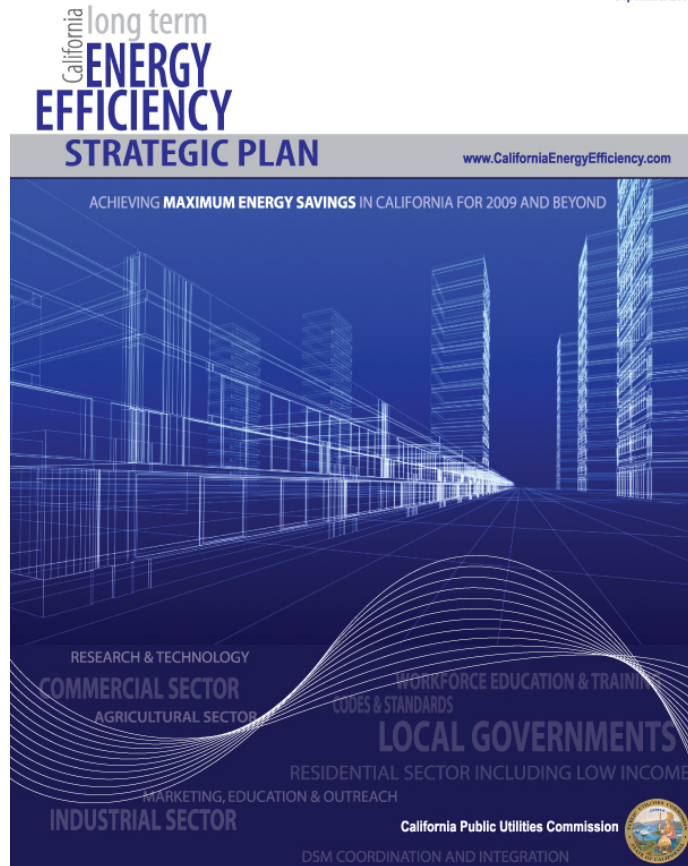
- 32,000 GWh and 800 MMTherms/year
- 19.5 MMT CO₂E





2. The California Long Term Energy Efficiency Strategic Plan

September 2008



<http://www.CaliforniaEnergyEfficiency.com>





3. CA's 2010-2012 EE Programs Align with Long-term Plan

- Savings Impacts Anticipated:
 - 6,965 GWh
 - 1,537 MW
 - 150.3 MMTherms
 - 3.07 million tons of CO₂e emissions avoided
- Equivalent of 3 large power plants
- Authorizes \$3.13 billion in cost-effective energy efficiency programs





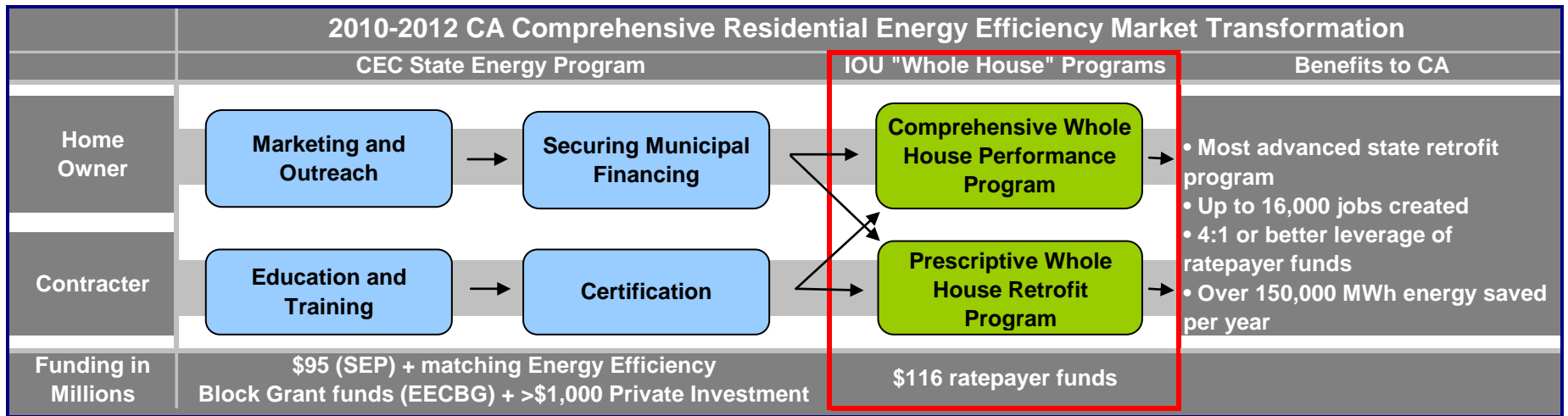
Program Highlights

12 Statewide Programs

- Cal SPREE (Statewide Program for Residential Energy Efficiency)
- Commercial: Benchmarking
- Industrial: Continuous Energy Improvement
- Zero Net Energy New Construction
- HVAC: Focus on compliance
- Statewide Marketing, Education & Outreach
- **Plus: six other SW programs** (Agriculture; Codes & Standards; Emerging Technologies; Lighting Market Transformation; Integrated Demand Side Management; Workforce Training) and government partnerships; 'local' (ie, one-off) utility and 3rd party programs, and pilot projects



Residential Retrofit in CA



Key elements:

- Targets 130,000 homes (1% of CA) over 2010-2012
- Delivers savings of 20% or greater per household
- Designed to be compatible with possible Federal program funding availability (ACESA: REEP Program^[1])
- Well coordinated with CEC use of ARRA funds and intent of municipal financing programs^[2]
- Establishes a transparent Whole House Retrofit Work Group including CEC, CPUC, IOUs, and business stakeholders, to guide program details and provide regular program feedback.

^[1] U.S. DOE Retrofit for Energy and Environmental Performance (REEP) program design within H.R. 2454, The American Clean Energy and Security Act (ACESA) of 2009

^[2] AB 811, Mello Roos, PACE Bonds or other. ARRA funds for EE in California estimated at: \$798.3 million





Zero Energy Buildings

- CA Advanced Home Partnership - \$63.2 million
 - Aims toward Strategic Plan 2011 milestone: 50% of new homes exceed Title 24 standards by 20%; 10% exceed by 40%
 - 15% above Title 24 (2008)
 - Calculated incentive structure up to 50% incremental cost
 - \$1000 performance bonus for New Solar Homes Partnership Tier 2 level (30% above 2008 T24)
 - Emphasizes “green” marketing- leverage existing consumer awareness
- Zero Net Energy Pilots
 - \$43.16 million utility programs
 - \$60 million for innovative local government programs focused on Advanced Building (“Reach”) Codes and GHG Action Plans
- Commercial buildings
 - **100,000 building statewide benchmarking target** (2010-2012)
 - Path to Zero Commercial Buildings Collaborative





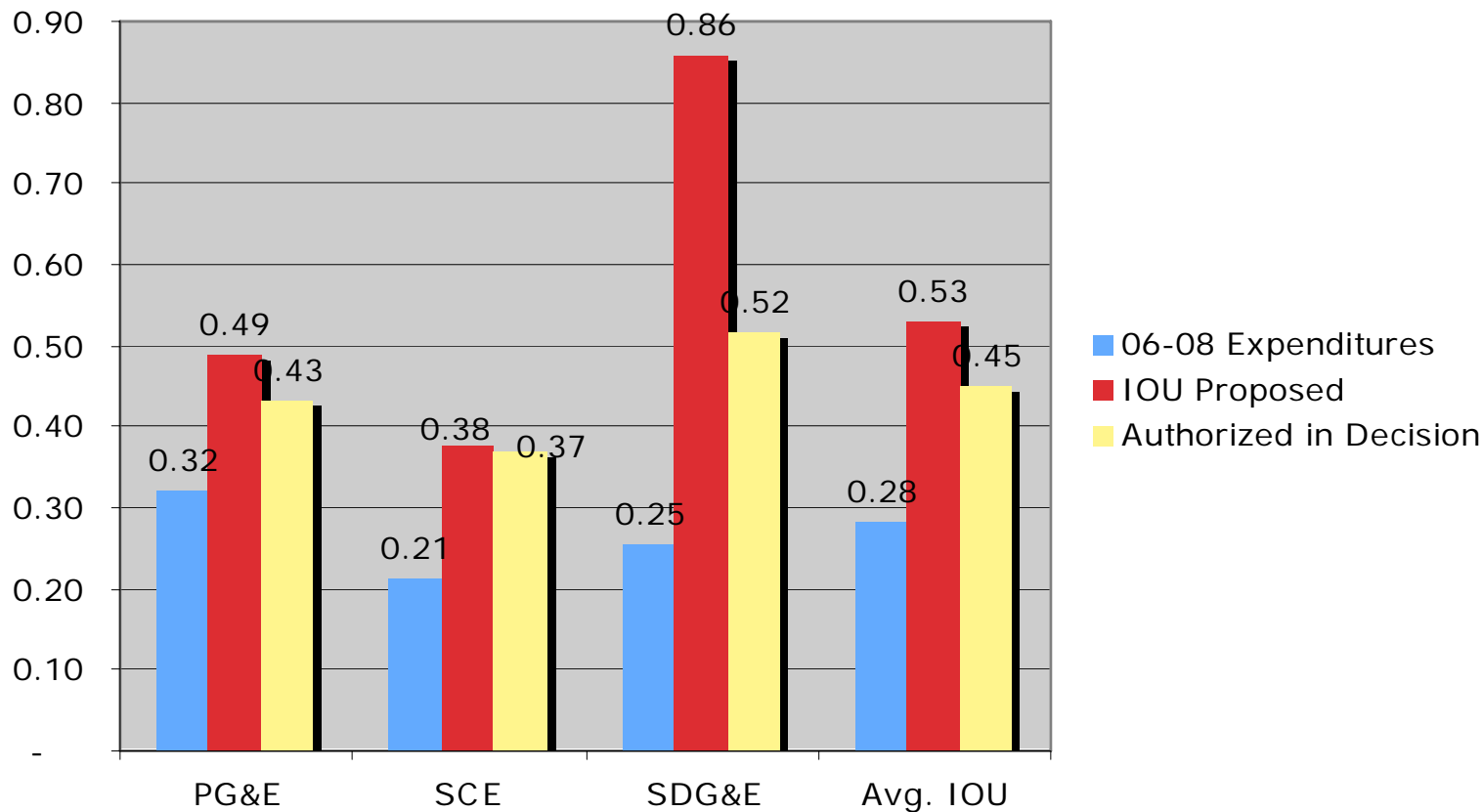
Other Highlights

- Advanced Lighting Programs (53% of total lighting budget)
 - \$89 million (LEDs, specialty/super CFLs, halogens); \$78 M - CFLs
 - 2020 Strategic Lighting Plan Work Group /LMT program
- Codes and Standards Programs
 - New Compliance Enhancement Program
 - training/support to building officials;
 - streamlining permitting and compliance requirements;
 - enhanced certification processes; Focus on HVAC
 - Reach Codes Sub-Programs- **climate-zone Reach Codes**; coordination at state level and with voluntary codes
- HVAC
 - Compliance focus: certification and training, CA specifications, quality installation and maintenance
- Industrial – certification/pilots on **CEI** – *energy management*





Cost of Energy Efficiency (in \$M/GWh. First Year Savings only)





4. Marketing/Brand that *engages* → moves customers to *take action*

- New or Revised Clean Energy Brand (2010)
- Interactive EE Web Portal
 - exchange expert resources & engage average folks
 - Will utilize social networking techniques
- Variety of in-language M&O programs
- Universal Integrated Audit/Survey Tool
- Behavioral Programs (→ EM&V Decision)

- Strategic Plan Progress Reports





5. Financing \$\$\$ - *Growing It*

- Additional financing of \$8 - \$25 billion needed
 - *for EE hardware alone 2010 -2020 . \$2.5 B gross customer investments in 2010-2012 alone.*
- Statewide Utility On-bill financing (OBF):
 - For commercial and institutional customers
 - Initial \$41.5 million in new funds for OBF loan pool
 - Common loan caps and terms
- Utility program coordination with municipal property-based financing
 - linked to stimulus funds/retrofit programs
- CPUC/State Treasurer's office collaboration on state facilities- broader EE report in 2010 expected as well





Economic Impact of Energy Efficiency Programs 2010-2012

- 15,000 – 18,000 new green collar jobs in 2010-2012 over 2006-08
 - 6,000 – 10,000 jobs in Residential Retrofit alone
- \$122 million budgeted for workforce education
 - WE&T Needs Assessment to help target investments

*Job benefits calculated based on Council of Economic Advisers' May 2009 publication of "*Estimates of Job Creation from the American Recovery and Reinvestment Act of 2009*"





6. Collaboration

- *Everyone, all the time*
- Public agencies (CPUC-CEC; state and local)
- Utilities
- Regions – West Coast Commercial ZNE
- Public/private/non-profit

California is ready for your good ideas!





2010-2012

- Bold, aggressive program for California
 - “turn and grow” the Titanic
- Energy efficiency as a “way of life”
- Utilities - and all - will need to “climb higher in the tree to pick the fruit”
- CPUC/utility leadership to engage EE thought- leaders, investors, financiers and stakeholders statewide





For more information:

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Extra slides





EM&V Streamlining

- Freeze ex ante values
- New emphasis on program performance metrics
 - way to track utility contribution to Strategic Plan and market transformation
- Review EM&V Practices and Frameworks
 - improve coordination with CARB AB32 tracking.
- Other plans:
 - updated potential/goals studies;
 - updated cost-effectiveness methodologies and tools
 - behavior program savings EM&V methodologies (linked to Whole House Retrofit Programs)





Goals and Budgets for the 2010-2012 Program Cycle

	PG&E	SCE	SDG&E	SoCal	Total
2010-2012 Program Cycle Electricity Savings (GWh)	3,100	3,316	539	-	6,965
Cumulative Savings (GWh)	6,950	7,581	1,379	-	15,910
2010-2012 Program Cycle Peak Savings (MW)	703	727	107	-	1,537
Cumulative Peak Savings (MW)	1,546	1,644	269	-	3,459
2010-2012 Program Cycle Natural Gas Savings (MMTh)	48.9	-	11.4	90	150.3
Cumulative Natural Gas Savings (MMTh)	108.8	-	24.2	175	308.1
2010-2012 GHG Reductions (MMt CO ₂ e)	1.27	1.08	0.24	0.48	3.07
2010-2012 Budgets (millions)	\$ 1,338	\$ 1,228	\$ 278	\$ 285	\$ 3,129





2006-2008 Savings

source: Energy Division draft Second Verification Report (2006-2008)

