

CPUC and Energy Efficiency: Utility Programs & Strategic Planning Process (2009-2020)

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2009-2020 Energy Efficiency Strategic Planning Process
California Public Utilities Commission
Utility Energy Forum, Tahoe City, April 30





Today:

- Energy efficiency programs at CPUC
- Recent developments –
 - “Big Bold” Programmatic Initiatives & Targets
 - Statewide Energy Efficiency Strategic Planning Process (2009-2020)
 - 2009-2011 Utility EE Applications
 - New energy efficiency goals out to 2020
- Links to AB32 (statewide GHG goals)

Current Energy Efficiency Programs

- 3 year cycles
- Utility administered programs
 - Design requirements, oversight and evaluation, measurement and verification (EM&V) by CPUC
- Approved Utility EE program funds
 - Ranged from \$500- \$845 million/year (2004- 2007), including LIEE programs
 - Approx \$1 billion/year expected (2009- 2011)
- Mandated efficiency goals through 2013
 - Cumulative goals (through 2013): 23,183 GWH/year; 4,885 MW/year; 444 MMTh/yr

Types of Utility Energy Efficiency Programs ('06-'08)

- Statewide Programs
 - Residential
 - Commercial/Industrial/Agricultural
 - New Construction
 - Codes & Standards
 - Emerging Technologies
- Statewide Marketing and Outreach
- Third Party (EE Contractors) Programs
- Local Government Partnerships
- Government Agencies Partnership Programs
- *Types of programs: Rebate, audit, direct install, appliance turn in, education, performance contracting, energy management services*

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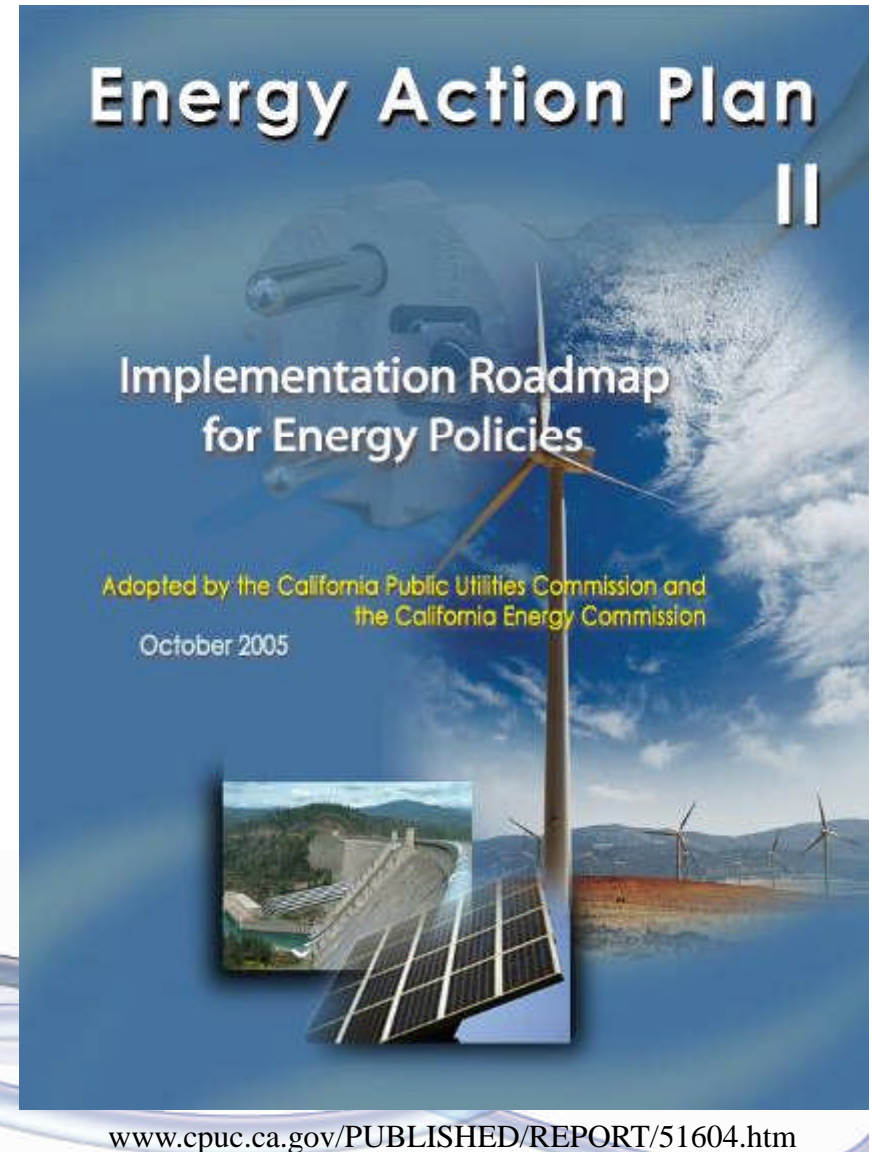
Energy Action Plan II

“Loading Order” of preferred resources:

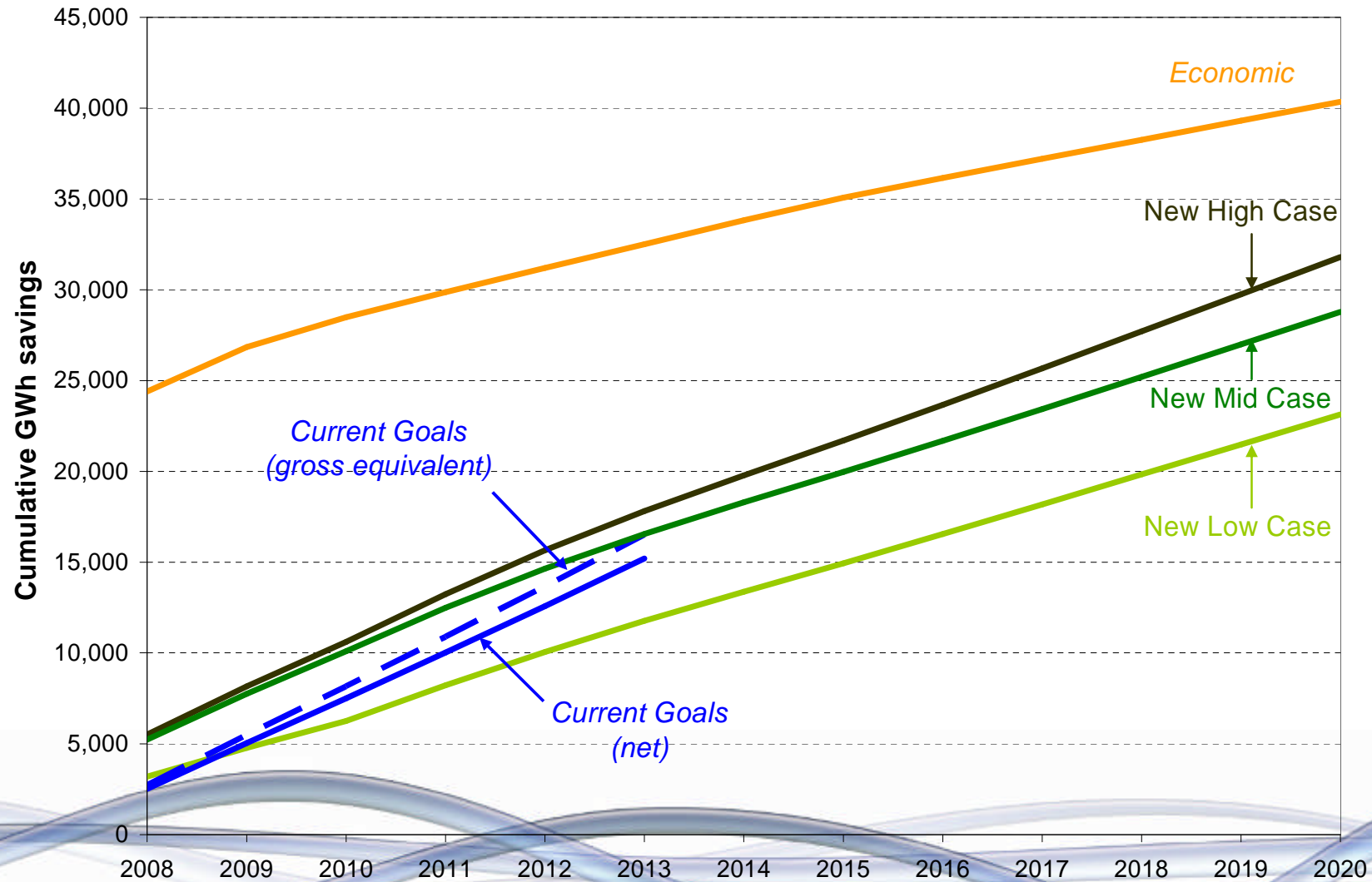
1. Energy efficiency and conservation
2. Demand response and advanced metering infrastructure programs
3. Renewable generation
4. Cleanest available fossil resources

Adds climate change, RD&D, and transportation

Energy Action Plan



CPUC to adopt EE goals for Utilities through 2020



Big Bold Energy Efficiency Strategies

Commercial New Construction

- All new commercial construction in California will be zero net energy by 2030.



Residential New Construction

- All new residential construction in California will be zero net energy by 2020.



Residential / Small Commercial HVAC

- Heating, Ventilation, and Air Conditioning (HVAC) industry will be reshaped



Low-Income Energy Efficiency

- All eligible homes energy-efficient by 2020



Organization of Strategic Plan Process

Sectors			
Residential	Commercial	Agriculture	Industrial
<input type="checkbox"/> Small HVAC BBEES			
<input type="checkbox"/> New Residential Construction BBEES	<input type="checkbox"/> New Commercial Construction BBEES		
Residential Low Income Strategies			
Local Government Roles			
Emerging Technologies, Market transformation , and/or Code & Standards			
Integrated DSM & EE program development & delivery			
Integrated Marketing, Education & Outreach			
Training & Work Force Development			

EE Strategic Plan process

- 40 CPUC convened workshops Nov-Dec, 2007; CEC convened HVAC group
- 500 individuals, 1100 participant –days
- 48 comments, publicly posted
- Range of participants
 - Agencies (state, federal, cities, SCAQMD), POU's, NGOs, vendors, research groups, individuals, developers, finance institutions
- Workshop convener reports → utility draft

Major New Action Areas from Strategic Planning Process-

Broad Actor Focus; Not Limited to Utility Programs

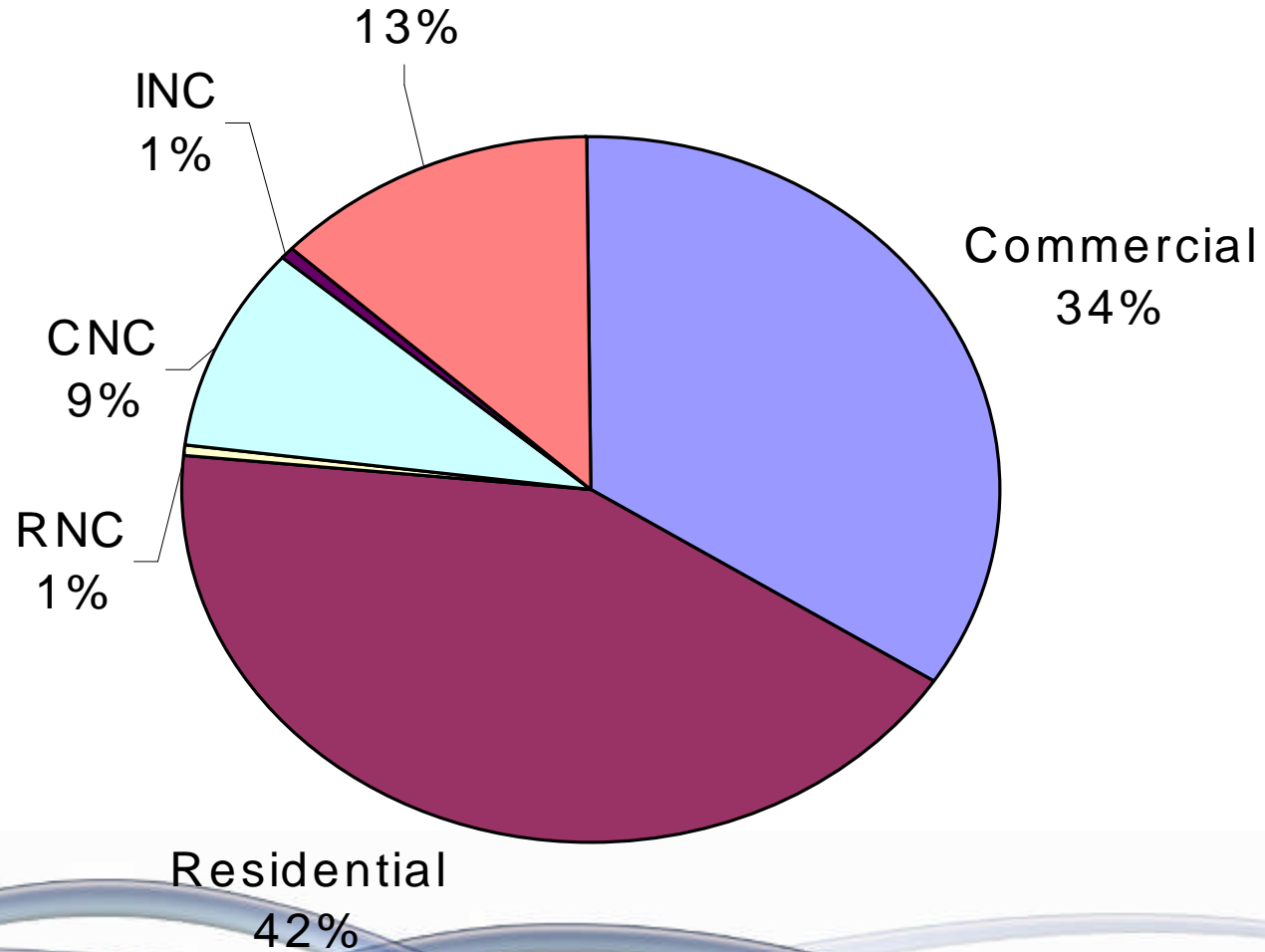
- Zero Net Energy targets for new construction (residential – 2020; commercial – 2030)
- ZNE pilot projects (starting in '09-'11 period)
- Enhanced CEC – CPUC – IOU coordination
 - Codes & Standards towards ZNE (Title 24, 20)
 - Tiered, coordinated 'stretch' goals beyond standard code
 - Coordination of CEC research & performance modeling, with CPUC authorized IOU incentives programs
- Benchmarking, building labeling programs

Residential and Commercial Themes

- Integrating DSM (EE, DR, DG/CSI) offerings & programs— (all sectors)
 - On-line information, coordinated incentive programs, audits
- Expanded whole building approaches
 - Incentives for integrated building design
 - Comprehensive retrofit programs
 - ‘One stop shops’ for integrated information
- Slowing “plug load” growth
 - Residential and commercial sectors
 - IOU emerging technologies, manufacture outreach, CEC Codes & standards, PIER research

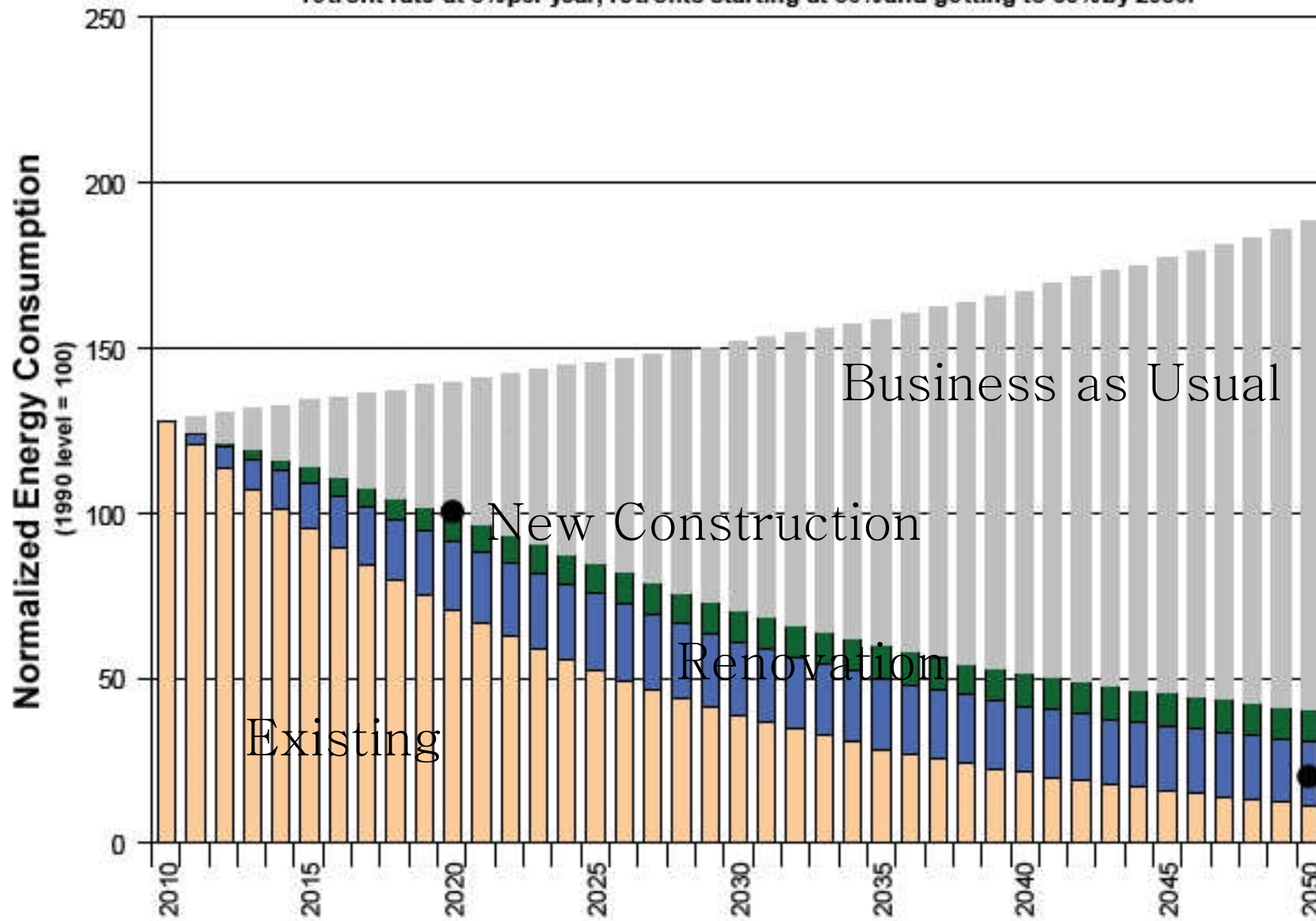
2007 Economic Potential, 38.4 TWh

Industrial 2006 Study



Aggressive Improvements to Both New and Existing Buildings

New buildings start at 60% energy savings and get to 99% by 2030,
retrofit rate at 5% per year, retrofits starting at 50% and getting to 80% by 2030.



HVAC (res and commercial)

- Improved installation and maintenance
 - Quality installer certification program
 - Tracking system from unit sale to permitting
 - Quality branding program
- Research & Design of HVAC systems suited to West
- Focus on training installers, permitting agencies
- Expanded compliance programs

Industrial

- Coordination of IOU programs with AB32 requirements
- Targeted, bilateral efficiency agreements
- Multi-resource program pilots
 - Food processing
- Participation in national energy management certification program
- Centralized technical support system

Agriculture

- Market assessment and goal setting
- Enhanced education, training, marketing, outreach
- Acceleration of new technologies
- Integrated offerings
- Focus on process changes to reduce energy use
 - Pump testing

Local Governments

- Emphasis on comprehensiveness
- Capacity building to 'lead by example'
- Integrated offerings (ee, solar, LIEE, water)
- Engagement in 'Stretch' T24 C&S, 'Green' Standards
- Expedited permitting, enhanced compliance programs
- Pilot 'point of sale' (POS) programs

Marketing & Outreach

- Statewide brand, linked to AB32
- Web portal

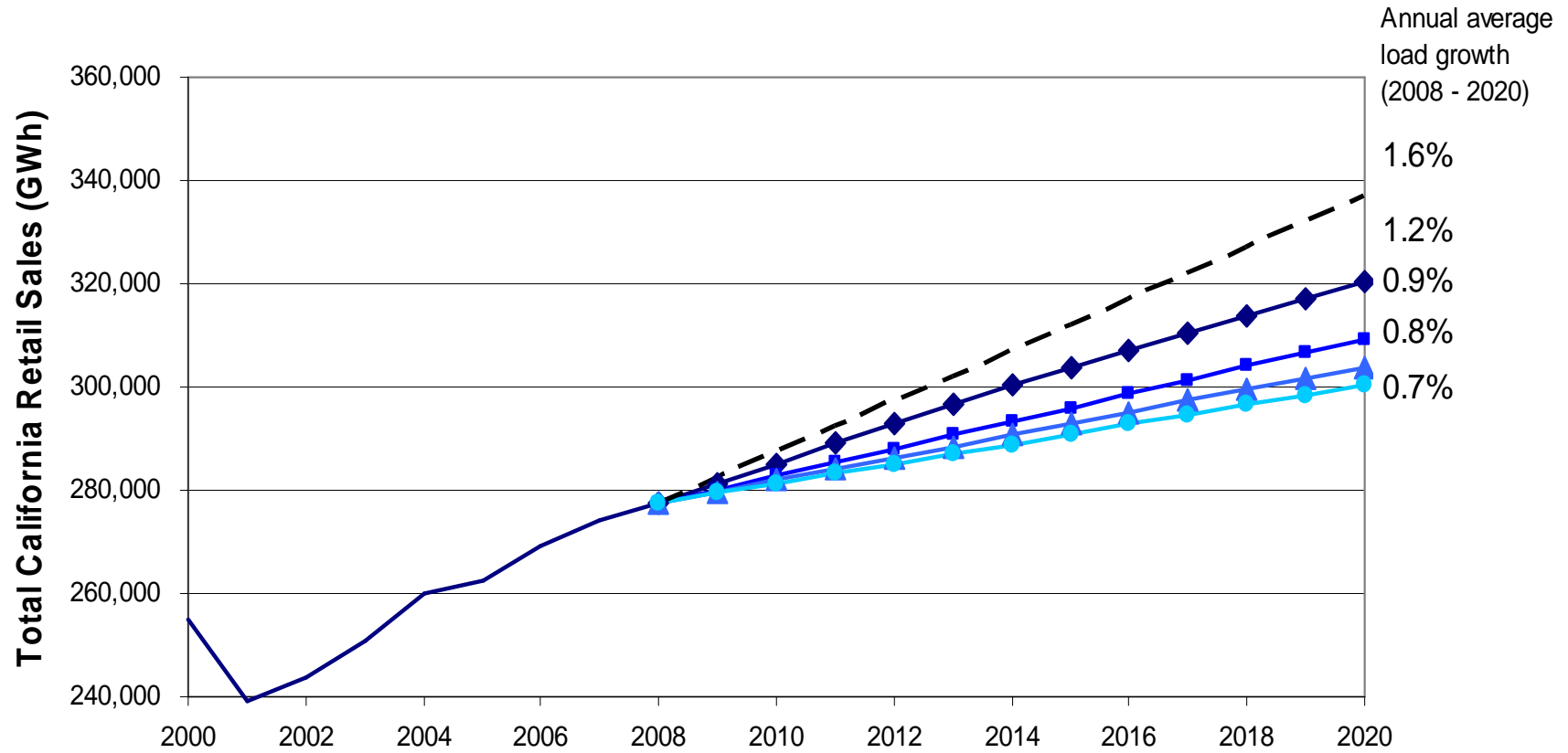
Financing & Education

- On-bill financing, expanded loan programs
- Workforce needs assessment

Emerging Technologies

- Strategic expansion, improved links to market intelligence, Big Bold strategies

Energy Efficiency Scenario Impacts on California Load Growth



- ◆ CEC business-as-usual load forecast (Nov. 2007)
- Low Proposed Goals Efficiency Scenario
- ▲ Mid Proposed Goals Efficiency Scenario
- High Proposed Goals Efficiency Scenario
- Load forecast - removing assumption of embedded EE
- Historic retail sales

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- May 15th Strategic Plan filed with CPUC
 - Extensive review & comment period
 - Concurrent filing and review of utility 09-11 Applications
 - (2012-2014 and 2015-2017)
 - CPUC authorization decision, late fall
- Continued Strategic Plan process (every 3 years)

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