Major Energy Initiatives to Reduce Greenhouse Gas Emissions

Briefing for NARUC/INE Partnership Managua, Nicaragua Angela Minkin, Chief Administrative Law Judge CPUC February 2008



Principles to implement the limit or cap on emissions

- Distribute costs and benefits equitably
- Protect entities that have already reduced the emissions voluntarily
- Ensure that there are no direct, indirect, or cumulative increases in air pollution in local communities







California Global Warming Protection Act

- Signed into law by Governor Schwarzenegger on September 27, 2006
- Requires reduction in greenhouse gas emissions to 1990 levels by 2020
- Emissions covered Carbon dioxide
 - Methane Nitrous oxide



- Hydrofluorocarbons Perfluorocarbons
- Sulfur hexafluoride



Stakeholders in California's Energy **Efficiency Programs** California ratepayers/consumers

- Consumer and Environment advocacy groups
- California Legislature and Governor
- California Public Utilities Commission
- California Energy Commission
- Independent System Operator
- Investor Owned Utilities (PG&E, SCE, SDG&E, SCG, SMJUs)
- Publicly Owned Municipal Utilities
- Energy service companies
- Local governments and other state agencies
- Program evaluation entities











Building Energy Efficiency Programs

Promotes energy savings through the identification, quantification, and substantiation of changes to building and appliance codes and standards that represent the best practices in energy efficiency.

Types of Energy Efficiency Programs

- Rebate Customer purchases energy efficiency measure at lower cost with the difference paid for by the program
- Audit Inspection of a home or business to identify energy efficiency opportunities
- Direct Install Installation of energy efficiency measures at no cost to the customer Appliance Turn-In – Takes inefficient appliances out of circulation with free or
- Appliance 1 urn-in I akes inerticient appliances out of circulation with free or rebated recycling services Education – Training for the general public as well as trade allies such as builders
- or building operators
- Performance Contracting Typically nonresidential programs; provides rebate for equipment and building retrofit per unit of energy saved rather than per measure purchased or installed
- Energy Management Services Typically Nonresidential programs. A combination of audit services, rebates and/or direct install, as well as load management and self-generation.

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 UCCSD Schools Program
 Provides University of California and California State University schools incentives for building retrofit projects and monitoring based commissioning, and education and training for campus energy managers using the UC/CSU systems of communication and outreach channels to achieve board penetration of local campuses.
 Governmental Agency Partnerships

 Partners with governmental agencies to seek opportunities to bridge the activities of the agency with the energy efficiency resources of the utilities to deliver cost-effective long-term energy savings at agency buildings and facilities.

Codes and Standards Program

UC/CSU Schools Program





- 2. Procurement
 - Energy efficiency is treated as a resource
 - Utilities "purchase" energy efficiency as they purchase electric supply
 - The procurement portfolio includes energy efficiency along with traditional supply

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	Utility Programs	Statewide Marketing & Outreach Programs	Non-Utility Programs	Evaluation and Various Projects	Total PGC Budget		
2002	\$192,820,000	\$10,057,000	\$62,012,796	\$10,500,000	\$275,389,79		
2003	\$229,717,477	\$20,507,459	\$47,448,204	\$10,992,000	\$308,665,14		
2002 (D.0 programs entities to	approved in var 11-11-066, D.02-(with over \$109 r implement state	03-056, D.02-05-04 nillion in PGC fundi wide marketing and	6, and D.02-06-0 ng from 2002 an I outreach progra	26). The CPUC si d 2003, and select ams in 2002. Budg	king (k.) 01-08- elected non-utility get for non-utility		



2006-2008 Energy Efficiency Budget & Projected Savings								
	в	udget	Projected Savings					
	(In	Million)	GWH	MW	MTH			
PG&E	\$	939	3,020	562	51,756			
SCE	\$	730	3,292	714				
SDG&E	\$	278	1,022	213	9,53			
SCG	\$	184	-	-	60,69			
Total	\$	2,131	7,334	1,489	121,989			



- Cut energy costs for homes & businesses by more than \$5 billion
- Avoid building 3 large (500 MW) power plants over the next three years
- Reduce global warming pollution by an estimated 3.4 million tons of carbon dioxide by 2008, which is equivalent to taking about 650,000 cars off the road
- Increase funding for the Governor's Green Building Initiative (Executive Order S-20-04) to \$230 million/year, which is a 36 increase in annual funding for climate change efforts
- Provide **net resource benefits** (value of savings benefits minus program and customer out-of-pocket costs) of estimated **\$2.7 billion**, representing a benefit cost ratio (using Total Resource Costs or **TRC** test) of **2 to 1** return on the efficiency investment







- Decoupling: breaking the link between utilities financial health from sales volume
- Energy efficiency as a resource in procurement portfolio
- Risk/reward incentive mechanism: Create financial incentives for utilities to invest in EE

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 Incentives for Investing in Cost-Effective Energy Efficiency
 In September 2007, CPUC established a new system of incentives and penalties to drive utilities above previous goals for energy savings
 Rewards utilities that succeed in helping

- Rewards utilities that succeed in helping customers become more energy efficient
- Offers a way for utilities to generate earning for shareholders when they invest in costeffective energy efficiency comparable to building new resources



















Regulatory Responsibility

CPUC is responsible for:

- Determining each LSE's baseline and annual RPS procurement targets
- Approving utility procurement plans, and approving or rejecting contracts executed to procure RPS-eligible electricity
- Establishing the Market Price Referent (MPR) Making determinations regarding RPS compliance and potentially imposing penalties for non-compliance

CEC is responsible for:

- Certifying renewable generating facilities as RPS-eligible
- Verifying the RPS-eligibility of energy procured to meet RPS targets









Ambitious Legislative Goals

Senate Bill 107 accelerates the 20% RPS goal from 2017 to 2010 and makes additional modifications to the RPS program:

- Changes the definition of eligible renewable resource to allow renewable power that is produced outside of California to count toward a retail seller's RPS if the associated electricity is delivered to an in-state location
- No electricity generated by an RPS-eligible resource can be attributable to the use of nonrenewable fuels, beyond a de minimus quantity
- Allows an electrical corporation to reduce its RPS obligation if the CPUC determines that there is insufficient transmission to ensure deliverability of the renewable energy
- Allows alternative RPS procurement mechanisms for ESPs









