



Overview of California's Appliance Standards, and a Proposal for Multi-state Cooperation



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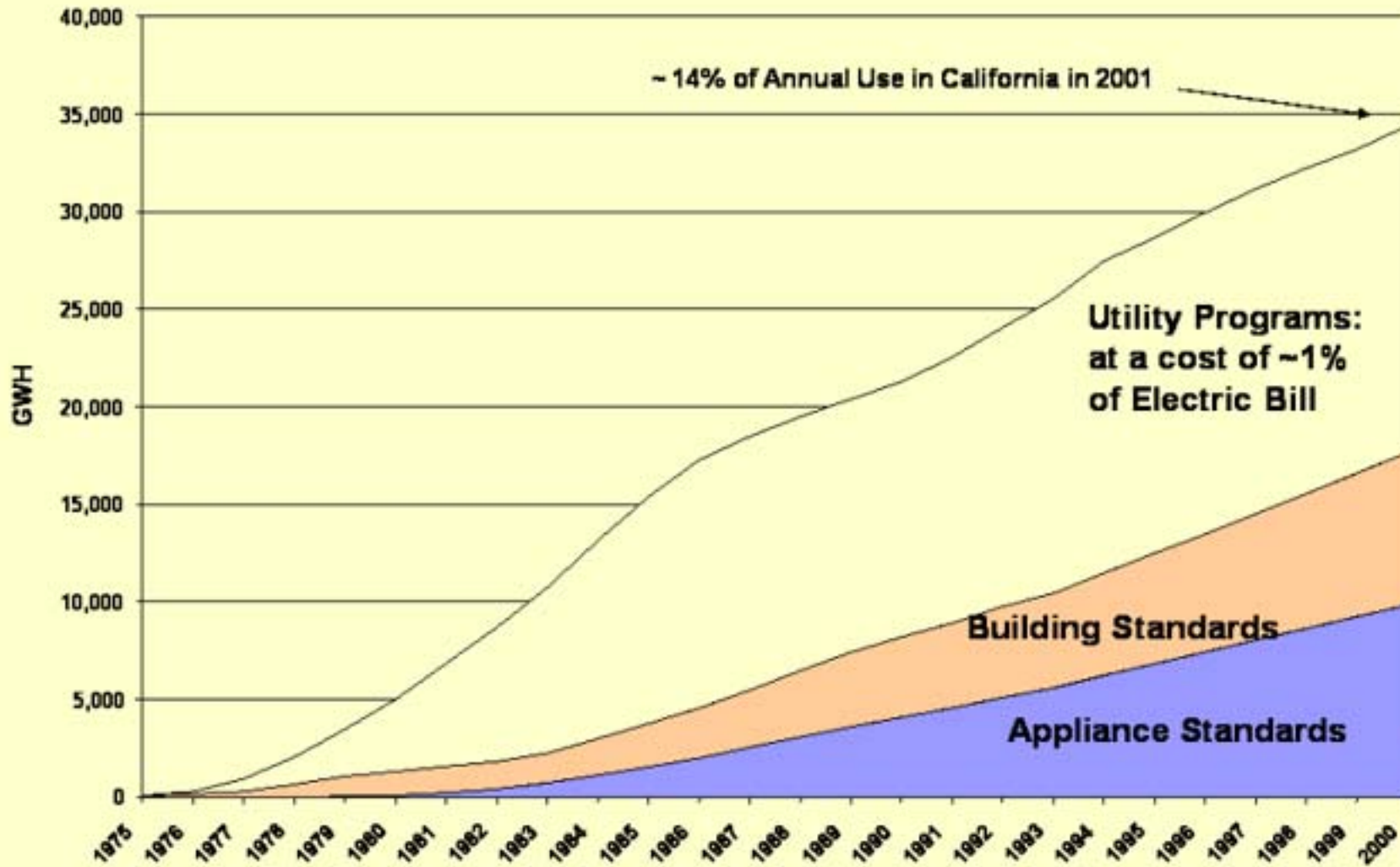
Overview of CEC

- Created in 1975 to be California's energy policy agency:
 - Power plant licensing
 - Efficiency standards for buildings and appliances
 - Energy supply and demand assessments
 - Research (\$80 M/yr)
 - Renewables (\$220 M/yr)
- 5 commissioners appointed by Governor
- 450 staff, \$360 million budget
- Website: www.energy.ca.gov



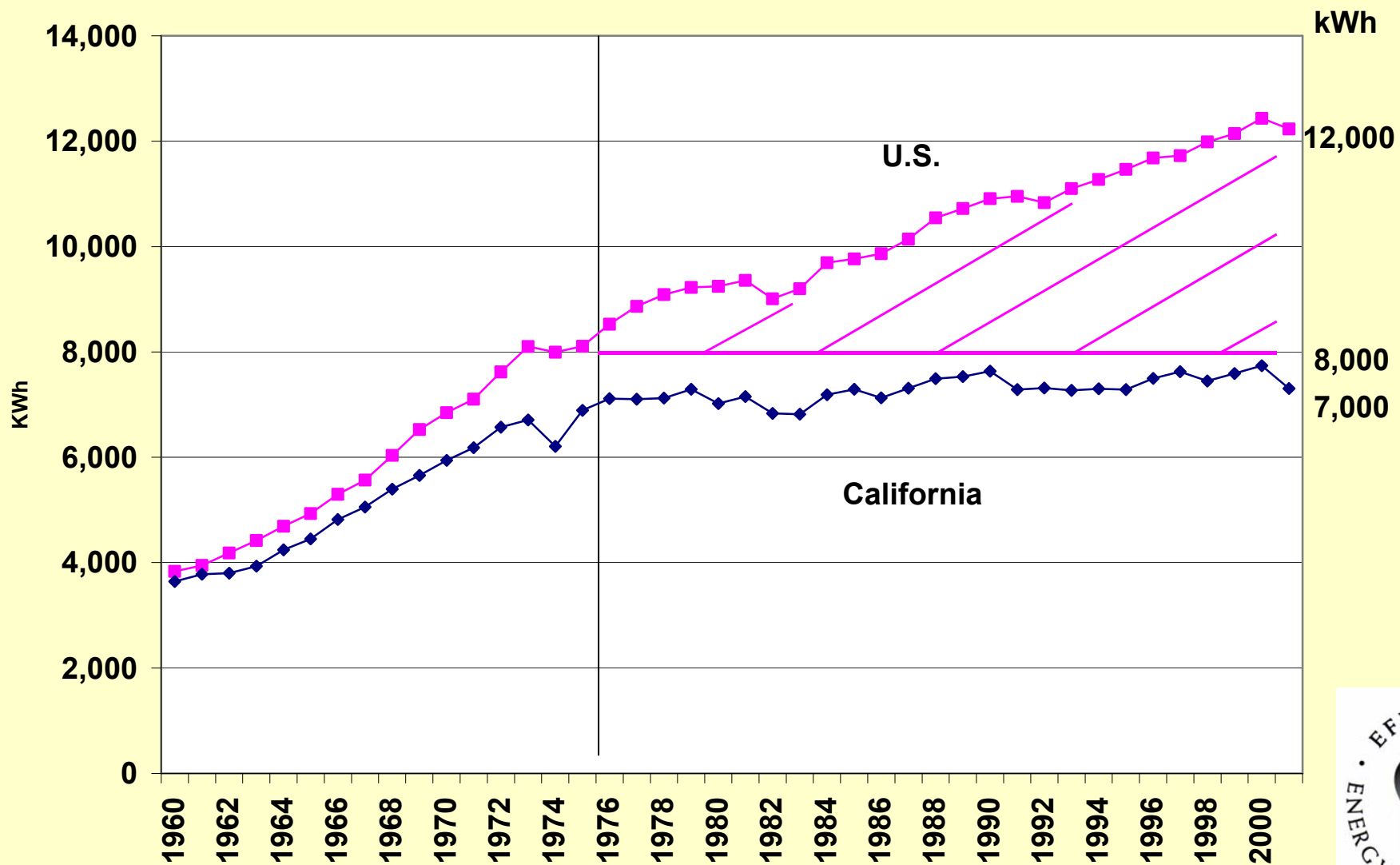


GWH Impacts from Programs Begun Prior to 2001





Total Electricity Use, per capita, 1960 - 2001





Economic benefits

- California kWh/person would have been 50% higher if we kept up pre-1975 growth
- California electric bill in 2004 ~ \$32 Billion
- so we've avoided ~\$16 B/yr of electricity bills
- we have spent about 1%/yr on utility programs and standards (about \$10/family/yr)
- so, net saving is “only” ~\$12B/year, but that is **\$1,000/family/yr.**





California state law

- Public Resources Code sec 25402(c), requires the CEC to set standards:
 - for all appliances that use a significant amount of energy.
 - that are feasible, and must reduce demand growth.
 - that are cost-effective to consumers over the life cycle of the appliance.
- Manufacturers must certify to the CEC they meet the standards in order to sell in the state.
- www.energy.ca.gov/reports/Warren-Alquist_Act/2004_WARREN-ALQUIST_ACT.PDF





CEC appliance regulations

- Adopted by the Commission.
- Specifies standards, compliance and enforcement provisions.
- Current regulations “Title 20” (~150 pp):
 - www.energy.ca.gov/appliances/documents/
- CEC appliances standards website:
 - www.energy.ca.gov/appliances





Regulated appliances – adopted 78-84

- IIDs
- refrigerator
- room AC
- central AC
- heat pumps
- furnaces
- boilers
- wall heaters
- plumbing fittings
(showerheads, faucets)
- ballasts
- large AC (65-135 KBtu).





Regulated appliances – adopted 2002

- central AC (EER)
- commercial AC
- vending machines (lighting)
- commercial frigs (transparent and solid doors <85 CF)
- traffic signals
- torchieres
- domestic and coin-op clothes washers
- distribution transformers
- exit signs





New standards – adopted 2004

- external power supplies
- digital TV adaptors
- commercial frigs
- walk-in frigs
- vending machines (daily energy use)
- ice makers
- refrigerated water dispensers
- pedestrian traffic signals
- audio and video consumer electronics
- very large AC (240-760 KBtu)
- evaporative coolers
- pool pumps
- portable spas
- pre-rinse spray valves
- fluorescent ballasts
- (and others ...)





Standards for data reporting only

- Purpose: gathering data for future standards and other evaluation programs.
- Requirements adopted 2004:
 - ceiling fans
 - evaporative coolers
 - whole house fans
 - residential exhaust fans
- Delayed: set-top boxes (IRDs)





CEC activities in 2005

- “Clean up” rulemaking
- Rulemaking to adopt delayed lighting standards:
 - general service incandescent lamps
 - incandescent reflector lamps
 - metal halide lamps





Standards development process

- Rely extensively on utility staff and consultants.
- PG&E CASE program (Codes and Standards Enhancement):
 - www.energy.ca.gov/appliances/documents/case_studies





Compliance

- Manufacturers required to certify to the CEC that they meet the standard.
- CEC created databases (were printed, now on-line):
 - www.energy.ca.gov/efficiency/appliances
 - Data is also used for building code compliance.





Enforcement

- CEC had contract for testing (about \$75k/yr), and used to do spot checks.
- Now, CEC can demand test report from manufacturer, and if do not get one, CEC can have test performed at mfr expense. (sec. 1608 (c)).
- If do not comply, then appliance is delisted and is not legal to be offered for sale in the state.
- Also survey retail stores...





Cost of CEC appliance program

- CEC costs:
 - about 5 FTE staff – about \$500k/yr
 - database support – about \$200k/yr
 - legal support – about \$100k/yr (preemption battles are big unknown)
- Utility support (PG&E CASE):
 - about \$500k/yr (including preemption waiver support)
- Total: about \$1.3 million/yr





Activities in other states

- ASAP: Appliance Standards Awareness Project
 - Andrew deLaski, Executive Director
 - Report on benefits of state standards (energy, dollar, pollution savings)
 - www.standardsasap.org
 - Summary of current state activities attached
- States where standards enacted/adopted:
 - AZ, WA, MD, CT, NJ, CA
- States where standards are pending:
 - MA, ME, NY, OR, RI, VT, PA
- Covered products vary by state; generally subset of those adopted in CA in 2004





Proposal: Multi-state Standards Program

- Problem: creating compliance and enforcement programs are a burden to states adopting standards
- Solution:
 - Compliance: states can refer to CEC database for certified products.
 - Enforcement: CEC can provide testing when other states request, and delist non-complying products. Should do retail surveys, probably need to be local.
- ASAP is coordinating effort to create “model regulations” that would enable this.





Opportunities...

- Technology: Research combined with utility emerging technology and efficiency programs.
 - Cycle: R&D > ET > EE > standards
- International markets:
 - External power supplies are an example of many entities working together on test procedures and specification levels for voluntary and mandatory programs.
 - EnergyStar, California, China, Australia, European Union, and other countries.
 - Next: set top boxes and TVs
 - Meetings in San Francisco June 28, 29

