Overview of Appliance Standards Activities – Can Programs Participate and Be Rewarded?

NEEP Workshop
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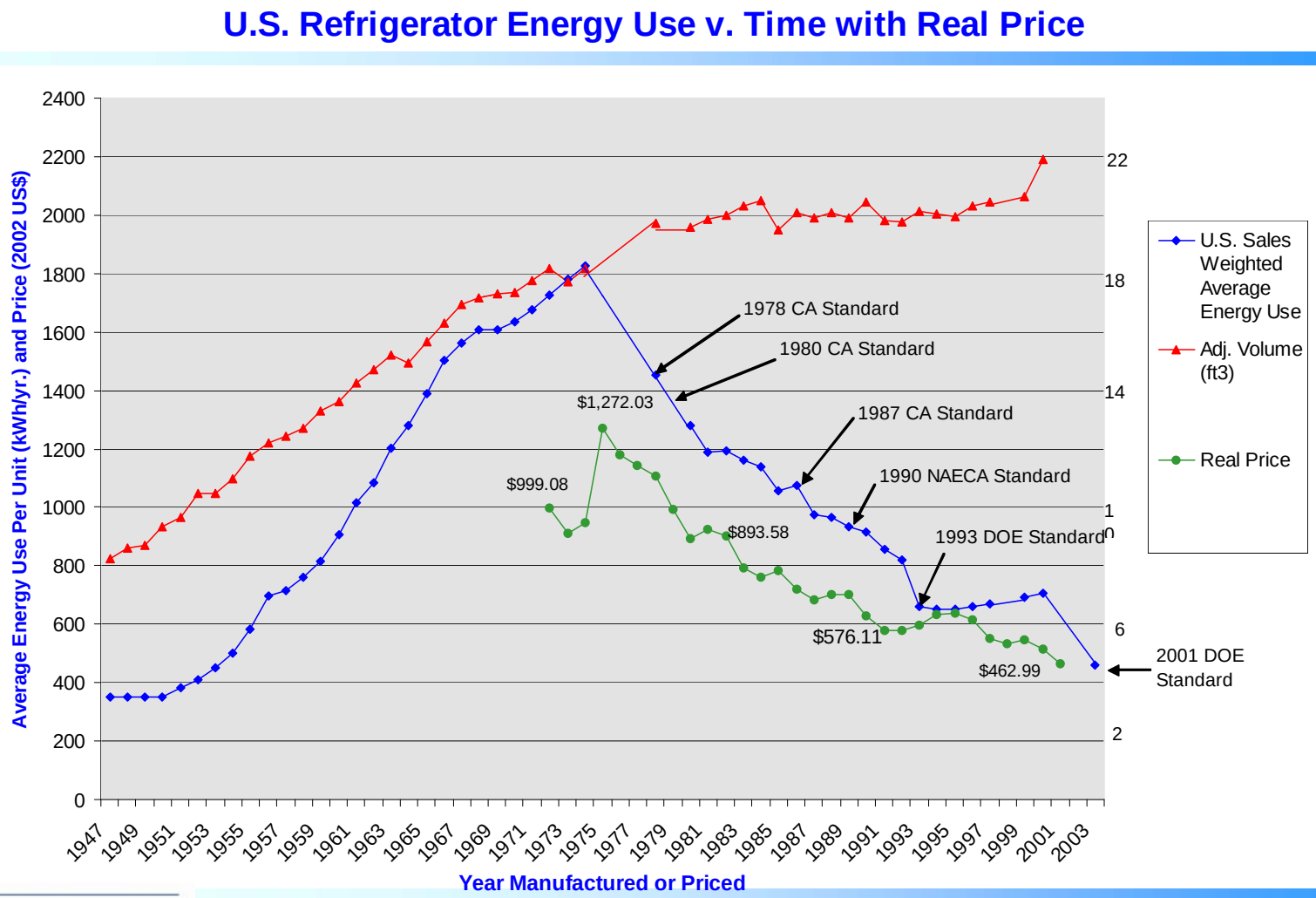
Overview

- Impact of appliance standards
- Background and evolution
- California and utility program
- Northwest and Northeast involvement
- Federal story-> new opportunities
- Discussion topics

Why Standards Are Important

- Residential/commercial buildings consume about 42% of U.S. primary energy
  - More than 70% related to appliances and equipment
  - Major end uses are lighting, space heating/cooling/ventilation, water heating
  - Electronics + computers are rapidly moving into top four
- Existing standards avoid need for 186 new (400MW) coal-fired power plants nationally by 2030
  - Potential savings from new standards (2009-13) could avert need for 63 more power plants (ASAP)
- Future standards represent larger savings opportunity than building codes, according to 2009 IEE report

The Case for Standards- Illustrated



Origin and Growth of Standards

- Two Federal Acts in 70's gave DOE authority to establish minimum standards for selected products
  - When Feds failed to act, California and other states took lead in the 80's
- Industry, concerned about patchwork of state standards, agreed to standards established by 1987 National Appliance Energy Conservation Act (NAECA)
  - Covered 12 products
  - Strong Fed preemption granted in return: Fed standards became min/max standard, trumping state standards
- Federal program influenced by politics; slowly grown to cover over 40 product categories
  - Still some room for states to operate

California's Process

- 1974 legislation creating California Energy Commission (CEC) provided authority to set standards
- CEC actions varied with federal activity and energy crises
  - Mid-1990s, Congress slowed DOE standards by withholding funding
  - California and other states again took initiative
  - California AB 970 (2000) required major upgrades to respond to brownouts

Emergence of California Utility Role

- Involvement started in late 1990s as information-only program
  - Motivated by market transformation focus and cost effectiveness of codes and standards
- Developed proposals to CEC
  - Identified candidate appliances
  - Conducted research
  - Participated in process

California's 2006 Standards

- IOUs funded preparation of Codes and Standards Enhancement (CASE) studies 2003-2005
  - Technology research
  - Market assessment
  - Feasibility and cost
- Covered nearly 20 diverse products
- First significant Codes & Standards (C&S) program steps

Current C&S Program Activities

- IOUs take active role with CEC in identifying opportunities
  1. Gaps in federal standards coverage
  2. Period before DOE standards take effect
  3. Test procedures providing basis for new standards
- Sponsor research and workshops
  - Products include computers, monitors, microwaves, televisions
  - Battery charger workshop

An Integrated IOU Approach

1. Identify and research emerging technologies—often with CEC
2. IOUs design/implement programs for best opportunities
3. Identify steps needed to adopt standard, including test procedures
4. Conduct workshops, work with stakeholders, negotiate
5. Prepare proposal—test procedure or standard—and/or work at federal level
6. Present proposal and advocate

Steps in blue are part of C&S program

Claiming Savings in California

- Verified savings determined by 3rd party evaluation
- Potential savings adjusted for:
  - Compliance
  - Naturally occurring adoption
  - Attribution to C&S program
- Attribution process (as of 2006-08)
  - Only for California standards even if program influenced Federal standards
  - Stakeholders assess factors affecting adoption
  - Evaluators assess contribution of C&S program

Future Directions in California

- More real-time documentation of program role
- Recognition of program effects on federal standards
- Credit for compliance enhancement

Northwest Background—A Unique Region

- Historically low electricity rates due to huge investment in hydro power
  - Bonneville Power Administration (BPA) created in 1937 to deliver and sell power
  - 45% of electricity provided by BPA
- Northwest Power Act passed 1980
  - Created NW Power & Conservation Council (NPCC)
  - Addresses salmon and power
  - Provides regional planning and forecasting—Power Plan every 5 years
- Northwest Energy Efficiency Alliance (NEEA)
  - Established 1997 to promote market transformation
  - Funded by private and public utilities and Energy Trust of Oregon (ETO)

NPCC Involvement with Standards

1. Expected standards (and codes) factored into NPCC baseline forecast built on end-use analysis
2. NPCC first engaged in federal standards in 1987
3. Continues active role
   a. DOE process
   b. Negotiations
4. Power Plan process used to update savings and forecast

NEEA's Involvement with Standards

1. Tracks and assesses emerging technologies for opportunities
   a. Assess regional applicability
   b. Analyze savings potential
2. Conducts initiatives, e.g., demonstrations
3. Hands off to IOUs and ETO for programs—monitor progress
4. Pursues standards
   a. Fund/compile data and information
   b. Participate in Federal process
5. Provides information for Power Plan updates

Northeast History

- Since 2004, 8 states in region (and DC) have passed appliance standards legislatively
  - Enabled by facilitation and information sharing by NEEP's Northeast Appliance Standards Project
  - Based on California's standards
  - Many states are part of Multistate Appliance Standards Collaborative

Northeast Efficiency Program Involvement

- Although program involvement has been limited, some key actions have been taken:
  - Some efficiency programs from region have co-signed NEEP comment letters for DOE rulemakings
  - National Grid (MA) has supported legislative efforts (2005, 2010) and provided key market data to develop waiver petition
  - Every MA program wrote DOE support letters for HVAC standards in recent advocate-industry consensus agreement
- No mechanisms currently exist to claim savings

New Federal Window of Opportunity

- After years of delays and resistance, DOE is anxious to make progress
- Energy Secretary Steven Chu: "Energy efficiency isn't just low-hanging fruit; it's fruit lying on the ground."
  - Told staff to double their standards program request
- May be time to reexamine federal preemption

What Help Is Needed? Views from California & Northwest

- Fund, collect, use, share program and test data
  - Refrigerators?
  - Clothes dryers?
- Participate in federal process
  - Strength in numbers
  - Inform lobbyists
  - Inform industry groups (e.g., EEI)
- Focus on preemption revisions and possible enforcement/compliance issues

Issues to Discuss

- Latest on Federal standards
  - (Andrew deLaski, ASAP)
- What kinds of activities make sense for Northeast programs?
  - CA standards program model (R&D/advocacy)
  - Federal standards participation (advocacy), etc.
- Critical challenges for programs to address
- Critical attribution concerns

Discussion Part II

- What are the fundamental differences between code and standards activities?
- For programs/states interested in codes and standards, does it make sense to seek regulatory approval separately or to get approval for both simultaneously?
- What can NEEP do to assist interested parties?