Appendix C: Recent and Pending National Standards

1. Recent National Standards

In late 2000 and early 2001, the Department of Energy (DOE) completed four new standards, each the culmination of three or more years of work at DOE. The new standard for residential clothes washers will increase washer efficiency by 20 percent effective Jan. 1, 2004 and another 15 percent effective Jan. 1, 2007. The new water heater standard will increase gas water heater efficiency by about 8 percent and electric water heater efficiency by about 4 percent effective Jan. 1, 2004. For commercial fluorescent lamp ballasts, DOE established a ballast efficiency factor that has the effect of eliminating magnetic ballasts. It affects new construction and renovation projects effective Jan. 1, 2005, but allows manufacturers to sell magnetic ballasts as replacements bulbs for existing fixtures through 2010.

The fourth new standard requires that new residential central air conditioners and heat pumps meet a SEER 13 standard (a 30 percent improvement over the old SEER 10 standard) effective January 23, 2006. In response to a request from some air conditioning manufacturers, the Bush administration has pursued a plan to weaken this standard to SEER 12. This rollback has been widely opposed by utilities, state government officials, consumer groups and environmental advocates. Nine states attorneys general have challenged the legality of the rollback. National legislation introduced in December 2001 would override the DOE rollback by simply enacting the SEER 13 standard. At the state level, California has proposed to adopt a standard that is more stringent than the SEER 13 standard and intends to request a waiver from federal preemption.

Altogether, the new national standards adopted in 2000 – 2001 will save about 77 billion kilowatt hours (KWh) per year by 2020, reduce national peak demand by about 54,000 megawatts (equivalent to the output of 180 power plants at 300 megawatts each) and save consumers $25 billion.

2. National Standards Under Development

Over the next three years (2002 – 2004), DOE will work on two priority rulemakings: residential furnaces and boilers and commercial air conditioners and heat pumps. DOE may add another priority standard for development. Both of the DOE priorities are of particular interest to the states in the Northeast.

RESIDENTIAL FURNACES AND BOILERS

Furnaces and boilers are the dominant heating technologies in Northeast states. For all of the states in the region, home heating accounts for a large share of residents 'home energy bills. There are three key issues at stake in this rulemaking:

? ? Setting an appropriately strong minimum thermal efficiency requirement (AFUE rating);
? ? Allowing cold states to opt-in to a more stringent standard; and,
? ? Addressing electrical consumption by the furnace fan

Improved thermal efficiency as measured by AFUE cuts oil and gas use. A modest increase in the current AFUE standard will be cost effective for all states. But for cold weather states, a much larger increase will be cost effective.[27]

In addition, one of the largest savings opportunities identified derives from improved furnace fans. For a given household, the savings from better fan efficiency could equal as much as 500 kWh per year – more than the typical annual energy use of a new refrigerator. Often, a furnace fan does double duty as the fan for a central air conditioner. The federal standard does not address the electrical use of furnaces and boilers.

The current DOE schedule calls for publication of the proposed new standard in 2003 and the final new standard in 2004. The Department will solicit comments on its preliminary analysis (officially released with a document called an Advance Notice of Proposed Rulemaking) and candidate standard levels in late 2002. The standard would go into effect in 2012.[28] States that wish to adopt a standard sooner must set their own standard and then petition DOE for a waiver from federal preemption.

COMMERCIAL AIR CONDITIONERS AND HEAT PUMPS

Commercial air conditioners account for a significant portion of peak load for northeastern states. The key issue in the DOE rulemaking will concern the appropriate Energy Efficiency Ratio (EER) at which to set the new standard.

Many utilities in the region have sponsored programs promoting purchase of energy efficient air conditioners for many years. These programs generally supported air conditioners meeting the efficiency specifications of the Consortium for Energy Efficiency (CEE). The basis for the savings estimates in this report is a new minimum standard set at the CEE *Tier 2* level.

The DOE schedule calls for publication of the proposed new standard in 2003 and the final new standard in 2004. The Department will solicit comments on its preliminary analysis and candidate standard levels in late 2002. The standard would go into effect in 2007. States that wish to adopt a standard sooner must set their own standard and then petition DOE for a waiver from federal preemption.

[27] Condensing type furnaces have AFUEs at 90 and above and are cost effective in colder climates. The upfront investment however is not cost effective in warmer states. American Council for an Energy Efficient Economy, Harvey Sachs, official comments to DOE docket "Energy Conservatin Standards for Residential Furnaces and Boilers, Docket Number: EE-RM/STD-01-350," August 16, 2001.

[28] This is an extraordinarily long lead time for a new standard. Typically, federal standards provide a three-year period between adoption and implementation, but the national law provides a longer period for this product as a result of the negotiated agreement between manufacturers and advocates that made the first standards law possible.