

Table A-6: from **Opportunities for New Appliance and Equipment Efficiency Standards: Energy and Economic Savings Beyond Current Standards Programs.** Washington, D.C.: American Council for an Energy Efficient Economy. 2001

Products	2000 Sales	Current Standard or Baseline	New Standard or Average Use	Average Product Life	Annual Baseline and Savings/Unit Calculation	Per Unit Incremental Cost	Coincidental Peak Factor
Furnace & HP fans (heating)	Appliance 2001	ACEEE 2001	ACEEE based on Lennox 2001	DOE 2000b	ACEEE based on Lennox 2001	ACEEE bottom up	No summer peak
Furnace, A/C & HP fans (cooling)	Appliance 2001	ACEEE 2001	ACEEE based on Lennox 2001	DOE 2000b	ACEEE based on Lennox 2001	ACEEE bottom up	Thorne et al. 2000b
Consumer electronics (standby power)	Appliance 2001	Thorne & Suozzo 1998	1 watt standby	ACEEE estimate of average	ACEEE calculation assuming standby occurs 8,760 hrs	Suozzo & Nadel 1998	1/8,760 hrs
Ceiling fans	Appliance 2001	Calwell & Horowitz 2001	EPA/DOE 2001c	Calwell 2001; ACEEE estimate	Calwell 2001	E Source 2001	EIA 2000a
Torchiere lamps	Calwell & Horowitz 2001	EPA/DOE 2001d	CEC 2001	Calwell 2001; ACEEE estimate	EPA/DOE estimate of daily use (4 hrs)	EPA/DOE 2001	EIA 2000a
Commercial unit and duct heaters	Krauss et al. 1992	Krauss et al. 1992	ACEEE based on Krauss et al. 1992	Krauss et al. 1992	Krauss et al. 1992	Krauss et al. 1992	No summer peak
Dry-type transformers	Barnes et al. 1997	Barnes et al. 1997	NEMA 1998	DOE 2000c	Barnes et al. 1997	Barnes et al. 1997	Thorne et al. 2000a
Beverage vending machines	ADL 1996	ADL 1996	ADL 1996	ADL 1996	ADL 1996	ADL 1996	EIA 2000a
Commercial refrigerators & freezers	ADL 1996	ADL 1996	ADL 1996	ADL 1996	ADL 1996	ADL 1996	EIA 2000a
Traffic signals	Suozzo 1998	Suozzo 1998	EPA 2001; ACEEE estimate	ACEEE estimate from multiple sources (see Table 3.9.2)	ACEEE estimate from multiple sources (see Table 3.9.2)	CEE 2001	1/8,760 hrs
Exit signs	E Source 1994	EPA 2001	EPA 2001; ACEEE estimate	Suozzo & Nadel 1998	Units are on 8,760 hrs/yr	EPA 2001	1/8,760 hrs

Commercial clothes washers	CEE 2001	DOE 2000d	DOE 2000d	PG&E 2001	PG&E 2000	PG&E 2001	EIA 2000a
Beverage merchandisers	ADL 1996	ADL 1996	ADL 1996	ADL 1996	ADL 1996	ADL 1996	EIA 2000a
Ice makers	ADL 1996	ADL 1996	ADL 1996	ADL 1996	ADL 1996	ADL 1996	EIA 2000a
Large packaged A/C equipment	Census 1999	ASHRAE 1989	CEE 2001c	ASHRAE 1996	ACEEE estimate based on data used to develop ASHRAE 90.1-1999	DOE 2000a	Thorne et al. 2000b
Residential central A/C and HP	Appliance 2001	DOE 2000b	DOE 2000b	DOE 2000b	DOE 2000b adjusted	ACEEE estimate based on DOE 2000b	Thorne et al. 2000b
Small packaged A/C and HP	Census 1999	ACEEE estimate based on Census 1999	CEE 2001c	ASHRAE 1996	ACEEE estimate based on data used to develop ASHRAE 90.1-1999	<i>Cool Choice</i> market analysis 1998	Thorne et al. 2000b

Table B-3 Sources:

- ACEEE 2001= American Council for an Energy-Efficient Economy. 2001. *The Most Energy-Efficient Appliances 2001*. Washington, D.C.: American Council for an Energy-Efficient Economy.
- ADL 1996 = Arthur D. Little, Inc. 1996. *Energy Savings Potential for Commercial Refrigeration Equipment*. Cambridge, Mass.: Arthur D. Little, Inc.
- Appliance 2001 = Appliance Magazine. 2001. "49th Annual Appliance Industry Forecast: Predicting the Landing." *Appliance*, January 0003/6781
- ASHRAE 1989 = American Society of Heating, Refrigerating, and Air-Conditioning Engineers. 1989. *Energy Code for Buildings Except Low-Rise Residential Buildings*. ASHRAE 90.1-1989. Atlanta, Ga.: American Society of Heating, Refrigerating, and Air-Conditioning Engineers.
- ASHRAE 1996 = 1996. *HVAC Systems and Equipment Handbook*. Atlanta, Ga.: American Society of Heating, Refrigerating, and Air-Conditioning Engineers.
- Barnes et al. 1997 = Barnes, P.R., S. Das, B.W. McConnell, and J.W. van Dyke. 1997. *Supplement to the Determination Analysis @ (ORNL-6847) and Analysis of the NEMA Efficiency Standard for Distribution Transformers*. ORNL-6925. Oak Ridge, Tenn.: Oak Ridge National Laboratory.
- Calwell & Horowitz 2001= Calwell, C. (Ecos Consulting) and N. Horowitz (Natural Resources Defense Council). 2001. Personal communication to Harvey Sachs and Steven Nadel to update estimates in Calwell, C. and N. Horowitz. 2001. "Ceiling Fans: Fulfilling the Energy Efficiency Promise." *Home Energy*, January/February.
- CEC 2001 = California Energy Commission. 2001. *Proposed Amendments to California Code of Regulations, Title 20: Appliance Efficiency Regulations; and Title 24: Building Standards*, March 30, 2001 Draft of Draft 15-Day Language. Sacramento, Calif.: California Energy Commission.

CEE 2000 =	Consortium for Energy Efficiency. 2000. Fact Sheet: Energy-Efficient Traffic Signals. Available online: www.ceeformt.org/resrc/facts/led-fx.php3 . Boston, Mass.: Consortium for Energy Efficiency.
CEE 2001b =	2001b. Commercial, Family-Sized Clothes Washer Initiative. Available online: www.ceeformt.org/com/cwsh/cwsh-main.php3 . Boston, Mass.: Consortium for Energy Efficiency.
CEE 2001c =	2001c. High-Efficiency Commercial Air Conditioning and Heat Pumps Initiative. Available online: www.ceeformt.org/com/hecac/hecac-main.php3 . Boston, Mass.: Consortium for Energy Efficiency.
Census 1999 =	U.S. Census Bureau. 1999. Refrigeration, Air Conditioning, and Warm Air Heating Equipment. MA333M(99)-1. Available online: http://www.census.gov/ftp/pub/industry/1/ma35m99.pdf . Washington, D.C.: U.S. Census Bureau.
Chris Neme 10/16/01 =	Personal conversation between Chris Neme of Vermont Energy Investment Corporation and Toru Kubo of ACEEE on October 16, 2001.
<i>Cool Choice</i> market analysis 1998 =	Market survey of incremental cost for high-efficiency equipment, conducted by NEEP sponsor group for <i>Cool Choice</i> – Northeast regional packaged-HVAC efficiency initiative, April 30, 1998
DOE 2000a =	U.S. Department of Energy. 2000a. Standards Rulemaking: Commercial Unitary Air Conditioners and Heat Pumps. Available online: www.eren.doe.gov/buildings/codes_standards/applbrf/coml_air_conditioner.html . Washington, D.C.: U.S. Department of Energy.
DOE 2000b =	2000b. Central Air Conditioner and Heat Pump Rulemaking: Technical Support Document. Available online: www.eren.doe.gov/buildings/codes_standards/applbrf/coml_air_conditioner.html . Washington, D.C.: U.S. Department of Energy.
DOE 2000b adjusted =	Data from the Technical Support Document were adjusted for individual states using 1) data from RECS 1997; 2) state-specific cooling degree-day data, and 3) U.S. DOE's "Analysis of Efficiency Advocates' Alternative Scenarios" document prepared the rulemaking.
DOE 2000c =	2000c. Distribution Transformers: Technical Support Document. Available online: www.eren.doe.gov/buildings/codes_standards/applbrf/dist_transformer.html . Washington, D.C.: U.S. Department of Energy.
DOE 2000d =	2000d. Clothes Washers: Technical Support Document. Available online: http://www.eren.doe.gov/buildings/codes_standards/reports/cwtsd/index.html . Washington, D.C.: U.S. Department of Energy.
E Source 1994 =	E Source. 1994. Tech Update: LED Traffic Lights— New Technology Signals Major Energy Savings. TU-94-1. Boulder, Colo.: E Source, Inc.
E Source 2001 =	2001. E Source Tech News, May 15. Boulder, Colo.: E Source, Inc.
EIA 2000a =	2000a. Electric Utility Demand Side Management 1999: Executive Summary. Available online: http://www.eia.doe.gov/cneaf/electricity/dsm99/dsm_sum99.html . Washington, D.C.: U.S. Department of Energy, Energy Information Administration.
EPA 2001f =	2001f. ENERGY STAR [?] Traffic Signals. Available online: http://yosemite1.epa.gov/estar/consumers.nsf/content/traffic_signals.htm . Washington, D.C.: U.S. Environmental Protection Agency/Department of Energy.
EPA 2001h =	2001h. ENERGY STAR [?] Exit Signs. Available online: http://yosemite1.epa.gov/estar/consumers.nsf/content/exitsigns.htm . Washington, D.C.: U.S. Environmental Protection Agency/Department of Energy.

- EPA/DOE 2001c = 2001c. ENERGY STAR[?] Residential Ceiling Fans. Available online: <http://yosemite1.epa.gov/estar/consumers.nsf/content/ceilingfans.htm>. Washington, D.C.: U.S. Environmental Protection Agency/Department of Energy.
- EPA/DOE 2001d = 2001d. ENERGY STAR[?] Floor and Table Lamps. Available online: <http://yosemite1.epa.gov/estar/consumers.nsf/content/floorandtablelamps.htm>. Washington, D.C.: U.S. Environmental Protection Agency/Department of Energy.
- Krauss et al. 1992 = Kraus, W.E., M.J. Hewett, and M.S. Lobenstein. 1992. Commercial Gas Space Heating Equipment: Opportunities to Increase Energy Efficiency. CEUE/TR91-3-CM. Minneapolis, Minn.: Center for Energy and the Urban Environment.
- Lennox 2001 = Lennox, Inc. 2001. "Lennox Innovator Series Brochure: 3 Dimension™ , Two-Stage Variable-Speed Gas Furnace."
- NEMA 1998 = [NEMA] National Electrical Manufacturers Association. 1996. NEMA Standards Publication, TP-1-1996: Guide for Determining Energy Efficiency for Distribution Transformers. Rosslyn, Va.: National Electrical Manufacturers Association.
- PG&E 2000 = [PG&E] Pacific Gas & Electric. 2000. Codes and Standards Enhancement Study: Energy Efficiency Exit Signs. San Francisco, Calif.: Pacific Gas & Electric.
- PG&E 2001 = 2001. Code Enhancement Initiative for the AB 970 Emergency Rulemaking: Commercial Clothes Washers. San Francisco, Calif.: Pacific Gas & Electric.
- Suozzo 1998 = Suozzo, M. 1998. A Market Transformation Opportunity Assessment for LED Traffic Signals. ACEEE-A983. Washington, D.C.: American Council for an Energy-Efficient Economy.
- Suozzo & Nadel 1998 = Suozzo, M. and S. Nadel. 1998. Selecting Targets for Market Transformation Programs: A National Analysis. ACEEE-U981. Washington, D.C.: American Council for an Energy-Efficient Economy.
- Thorne et al. 2000b = 2000b. Staying Cool: How Energy-Efficient Air Conditioners Can Prevent Blackouts, Cut Pollution and Save Money. Washington, D.C.: American Council for an Energy-Efficient Economy.
- Thorne & Suozzo 1998 = Thorne, J. and M. Suozzo. 1998. Leaking Electricity: Standby and Off-Mode Power Consumption in Consumer Electronics and Household Appliances. ACEEE-A981. Washington, D.C.: American Council for an Energy-Efficient Economy.