ACRONYMS

AB	Accreditation body		Equipment Manufacturers
ACE	ASEAN Center for Energy	CECP	Center for the Certification of
ACEEE	American Council for an Energy- Efficient Economy		Energy Conservation Products (China)
ADB	Asian Development Bank	CEE	Consortium for Energy Efficiency
ADEME	Agence de l'Environnement et de la Maîtrise de l'Energie (French Agency for the Environment and Energy Management)	CEECAP	Central and Eastern European Countries Appliance Policy
		CEN	European Committee for Standardization
AGO	Australian Greenhouse Office	CENELEC	European Committee for
AHAM	Association of Home Appliance		Electrotechnical Standardization
	Manufacturers	CFC	chlorofluorocarbon
ANER	Tunisian Agency for Renewable Energy	CFL	compact fluorescent lamp
		CFR	Code of Federal Regulations
ANSI	American National Standards Institute	CLASP	Collaborative Labeling and Appliance Standards Program
ANOPR	advance notice of proposed	СМ	compliance monitoring
APEC	Asia-Pacific Economic	CNIS	China National Institute of Standardization
ARI	Cooperation Air-conditioning and Refrigeration Institute	СО	certification organization
		CO ₂	carbon dioxide
ASEAN	Association of Southeast Asian Nations	CONAE	Comision Nacional para el Ahorro de Energia (Mexican government
ASHRAE	American Society of Heating, Refrigerating, and Air-conditioning	COP	coefficient of performance
		COPANT	Den American Standarda
A T 7		COFAINT	Commission
AV	adjusted volume	CSA	Canadian Standards Association
BRS	Building Research and Standards Office (U.S. DOE)	CTI	Climate Technology Initiative
Btu	British Thermal Unit		(of the IEA)
CACPK	Citizens Alliance for Consumer Protection of Korea	DG TREN	European Commission Directorate General for Transport and Energy
CANENA	Council for the Harmonization of Electro-technical Standards of the Nations of the Americas	DSM	demand-side management
		EE	energy efficiency
		EE&C-SSN	Energy Efficiency and
CCE	cost of conserved energy		Conservation Subsector Network
CECED	European Committee of Domestic		(ASEAN)

EEA	European Economic Area	IEC	International Electrotechnical
EER	energy-efficiency ratio		Commission
EGAT	Electricity Generating Authority of	IEE	Intelligent Energy for Europe
EGEE&C	Thailand Experts Group on Energy	IEEE	Institute of Electrical and Electronics Engineers
LULLUU	Efficiency and Conservation	IFC	International Finance Corporation
EIA	(APEC) Energy Information	IIEC	International Institute for Energy Conservation
	Administration (U.S. DOE)	ILAC	International Laboratory
EJ	exajoule		Accreditation Cooperation
ELAR	Energy-efficiency Labeling of Large Household Appliances	ISO	International Organization for Standardization
ELRC	(Czech Republic) Energy Labeling Regulatory	JIS	Japan Industrial Standards Association
	Committee (E.U.)	kCal/hr	kiloCalories per hour
ELI	Efficient Lighting Initiative	KSA	Korean Standards Association
EPR	Energy Premium Scheme	kWh	kilowatt hour
ESCO	(Netherlands) energy service company	LBNL	Lawrence Berkeley National Laboratory
ESIS	Energy Standards Information	LCC	life-cycle cost
D I I	System	LCIE	Le Laboratoire Central des
E.U.	European Union		Industries Electriques (Central
EWG	Energy Working Group (APEC)		Electricity Industry Laboratory, France)
FIC	Federal Irade Commission (U.S.)	LED	light-emitting diode
GDP	gross domestic product	LFA	logical framework approach
GEA	Group for Efficient Appliances	LNE	Laboratoire National d'Essais
GHG	greenhouse gas		(French National Testing Laboratory)
GRIM	government regulatory impact model	MEPS	minimum energy performance standards
GSA	Government Service Agency (U.S.)	MITI	Ministry of International Trade
GWh	gigawatt hour		and Industry (Japan)
HCFC	hydrochlorofluorocarbon	MOU	memorandum of understanding
HFC	hydrofluorocarbon	MRA	mutual recognition agreement
HPWH	heat-pump water heater	MTP	Market Transformation
HVAC	heating, ventilation, and		Programme (U.K.)
	air conditioning	MW	megawatt
IDB IEA	Interamerican Development Bank International Energy Agency	NABL	National Accreditation Board for Testing and Calibration Labs (India)

NAECA	National Appliance Energy	TRC	total resource cost
NAEEEP	National Appliance & Equipment Energy-Efficiency Program (Australia)	TREAM	Transforming the Market for Energy-Efficient Appliances and Products through the Use of Appliance Information Systems
NAEWG	North American Energy Working	TSD	(Czech Republic)
NEMA	National Electrical Manufacturers Association	TTEM	Technology Transfer for Energy Management (Philippines)
NEMS	National Energy Modeling System	TWh	terawatt hour
NEPA	National Environmental Protection Agency (China)	UEC	unit energy consumption
NGO	non-governmental organization	U.K.	
NOPR	notice of proposed rule making	UN DESA	Economic and Social Affairs
NPV	net present value	UN ECE	United Nations Economic
NUTEK	Swedish National Board for Industrial and Technical Development	UN ECLAC	United Nations Economic Commission for Latin America
O & M	operation and maintenance		and the Caribbean
OECD	Organization for Economic Cooperation and Development	UN ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
PADE	Pan European Database of Energy- Efficient Appliances	UNDP	United Nations Development
PAMS	Policy Analysis Modeling System	UNEP	Program United Nations Environmental Program
PELP	Poland Efficient Lighting Project		
R&D	research and development	UNF	United Nations Foundation
SARI/E	South Asia Regional Initiative for Energy Cooperation and	U.S. AID	United States Agency for International Development
SEER	seasonal energy-efficiency ratio	U.S. DOE	United States Department of Energy
SEPA	State Environmental Protection Administration (China)	U.S. EPA	United States Environmental Protection Agency
SERP	Super-Efficient Refrigerator Program	VCRs	videocassette recorders
SFOE	Swiss Federal Office of Energy	VECP	Vietnam Energy Conservation and Efficiency Program
SI	Système Internationale d'Unités (International System of Units)	VINASTAS WSSN	Vietnam Consumers Organization
STEM	Statens Energimyndighet (Swedish National Energy Administration)		World Standards Services Network
TESAW	Top Energy Saver Award (Australia)		

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GLOSSARY

- Accreditation: Conformity certification process by which the government ensures that testing facilities perform tests correctly with properly calibrated equipment.
- Achievable potential: Practical and sustainable energy-savings potential, given market barriers and competing policies.
- Adjusted volume: Accounts for the different temperatures in the fresh-food and freezer compartments of refrigerators, refrigerator-freezers, and freezers.
- **Alignment:** The unilateral adoption of the same test procedure or performance standard level or energy labeling criteria or design as that of an international organization or trading partner for a particular appliance.
- **Baseline:** Represents the energy performance of a typical model for a given product or a description of what would have happened to a produc's energy use if labels and/or standards had not been implemented
- **Carbon Dioxide (CO₂):** Colorless, odorless noncombustible gas with the formula CO_2 that is present in the atmosphere. It is formed by the combustion of carbon and carbon compounds (such as fossil fuels and biomass); by respiration, which is a slow combustion in animals and plants; and by the gradual oxidation of organic matter in the soil.
- **Certification:** Process for meeting labeling or standards requirements, ensuring consistency, and giving credibility to government and manufacturer claims about energy efficiency. Protects manufacturers by making willful non-compliance unacceptable.
- **Chlorofluorocarbons (CFCs):** Family of chemicals composed primarily of carbon, hydrogen, chlorine, and fluorine whose principal applications are as refrigerants and industrial cleansers and whose principal drawback is their destructive effect on the Earth's protective ozone layer. They include CFC-11, CFC-12, and CFC-113.
- **Class-average standards:** Standards that specify the average efficiency of a manufactured product over a specific time period, allowing each manufacturer to select the level of efficiency to design into each model in order to achieve the overall average.
- **Compact fluorescent lamps (CFLs):** Smaller version of standard fluorescent lamps that can directly replace standard incandescent lights. These lights consist of a gas-filled tube and a magnetic or electronic ballast.
- **Comparative labels:** Labels that present information that allows consumers to compare performance among similar products, either using discrete categories of performance or a continuous scale.
- **Compliance:** Method to ensure that errors are found and corrected and violations of requirements are returned to the permitted range or, if necessary, punished. It protects manufacturers by making willful non-compliance unacceptable.
- **Consumer Analysis:** Analysis that establishes the economic impacts on individual consumers of any standard being considered.
- "Declared" energy consumption: A manufacturer's claimed energy performance for an entire production run of a given appliance.
- **Demand-side management (DSM):** Programs by electricity and natural gas utilities to help customers use energy more efficiently and better manage peak loads.
- Economic potential: Optimum economic energy savings from a product user's (consumer's) perspective.

Endorsement labels: "Seals of approval" given according to a specified set of criteria.

- **Energy-efficiency labels:** Informative labels affixed to manufactured products indicating a energy performance (usually in the form of energy use, efficiency, and/or energy cost) that provide consumers with the data necessary for making informed purchases.
- **Energy-efficiency ratio (EER):** Measure of the instantaneous energy efficiency of room air conditioners: the cooling capacity in Btu/hr divided by the watts of power consumed at a specific outdoor temperature (usually 95 degrees Fahrenheit).
- **Energy-efficiency standards:** Set of procedures and regulations that prescribe the energy performance of manufactured products, usaually prohibiting the sale of products that are less energy-efficient than a minimum standard; also known as "norms."
- **Energy service company (ESCO):** Company that specializes in undertaking energy-efficiency measures under a contractual arrangement in which the ESCO shares the value of energy savings with its customers.
- **Energy test procedure:** Agreed-upon method of measuring the energy performance of an appliance; may be expressed as an efficiency, efficacy (for lighting products), annual energy use, or energy consumption for a specified cycle, depending on the appliance being tested; used to rank similar products by their energy performance and to evaluate new technologies and to forecast their energy performance; also known as a "test standard."
- **Enforcement:** All activities used to deal with manufacturers, distributors, and retailers that are not in compliance with the regulations.
- **Engineering analysis:** Analysis that assesses the energy performance of products currently being purchased in the country and establishes the technical feasibility and cost of each technology option that might improve a product's energy efficiency and each option's impact on overall product performance.
- **Engineering data:** Data on technical and energy characteristics of individual product models available on the market.
- **Greenhouse gas (GHG):** Gas, such as water vapor, carbon dioxide, tropospheric ozone, methane, and low-level ozone, that is transparent to solar radiation but opaque to long-wave radiation and that contributes to the greenhouse effect by absorbing infrared radiation in the atmosphere.
- **Harmonization:** The adoption of the same test procedure or performance standard level or energy labeling criteria or design as that of an international organization or trading partner or the mutual recognition of test results for a particular appliance through a multilateral forum or compact.
- Heat-pump water heater (HPWH): Water heater that uses electricity to move heat from one place to another instead of generating heat directly.
- **Impact evaluation:** Used to determine the energy and environmental impacts of a labeling program. Can be used to determine cost effectiveness and can also assist in stock modeling and end-use (bottom up) forecasting of future trends. Impact elements include influence of an efficiency label on purchase decisions, tracking of sales-weighted efficiency trends, energy and demand saving, pollutant emission reductions, and related effects.

Information-only labels: Labels that provide data only on a product's performance.

Kilowatt hour (kWh): Unit or measure of electricity supply or consumption; equal to 1,000 Watts over the period of one hour; equivalent to 3,412 Btu.

- Life-cycle cost (LCC): The sum of purchase cost and annual operating cost discounted over the lifetime of the appliance; includes consideration of lifetime of the appliance and consumer discount rate.
- **Manufacturing analysis:** Analysis that predicts the impact of any standard being considered on international and domestic manufacturers and their suppliers and importers. It assesses the resulting profitability, growth, and competitiveness of the industry and predicts changes in employment. Depending on the local situation, this analysis may be expanded to include distributors and retailers.
- Market penetration: Level of ownership, i.e., the percentage of households that own and use the product or equipment in question.
- **Market transformation:** Permanent shift in the market toward greater energy efficiency, accomplished by specific interventions for a limited period of time.
- Market-transformation perspective: Evaluation focus on whether sustainable changes in the marketplace have occurred as a result of labels and standards programs.
- **Minimum LCC:** The level at which the consumer incurs the lowest total cost and therefore receives the most benefit.
- Mutual recognition agreements (MRAs): Bilateral or multilateral arrangements to recognize or accept some or all aspects of another's conformity test procedures (e.g., test results and certification).
- **National impact analysis:** Assesses the societal costs and benefits of any proposed standard; the impacts on gas and electric utilities and future gas and electricity prices that would result from reduced energy consumption; and the environmental effects in terms of changes of emissions of pollutants such as carbon dioxide, sulfur oxides, and nitrogen oxides that would occur in both homes and power plants resulting from reduced energy consumption.
- **Net present value (NPV):** Value of a personal portfolio, product, or investment after depreciation and interest on debt capital are subtracted from operating income. NPV can also be thought of as the equivalent worth of all cash flows relative to a base point called the present.
- **Payback period:** The amount of time needed to recover, through lower operating costs, the additional consumer investment in efficient equipment; the ratio of the increase in purchase price and installation cost to the decrease in annual operating expenses.
- **Performance standards:** Prescriptions of minimum efficiencies (or maximum energy consumption) that manufacturers must achieve in each product, specifying the energy performance, but not the technology or design specifications, of that product.
- **Prescriptive standards:** Standards that require a particular feature or device to be installed in all new products.
- **Process evaluation:** Measures how well a program is functioning. Process elements include assessing consumer priorities in purchasing an appliance, tracking consumer awareness levels, monitoring correct display of labels by retailers, measuring administrative efficiency, and maintaining program credibility.
- **Qualitative primary research:** Includes the focus-group technique, where a small number of people with certain characteristics (e.g., recent buyers of refrigerators) are recruited to participate in a facilitated discussion about a particular topic in order to get the in-depth and subjective views of key audiences. Results cannot be statistically generalized to the greater population.

- **Quantitative primary research:** Uses survey approaches with randomly selected samples of a particular population. Results are then projected to the whole population from which the sample is drawn.
- **Regulatory standard:** Establishes a level of minimum energy efficiency. Typically references the appropriate test procedures.
- **Resource-acquisition perspective:** Evaluation focus on the calculation of energy and demand savings and greenhouse gas emissions reductions from labeling programs and standards.
- Secondary research: Analyzes and applies the results of past research to the current situation.
- Seasonal energy efficiency ratio (SEER): Measure of seasonal or annual efficiency of a central air conditioner or air-conditioning heat pump and takes into account the variations in temperature that can occur within a season. It is expressed as average number of Btu of cooling delivered for every watt-hour of electricity used over a cooling season.
- **Self-certification:** Certification in which manufacturers formally test their own products and, in practice, also test each other's products and force compliance. It is practiced in the U.S., Japan, and most European countries.
- **Stakeholder:** Any party who may have an interest. Stakeholders typically include representatives of manufacturers, consumers, utilities, local governments, and environmental or energy-efficiency interest groups; also representatives of importers and international organizations where applicable.
- **Technical MRAs:** Establish technical equivalency between bodies in different countries. They can cover laboratory accreditation agencies, inspection accreditation, and testing certification bodies. They facilitate testing by a manufacturer because they can eliminate the need for retesting a product in a foreign country.
- Technical potential: The maximum energy savings that could be achieved by using the best technology available, regardless of cost.
- Test protocol: Specifications for testing a product.
- **Theory Evaluation:** Approach that tests hypotheses such as: "most/some/all consumers will use labels as part of their purchase decisions" or "labels will encourage manufacturers to improve the energy performance of their products."

REFERENCES

CHAPTER 1

- Price, L., S. de la Rue du Can, E. Worrell, and J. Sinton. 2005. *Sectoral Trends in Global Energy Use and Greenhouse Gas Emissions*. Berkeley, CA, Lawrence Berkeley National Laboratory, LBNL-56144.
- Wiel, S., N. Martin, M. Levine, L. Price, and J. Sathaye. 1998. "The Role of Building Energy Efficiency in Managing Atmospheric Carbon Dioxide." *Environmental Science & Policy* 1:28-29.

CHAPTER 2

- Adnot, J. and M. Orphelin. 1999. "Hungry Cooling: Room Air-Conditioners." Appliance Efficiency 3(3).
- Bertoldi, P. 2000. *European Union Efforts to Promote More Efficient Equipment*. European Commission, Directorate General for Energy.
- Danish Energy Management. 2004. *Benchmarking of Air Conditioner Efficiency Levels in Five Asian Countries*. Report prepared for the Australian Greenhouse Office. Available at <u>www.apec-esis.org</u>. August.
- Duffy, J. 1996. Energy Labeling, Standards and Building Codes: A Global Survey and Assessment for Developing Countries. International Institute for Energy Conservation, Washington, D.C.
- EIA. 2004. International Energy Outlook 2004 (IEO2004). U.S. Energy Information Administration, Washington, D.C.
- Fridley, D. and J. Lin. 2004. Private communications at Lawrence Berkeley National Laboratory.
- Ginthum, M. 1995. Appliance. September.
- GfK. 2003. "Evolution of sales of domestic appliances in Western Europe," *Proceedings of the 3rd International Conference on Energy Efficiency in Domestic Appliances and Lighting (EEDAL '03)*. Turin, Italy. October 1–3.
- Greening, L., A. Sanstad, J. McMahon, T. Wenzel, and S. Pickle. 1996. Retrospective Analysis of National Energy-Efficiency Standards for Refrigerators. Berkeley, CA, Lawrence Berkeley National Laboratory, LBNL-39700.
- IEA (International Energy Agency). 1999. Energy Statistics & Balances: 1999 Edition. IEA/OECD, Paris, France.
- IEA (International Energy Agency). 2000. Energy Labels and Standards, IEA/OECD, Paris, France.
- IEA (International Energy Agency). 2002. *Things that go Blip in the Night: Standby Power and How to Limit It*, OECD/IEA, Paris, France.
- IEA (International Energy Agency). 2003. *Cool Appliances: Policy Strategies for Energy-Efficient Homes*, OECD/IEA, Paris, France.
- KEMCO (Korea Energy Management Corporation). 2003. Statistical data.
- McMahon, J. and I. Turiel. 1997. "Introduction to Special Issue Devoted to Appliance and Lighting Standards." *Energy and Buildings* 26(1).
- Meyers, S, J. McMahon, and M. McNeil. 2004. *Realized and Prospective Impacts of U.S. Energy Efficiency Standards for Residential Appliances: 2004 Update*. Berkeley, CA, Lawrence Berkeley National Laboratory, LBNL-56417, December.

Murakoshi, C. 1999. "Japanese Appliances on the Fast Track." Appliance Efficiency. 3(3).

- Nakagami, H. and B. Litt. 1997. "Appliance Energy Standards in Europe." *Energy and Buildings* 26(1):72.
- Ramsay, W. C. 2004. Opening Statement. IEA-India seminar on perspectives on appliance standards and labelling in IEA countries, Bangalore, India, 13–14 October.
- Singh, J. and C. Mulholland. 2000. *DSM in Thailand: A Case Study*. World Bank Report No. 21641, ESMAP Technical Paper No. 8, October.
- UNF (United Nations Foundation). 1999. Strategic Discussion on Environment-Climate Change, Executive Summary, Washington, D.C.
- Waide, P., B. Lebot, and M. Hinnells. 1997. "Appliance Energy Standards in Europe." *Energy and Buildings* 26(1):45.
- Waide, P., C. Egan, and J. Minghong. 2004. "Findings of Energy Label Design Research in China" Conference Proceedings of the ACEEE Summer Study on Energy Efficiency in Buildings. American Council of an Energy-Efficient Economy, Washington, D.C
- Webber, C.A., R. Brown, M. McWhinney, and J. Koomey. 2003. 2002 Status Report: Savings Estimates for the ENERGY STAR Voluntary Labeling Program. Lawrence Berkeley National Laboratory, LBNL-51319, March.
- Wiel, S. and L. Van Wie McGrory. 2003. "Regional Cooperation in Energy Efficiency Standard-Setting and Labeling in North America." Proceedings of the 3rd International Conference on Energy Efficiency in Domestic Appliances and Lighting (EEDAL '03). Turin, Italy. October.

CHAPTER 3

- Agra-Monenco International. 1999. DSM Program Evaluation—Conservation Program. Draft Final Report—Process and Market Evaluation. Volume 1: Main Report. August.
- AGO (Australian Greenhouse Office). 2003. When You Can Measure It, You Know Something About It: Projected Impacts 2000-2020. Canberra, Report No: 2003/02. June.
- Bertoldi, P. et. al. 2002. "Standby Power Use: How Big is the Problem? What Policies and Technical Solutions Can Address It?" Proceedings of the 2002 ACEEE Summer Study on Energy Efficiency in Buildings. Asilomar, CA, American Council for an Energy-Efficient Economy. August
- Danish Energy Management. 2004. *Benchmarking of Air Conditioner Efficiency Levels in Five Asian Countries*. Report prepared for the Australian Greenhouse Office. Available at <u>www.apec-esis.org</u>. August.
- ERM-Siam. 1999. Energy Efficiency Standards Regime Study: Steering Committee and Products Sub-committee Progress Meeting No. 3. Bangkok, Thailand. March.
- European Community. 1992. "Council Directive 92/75/EC of 22 September 1992, on the indication by labeling and standard product information of the consumption of energy and other resources by household appliances." *Official Journal of the European Communities* No. L 297/16. 13 October.
- IIEC (International Institute for Energy Conservation). 1999. Proceedings of the APEC Colloquium on Technical Issues of Minimum Energy Performance Standards. Published for APEC by IIEC-Asia, Bangkok, Thailand. December.
- Harrington, L. 1997. "Appliance Labels from Around the World." Presented at the *First International Conference on Energy Efficiency in Household Appliances*, Florence, Italy. 10–12 November.

- Motoomull, J. 1999. "Mutual Recognition Arrangements and Harmonization of Standards." Proceedings of the APEC Colloquium on Technical Issues of Minimum Energy Performance Standards. Published for APEC by IIEC-Asia, Bangkok, Thailand. December.
- NAECA. 1987. National Appliance Energy Conservation Act of 1987. U.S. Congress Public Law 100-12. March 17.
- NAECA. 1988. National Appliance Energy Conservation Amendments of 1988. U.S. Congress Public Law 100-357. June 28.
- Rath, K. 1999. "Mutual Recognitions and What They Mean in Practice." Proceedings of the APEC Colloquium on Technical Issues of Minimum Energy Performance Standards. Published for APEC by IIEC-Asia, Bangkok, Thailand. December.
- Sidler, O. 1997. CIEL. An electrical end-use measurement campaign in the French domestic sector, translation into English from the original French of the report by Cabinet Conseil SIDLER for the SAVE programme of DG-XVII of the European Commission, contract no. 4.1031/93.58, rue de la loi 200, Brussels, June.
- Turiel, I. and S. Hakim. 1996. "Consensus Efficiency Standards for Refrigerators and Freezers-Providing Engineering/Economic Analyses to Aid the Process." Proceedings of the ACEEE Summer Study on Energy Efficiency in Buildings. Asilomar, CA, American Council for an Energy-Efficient Economy, 9(9):207-9, 215.
- Waide, P. 1998. "Examples of Framework Legislation." Presented at the Workshop on Product Efficiency Standards and Labeling Policy organized by the State Economic Trade Commission of the People's Republic of China, Beijing, China. November.

- Bansal, P. and R. Krüger. 1995. "Test Standards for Household Refrigerators and Freezers I: Preliminary Comparisons." International Journal of Refrigeration 18(1): 4-17.
- Breitenberg, M. 1997. The ABC's of the U.S. Conformity Assessment System. Gaithersburg, MD, National Institute of Standards and Technology.
- de Almeida, A. and J. Busch. 2000. Development of an Algorithm to Compare Motor Efficiency Testing Procedures. Berkeley, CA, Lawrence Berkeley National Laboratory, LBNL-47058. October.
- Egan, K., et al. 1997. Accessing Overseas Markets: Energy Efficiency Standards and Appliances. Washington, D.C., International Institute for Energy Conservation.
- Energy Efficient Strategies. 1999. Review of Energy Efficiency Test Standards and Regulations in APEC Member Economies. Singapore, APEC Secretariat.
- IIEC (International Institute for Energy Conservation). 1998. Labeling in Asia and Latin America. Washington, D.C., Conservation.
- ISO (International Organization for Standardization). 1999. Household Refrigerating Appliances-Characteristics and Testing Methods. Geneva, Switzerland.
- Meier, A. 1987. "Energy Use Test Procedures for Appliances: A Case Study of Japanese Refrigerators." ASHRAE Transactions 93(2): 1570-77.
- Meier, A. 1995. "Refrigerator Energy Use in the Laboratory and the Field." Energy and Buildings 22(3): 233-243.
- Meier, A. and J. Hill. 1997. "Energy Test Procedures for Appliances." Energy and Buildings 26(1): 22-33.

- Meier, A. 1998. "Energy Test Procedures for the Twenty-First Century." 1998 Appliance Manufacturer Conference and Expo, Nashville, TN. *Appliance Manufacturer Magazine*. October 12–14.
- NAEWG. 2002. North American Energy Efficiency Standards and Labeling, undated, released in November 2002. Available at <u>www.eere.energy.gov/buildings/appliance_standards</u>; search for "NAEWG."
- Sommer, U. 1996. "Energie-Label für Waschmachinen Kriterien—Prüfmethode—Toleranzen." 37th International Detergency Conference. Krefeld, Germany, Forschungsinstitut für Reinigungstechnologie e.V.
- Winward, J., P. Schiellerup, and B. Boardman. 1998. COOL LABELS: The First Three Years of the European Energy Label. University of Oxford, ISBN: 1 874370 21 4. September.

- ADEME and PW Consulting. 2000. COLD II: The Revision of Energy Labeling and Minimum Energy Efficiency Standards for Domestic Refrigeration Appliances, ADEME and PW Consulting for DG-TREN of the Commission of the European Communities. December.
- AGO (Australian Greenhouse Office). 2004. Web site information on the TESAW program: <u>www.energyrating.gov.au/tesaw-main.html</u>.
- Agra-Monenco International. 1999. DSM Program Evaluation—Conservation Program. Draft Final Report—Process and Market Evaluation. Volume 1: Main Report. August.
- Artcraft Research. 1998. Final Report on a Qualitative Market Research Study Regarding Appliance Energy Rating Labels. For the National Appliance and Equipment Energy Efficiency Committee. Chatswood, Australia. April.
- Bernard, H. 1994. Research Methods in Anthropology: Qualitative and Quantitative Approaches. Second Edition. Sage Publications Thousand Oaks California.
- Bertoldi, P. 2000. European Union Efforts to Promote More Efficient Equipment. European Commission, Directorate General for Energy.
- Bonneville Power Administration. 1987. *The Evaluation of Phase 2 of the BPA Appliance Energy Efficiency Promotion Campaign: Promotion of Energy-Efficient Refrigerators-Freezers*. Prepared by Columbia Information Systems for the Bonneville Power Administration, Portland OR.
- Brown and Whiting. 1996. Consumer Attitudes Toward Energy-Efficient Appliances: A Look at the Impact of the Energy Star Retailer Program. Washington, D.C. Prepared for D&R International.
- Cadmus. 2001. The Cadmus Group. *CEE ENERGY STAR Household Survey Report (2000)*. Report for the Climate Protection Partnerships Division, USEPA. Washington, D.C. February 9.
- Carswell, L., J. Langel, and A. Borison. 1989. *Environmental Labeling in the United States: Background Research, Issues, and Recommendations*. Menlo Park, CA, Applied Decision Analysis. Prepared for U.S. Environmental Protection Agency.
- CEE (Consortium for Energy Efficiency). 2003. National Awareness of ENERGY STAR for 2003: Analysis of the CEE Household Survey. Available at www.cee1.org/eval/2003 ES-Survey.php3
- Danish Management A/S and Kantor Management Consultants. 2001. Handbook for Monitors: External Monitoring System of EC Development Aid Programs. Developed for the European Commission, EuropeAid Unit H6. February.
- Danish Energy Management. 2004. *Benchmarking of Air Conditioner Efficiency Levels in Five Asian Countries*. Report prepared for the Australian Greenhouse Office. Available at <u>www.apec-esis.org</u>. August.

- Dethman, L., I. Unninayar, and M. Tribble. 2000. "Transforming Appliance Markets in India: Consumer Research Leads the Way." *Conference Proceedings of the ACEEE Summer Study on Energy Efficiency in Buildings*. Volume 8: Consumer Behavior and Non-Energy Effects. 8.51-8.64. American Council of an Energy-Efficient Economy. Washington, D.C.
- Dolley, P. 2004. *Revision of the Ecological Criteria for the Refrigerator Ecolabel.* A Report to the European Commission, DG Environment. Available at <u>europa.eu.int/comm/environment/ecolabel/</u> product/pg_refrigerators_en.htm#Background.
- du Pont, P. 1998. Energy Policy and Consumer Reality: The Role of Energy in the Purchase of Household Appliances in the U.S. and Thailand. Dissertation, University of Delaware. April.
- Egan, C. 1999. Comparative Energy and Its Potential in Promoting Residential Energy Efficiency. Washington, D.C., American Council for an Energy-Efficient Economy.
- Egan, C. 2000a. An Evaluation of the Federal Trade Commission's Energy Guide Appliance Label: An Interim Summary of Findings. Washington, D.C., American Council for an Energy-Efficient Economy.
- Egan, C. 2000b. Personal communication regarding study to assess alternatives to the U.S. EnergyGuide appliance label.
- Egan, C., C. Payne, and J. Thorne. 2000c. "Interim Findings of an Evaluation of the U.S. EnergyGuide Label." In *Proceedings of the 2000 ACEEE Summer Study on Buildings*, 8.77-8.8.91. Washington, D.C., American Council for an Energy-Efficient Economy.
- Energy Efficient Strategies. 1999. *Review of Energy Efficiency Test Standards and Regulations in APEC Member Economies*, project EWG03/98T, prepared by Energy Efficient Strategies (Australia) et al. for APEC Secretariat, Singapore, 27 November.
- Geller, H. 2000. Testimony before the Subcommittee on VA, HUD and Independent Agencies, Committee on Appropriations, U.S. House of Representatives on the Environmental Protection Agency's Climate Change and Pollution Prevention Programs. The American Council For An Energy-Efficient Economy, April 12.
- Harris, J. and N. McCabe. 1996. "Energy-Efficient Product Labeling." *Proceedings of the ACEEE Summer Study on Energy Efficiency in Buildings*. Asilomar, CA, American Council for an Energy Efficient Economy.
- IEA (International Energy Agency). 2003. Cool Appliances: Policy Strategies for Energy-Efficient Homes, Paris, France.
- IRG (International Resources Group). 1999. "Appliance Efficiency Market Research and Label Development in India. Part III: Final Label Preference Research." Conducted by the U.S. Agency for International Development by the International Resources Group and Taylor Nelson Sofres Mode. Delhi, India. September.
- Jensen, H. 2004. Danish Energy Management A/S, Kuala Lumpur, Malaysia. Personal communication.
- Lebot, B., P. Waide, and J. Newman. 2001. "The European Appliance Labelling Programme." *Asia Regional Symposium on Standards and Labeling*, United Nations Conference Centre (UNCC), Bangkok, Thailand, May
- Lebot, B. 2004. Climate Change Technical Advisor, United Nations Development Programme. Personal communication. 30 November.

- Lin, J. 2002. Appliance Efficiency Standards and Labeling Programs in China" Annual Review of Energy and the Environment, Volume 27. Palo Alto, California.
- Liu, C. and T. Li. 2003. "Energy Efficiency Certification Programme in China", *Proceedings* of the 3rd International Conference on Energy Efficiency in Domestic Appliances and Lighting (EEDAL '03). Turin, Italy. October 1–3.
- Marker, T., S. Holt, and G. Wilkenfeld. 2003. "Managing Convergence of Energy Labelling Programs in Australia."
- McWhinney, M. A. Fanara, R. Clark, C. Hershberg, R. Schmeltz, and J. Roberson. 2004. "ENERGY STAR product specification development framework: using data and analysis to make program decisions" *Energy Policy*, In Press, corrected proof, available online, 9 April.
- Meier, A. 1997. "Energy Test Procedures for Appliances." *Energy & Buildings—Special Issue Devoted to Energy-Efficiency Standards for Appliances*, 26(1). Available for download from <u>eetd.lbl.gov/</u> <u>EA/Buildings/ALAN/Publications/test_procedures.html</u>
- Meier, A. 1998. "Energy Test Procedures for the Twenty-First Century." Proceedings of 1998 Appliance Manufacturer Conference & Expo. October 12–16, Nashville TN, USA. Also available as Berkeley CA, Lawrence Berkeley National Laboratory, LBNL-41732. May. <u>eetd.lbl.gov/EA/Buildings/ALAN/Publications/AMCE/AMCE.text.html</u>
- Natural Resources Canada. 2004. Private communication with John Cockburn.
- Phillips, R. 2003. China CFC-Free Energy Efficient Refrigerator Project. Presentation at the India-IEA International Workshop on Standards and Labelling for Consumer Appliances, Bangalore, India, 13–14 October.
- SEC Victoria. 1991. An Evaluation of the Electricity Energy Labeling Scheme. Box Hill, Australia. Demand Management Unit of the State Electricity Commission of Victoria.
- Shugoll Research. 1999. "A Focus Group Study to Assess Consumer Reaction to the Current FTC Energy Guide Label". Prepared for ACEEE in Washington, D.C. August.
- Thorne, J. and C. Egan. 2002a. "The EnergyGuide Label: Evaluation and Recommendations for an Improved Design," *Proceedings of the 2002 Summer Study on Energy Efficiency in Buildings*, 8.357–8.369. American Council for an Energy-Efficient Economy, Washington, D.C.
- Thorne, J. and C. Egan. 2002b. An Evaluation of the Federal Trade Commission's EnergyGuide Appliance Label: Final Report and Recommendations. Washington, D.C., American Council for an Energy-Efficient Economy.
- Tiedemann, K., M. Nanduri and J-F Bilodeau. 2003. "Regulating the Labeling of Household Appliances in Canada." *Proceedings of the 3rd International Conference on Energy Efficiency in Domestic Appliances and Lighting (EEDAL '03).* Turin, Italy. 1–3 October.
- UNESCAP (UN Economic and Social Commission for Asia and the Pacific). 1999. "Conclusions and Recommendations for Future Action by Consumer Organizations to Promote Sustainable Development and Sustainable Energy Use." *Asia-Pacific NGO Forum on Effective Consumer Information for Sustainable Energy Use.* Seoul, Republic of Korea. May.
- U.S. EPA (U.S. Environmental Protection Agency). 2003. ENERGY STAR: The Power to Protect the Environment through Energy Efficiency. Available at <u>www.energystar.gov/index.cfm?c=logos.pt</u> <u>guidelines</u>. July.
- U.S. EPA (U.S. Environmental Protection Agency). 2004a. Protecting the Environment—Together: ENERGY STAR and Other Voluntary Programs 2003 Annual Report. Washington, D.C.

- U.S. EPA (U.S. Environmental Protection Agency). 2004b. Using the Energy Star Identity to Maintain and Build Value. USEPA document number 430B03003, available on the Energy Star Website: www.energystar.gov/index.cfm?c=logos.pt_guidelines.
- Waide, P. 1997. "Refrigerators: Developments in the European Market." *Energy Efficiency in Household Appliances*. P. Bertoldi, A. Ricci, and B. Wajer, eds. Springer.
- Waide, P. 1998. Monitoring of Energy Efficiency Trends of European Domestic Refrigeration Appliances: Final Report. Manchester UK: PW Consulting.
- Waide, P., C. Egan, and J. Minghong. 2004. "Findings of Energy Label Design Research in China" Conference Proceedings of the ACEEE Summer Study on Energy Efficiency in Buildings. American Council of an Energy-Efficient Economy. Washington, D.C
- Webber, C, R. Brown, and J. Koomey. 2000. "Savings Extimates for the ENERGY STAR Voluntary Labeling Program." *Energy Policy* 28, 1137-1149.
- Webber, C., R. Brown, M. McWhinney, and J. Koomey. 2003. 2002 Status Report: Savings Estimates for the ENERGY STAR Voluntary Labeling Program. Lawrence Berkeley National Laboratory, LBNL-51319. March.
- Webber, C., R. Brown, M. McWhinney, and J. Koomey. 2004. 2003 Status Report: Savings Estimates for the ENERGY STAR Voluntary Labeling Program (DRAFT). Lawrence Berkeley National Laboratory. July.

- Commission of the European Communities. 1999. Proposal for a European Parliament and Council Directive on Energy Efficiency requirements for Ballasts for Fluorescent Lighting. Brussels, Belgium. Contact: Paolo Bertoldi, Paolo.Bertoldi@bxl.dg.cec.be
- Constantine, S., A. Denver, S. Hakim, J. McMahon, and G. Rosenquist. 1999. Ghana Residential Energy Use and Appliance Ownership Survey: Final Report on the Potential Impact of Appliance Performance Standards in Ghana. Berkeley, CA, Lawrence Berkeley National Laboratory, LBNL-43069. March.
- U.S. DOE (U.S. Department of Energy). 1994. "Notice of Proposed Rulemaking." *Federal Register* 59 (43):10486. March.
- U.S. DOE (U.S. Department of Energy). 1995. "Proposed Rulemaking Regarding Energy Conservation Standards for Refrigerators, Refrigerator-Freezers, and Freezers." *Federal Register* 37388-37416. July 20.
- U.S. DOE (U.S. Department of Energy). 1999. Technical Support Document: Energy Efficiency Standards for Consumer Products: Fluorescent Lamp Ballasts. November.
- EIA (Energy Information Administration). 1998. *National Energy Model System: An Overview 1998*. DOE/EIA-0581 (98). February.
- EIA (Energy Information Administration). 2004. *Annual Energy Outlook 2004, With Projections to 2025*, U.S. Department of Energy, Washington, D.C., January. Available at <u>www.eia.doe.gov/oiaf/aeo/</u>.
- Group for Efficient Appliances. 1993. Study on Energy Efficiency Standards for Domestic Refrigeration Appliances. Prepared for the Commission of the European Communities on Energy Efficiency Standards for Domestic Refrigeration Appliances. March.
- Hakim S., and I. Turiel. 1996. "Cost-Efficiency Analysis in Support of the Energy Conservation Standards for Refrigerator/Freezers." *ASHRAE Transactions* Vol. 102, Pt. 2.

- Lawrence Berkeley National Laboratory. 1999. Technical Support Document: Energy Efficiency Standards for Consumer Products: Fluorescent Lamp Ballasts. November.
- McMahon, J. 2003. "New Analysis Techniques for Estimating Impacts of Federal Appliance Efficiency Standards," in *Proceedings of 3rd International Conference on Energy Efficiency in Domestic Appliances* and Lighting (EEDAL '03). Turin, Italy. October 1–3.
- Meyers, S., J. McMahon, M. McNeil, and X. Liu, 2003. "Impacts of US federal energy efficiency standards for residential appliances", *Energy Volume 28, Issue 8*, LBNL 49504. March.
- Murakoshi, C., and H. Nakagami. 1999. "Japanese Appliances on the Fast Track." *Appliance Efficiency* 3(3).
- Thompson, M. 2003. "Coupling Market Transformation With Reasonable Appliance Standards (A Case Study)". Proceedings of the 3rd International Conference on Energy Efficiency in Domestic Appliances and Lighting (EEDAL '03). Turin, Italy. October 1-3.
- Turiel, I., J. McMahon, and B. Lebot. 1993. "Global Residential Appliance Standards." Proceedings of the European Council for an Energy-Efficient Economy Summer Study, Rungstedgaard, Denmark, June 1–5.
- Wilkenfeld, G. 1993. Benefits and Costs of Implementing Minimum Energy Performance Standards for Household Electrical Appliances in Australia, Final Report. April.

- Agricola, A., and S. Kolb. 2003. "Review of the German Campaign for Improving the Energy Efficiency of Domestic Power Consumption." *Proceedings of 3rd International Conference on Energy Efficiency in Domestic Appliances and Lighting (EEDAL '03)*. Turin, Italy. October 1–3.
- Alliance to Save Energy. 2004. New consumer website offering "Everything You Always Wanted to Know About Lowering Your Energy Bills in One Place," <u>www.ase.org/consumers</u>; Fact Sheet on "Energy Efficiency vs. Energy Conservation."
- The Cadmus Group. 2004. *National Analysis of CEE (Consortium for Energy Efficiency) ENERGY STAR Household Survey*. Prepared for U.S. Environmental Protection Agency. Washington, D.C.
- Coffman, J. 2002. Public Communications Campaign Evaluation: An Environmental Scan of Challenges, Criticisms, Practice and Opportunities. Harvard Family Research Project. prepared for the Communications Consortium Media Center, May.
- Coffman, J. 2003. *Lessons in Evaluating Communications Campaigns: Five Case Studies*. Harvard Family Research Project. Prepared for the Communications Consortium Media Center, June.
- CCMC (Communications Consortium Media Center). 2004. Guidelines for Evaluating Non-Profit Communications Efforts. April.
- Day, B. and M. Monroe. 2000. Environmental Education and Communications for a Sustainable World: Handbook for International Practitioners. Academy for Educational Development. Washington, D.C.
- Dorfman, L., J. Evrice, and K. Woodruff. 2002. *Voices for Change: A Taxonomy of Public Communications Campaigns and Their Evaluation Challenges*. Berkeley Media Studies Group, prepared for the Communications Consortium Media Center, November.
- ECO Northwest. 2004. Consumer Preference for CFLs over Time: Where are We Going? Evaluation of the Northwest Energy Efficiency Alliance's Residential Lighting Program. Portland, OR.

- Egan, C. and E. Brown. 2001. An Analysis of Public Opinion and Communication Campaign Research on Energy Efficiency and Related Topics. American Council for and Energy Efficient Economy. Washington, D.C.
- Energetics. 1995. "Industrial Liaison Program" in *Master Plan for Energy Conservation and Efficiency of the Thai Encon Program*. Bangkok, Thailand.
- Energy Efficient Strategies. 2004. Energy Label Transition—The Australian Experience (Main Report). Prepared for the Australian Greenhouse Office. Warragul, Australia.
- Huh, K. 2002. "Energy Labeling Programmes and Their Effective Implementation: Perspectives on Consumer Behaviour," from *Guidebook on Promotion of Sustainable Energy Consumption: Consumer* Organizations and Efficient Energy Use in the Residential Sector. United Nations Economic and Social Commission for Asia and the Pacific.
- IEA (International Energy Agency). 2000. Energy Labels and Standards. IEA/OECD, Paris, France.
- Kohl, S. 2000. *Getting @ttention: Leading-Edge Lessons for Publicity and Marketing*. Butterworth Heinemann, Woburn, MA.
- Minghong, J., et al. 2003. "The Design and Market Research of China's Energy Efficiency Information Label." *Proceedings of 3rd International Conference on Energy Efficiency in Domestic Appliances and Lighting (EEDAL '03)*. Turin, Italy.
- Morimura, P. 2000. Proposed Approach for Implementation of an EC&E Program in Industry. Enconet (Thailand), Bangkok, Thailand.
- Muller, E. 2002. Environmental Labeling, Innovation and the Toolbox of Environmental Policy: Lessons Learned from the German Blue Angel Program. Federation of German Consumer Organizations. Berlin, Germany.
- Nadel, S., et al. 2003. *Market Transformation: Substantial Progress from a Decade of Work*. American Council for and Energy Efficient Economy. Washington, D.C.
- Northwest Energy Efficiency Alliance. 2003. Market Activities Report. Portland, OR.
- Phillips Group. 2000. Communications Strategy and Final Report on the Australian Greenhouse Office Appliance Energy Rating Label Transition Program—Communications Strategy. Sydney, Australia.
- Salmon, C. and R. Christensen. 2003. *Mobilizing Public Will for Social Change*. Prepared for the Communications Consortium Media Center, June.
- Shorey, E. and T. Eckman. 2000. "Increasing Consumer Participation in Reducing Greenhouse Gases," Chapter IV, "Appliance and Global Climate Change". Pew Center on Global Climate Change, Arlington, VA.
- Song, V. 2002. "The Role of Consumer Organizations and Other Non-Governmental Organizations in Promotion of Sustainable Energy Consumption," from *Guidebook on Promotion of Sustainable Energy Consumption: Consumer Organizations and Efficient Energy Use in the Residential Sector*. United Nations Economic and Social Commission for Asia and the Pacific.
- Schwengels, P. 2004. (U.S. Environmental Protection Agency). Personal communication on India's efficiency labeling project.
- Thorne, J. and C. Egan. 2002. An Evaluation of the Federal Trade Commission's EnergyGuide Appliance Label: Final Report and Recommendations. American Council for and Energy Efficient Economy. Washington, D.C.

- United Nations Programme of Technical Cooperation. 2004. Web pages on Thailand's energy efficiency labeling project (no. GL099095). Available at <u>esa.un.org/techcoop/flagship.asp?Code=GLO99095</u>.
- Vorisek, T. 3003. "The Influence of The Energy Labelling Legislation on Energy Efficiency in the Household Sector in the Czech Republic," SEVEn (The Energy Efficiency Center), in: Proceedings of the 3rd International Conference on Energy Efficiency in Domestic Appliances and Lighting (EEDAL '03). Turin, Italy. October 1-3.
- Wilkins, A. 2003. Presentation on *Promoting the ENERGY STAR Symbol in Canada*, Office of Energy Efficiency, Natural Resources Canada. Ottawa, Canada.

- Title 42. United States Code. Section 6295 (o) and (p).
- Title 42. United States Code. Section 6307.
- Title 42. United States Code. Section 6311-6316.
- Title 42. United States Code. Section 6316a.
- Grubbert, M. 2001. "Monitoring and Enforcement in Australia: Standards, MEPS and Labeling" presented at *Lessons learned in Asia: Regional symposium on energy efficiency standards and labeling*, UN Conference Centre, Bangkok, Thailand, CLASP and UNF. 29-31 May.
- Harrington, L. 1999. "Australian Standards lead to label revision." *Appliance Efficiency*. newsletter of IDEA, International Network for Domestic Energy-Efficient Appliances, published by NOVEM, Netherlands. 3(1).
- ISO (International Organization for Standardization). 1993. *Calibration and testing laboratory accreditation systems—General requirements for operation and recognition*. ISO/IEC Guide 58:1993, Geneva, Switzerland.
- ISO (International Organization for Standardization). 1996. *General requirements for bodies operating product certification systems*. ISO/IEC Guide 65:1996, Geneva, Switzerland.
- ISO (International Organization for Standardization). 1997. *Proficiency testing by inter-laboratory comparisons*. ISO/IEC Guide 43:1997, Geneva, Switzerland.
- ISO (International Organization for Standardization). 1999. General Requirements for the Competence of Testing and Calibration Laboratories. ISO/IEC 17025:1999, Geneva, Switzerland.
- National Archives and Records Administration (U.S.). 1998. 16 Code of Federal Regulations §305. Office of the Federal Register. January.
- National Archives and Records Administration. (U.S.). 1998. 10 Code of Federal Regulations §430. Office of the Federal Register. January: 92-284.
- NECPA. 1978. *National Energy Conservation Policy Act of 1978*. U.S. Congress. Public Law 95-619, Part 3 of Title IV.
- U.S. General Accounting Office. 1993. Report to the Chairman, Environment, Energy, and Natural Resources Subcommittee. Report#GAO/RCED-93-102. March.
- Waide, P. 1997. "Refrigerators: developments in the European market." *Proceedings of the First International Conference on Energy Efficiency in Household Appliances*, Florence, Italy. November.

CHAPTER 9

Agra Monenco, Inc. 2000a. DSM Program Evaluation, Conservation Program, Final Report. Volume 3: Process Evaluation. March.

- Agra Monenco, Inc. 2000b. DSM Program Evaluation, Conservation Program, Final Report. Volume 5: Impact Evaluation. March.
- Barbagallo, L. and T. Ledyard. 1998. Market Assessment for Tumble Clothes Washers and Other ENERGY STAR Appliances, Phase I: The Baseline Assessment, Middletown, CT (USA): RLW Analytics.
- Beslay, C. 1999. "Are Refrigerators Energivorous? Energy Consumption: A Subject Ignored by the Consumers." *Proceedings of the 1999 ECEEE Summer Study*, European Council for an Energy Efficient Economy, Paris, France.
- Boardman, B. 1997. "Cold Labelling—the UK Experience of Energy Labels." *Proceedings of the 1997 ECEEE Summer Study*, European Council for an Energy Efficient Economy, Paris, France.
- Danish Energy Management A/S. 2001. *Handbook for Monitors: External Monitoring System of EC Development Aid Programmes*, prepared for European Commission EuropeAid Unit H6. February.
- du Pont, P. 1998a. Energy Policy and Consumer Reality: The Role of Energy in the Purchase of Household Appliances in the U.S. and Thailand. Dissertation, University of Delaware.
- du Pont, P. 1998b. "Communicating with Whom? The Effectiveness of Appliance Energy Labels in the U.S. and Thailand." *Proceedings of the 1998 ACEEE Summer Study on Energy Efficiency in Buildings*. Washington, D.C., American Council for an Energy-Efficient Economy.
- GfK. 2003. "Evolution of sales of domestic appliances in Western Europe," Proceedings of the 3rd International Conference on Energy Efficiency in Domestic Appliances and Lighting (EEDAL '03). Turin, Italy. October 1-3.
- Greening, L., A. Sanstad, and J. McMahon. 1997. "Effects of Appliance Standards on Product Price and Attributes: An Hedonic Pricing Model." *Journal of Regulatory Economics* 11:181-194.
- Grubert, Michael. 2001. "Monitoring and Enforcement of Standards and Labeling Programs in Australia," *Proceedings of Lessons Learned in Asia: Regional Conference on Energy Efficiency Standards and Labeling*, Collaborative Labeling and Appliance Standards Program.
- Hagler Bailly. 1998. Residential Market Effects Study: Refrigerators and Compact Fluorescent Lights. Madison WI: Hagler Bailly Consulting, Inc.
- Hagler Bailly. 1996. Baseline Study of Residential Air Conditioner and Water Heater Sales. Madison, WI, Hagler Bailly Consulting, Inc.
- Harrington, L. and G. Wilkenfeld. 1997. "Appliance Efficiency Programs in Australia: Labelling and Standards." *Energy and Buildings* 26:81-88.
- HBRS, Inc. 1995. *Baseline Study of Natural Gas Forced-Air Furnace and Boiler Sales*. Madison WI: HBRS, Inc.
- Hewitt, D., J. Pratt, and G. Smith. 1998. A Second Wash Wise Market Progress Evaluation Report. Portland OR: Pacific Energy Associates.
- Karbo, P., J. Boelskov, and P. Andersen. 2002. "How to Double the Annual Sales of CFLs with Energy Label A," *Proceedings of the 2002 Summer Study on Energy Efficiency in Buildings*, 6.151-6.162. American Council for an Energy-Efficient Economy, Washington, D.C.
- Kartha, S., M. Lazarus, and M. Bosi. 2004. "Baseline Recommendations for Greenhouse Gas Mitigation Projects in the Electric Power Sector," *Energy Policy* 32: 545-566.
- McMahon, J. 1997. "State of the Art in Economic Evaluation Methodologies and Manufacturer Impact Modeling." *Energy Efficiency in Household Appliances*. P. Bertoldi, A. Ricci, and B. Wajer, eds. Springer.

- Meier, A. 1997. "Observed Energy Savings from Appliance Efficiency Standards." *Energy and Buildings* 26:111-117.
- Meyers, S., J. McMahon, M. McNeill, X. Liu. 2002. *Realized and Prospective Impacts of U.S. Federal Efficiency Standards for Residential Appliances*. Lawrence Berkeley National Laboratory, Berkeley, CA. LBNL-49504.
- Nadel, S. 1997. "The Future of Standards." Energy and Buildings 26:119-128.
- Pacific Energy Associates. 1998. NEEA Premium Efficiency Motors Program: Market Progress Report. Portland OR, Pacific Energy Associates.
- Phumaraphand, N. 2001. "Evaluation Methods and Results of EGAT's Labeling Programs," presentation at the conference, *Lessons Learned in Asia: Regional Conference on Energy Efficiency Standards and Labeling*, organized by Collaborative Labeling and Appliance Standards Program (CLASP) and the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), Bangkok, Thailand. 29-31 May.
- Rosenberg, M. 2003. "The Impact of Regional Incentive and Promotion Programs on the Market Share of Energy Star Appliances," *Proceedings of the 2003 International Energy Program Evaluation Conference*, 455-465. National Energy Program Evaluation Conference, Seattle, WA.
- Saldanha, C. and J. Whittle. 1998. Using the Logical Framework for Sector Analysis and Project Design: A User's Guide. Asian Development Bank, Manila, Philippines.
- Schiellerup, P. and J. Winward. 1999. "The European Labelling Scheme for Cold Appliances." Proceedings of the 1999 ECEEE Summer Study, European Council for an Energy Efficient Economy. Paris, France.
- Singh, J. and C. Mulholland. 2000. *DSM in Thailand: A Case Study.* World Bank Report No. 21641, ESMAP Technical Paper No. 8, October.
- Thorne, J. and C. Egan. 2002. "The EnergyGuide Label: Evaluation and Recommendations for an Improved Design," *Proceedings of the 2002 Summer Study on Energy Efficiency in Buildings*, 8.357-8.369. American Council for an Energy-Efficient Economy, Washington, D.C.,
- Vine, E. and J. Sathaye. 1999. Guidelines for the Monitoring, Evaluation, Reporting, Verification, and Certification of Energy-Efficiency Projects for Climate Change Mitigation. Berkeley CA: Lawrence Berkeley National Laboratory, LBNL-41543.
- Vine, E., L. Freeman, J. Lopes, M. Adelaar, B. Atkinson, R. Friedmann, and I. Sulyma. 2003. "Interim Process Evaluation of the Efficient Lighting Initiative: 1999-2001," 177-184. Proceedings of the 2003 International Energy Program Evaluation Conference, 455-465. National Energy Program Evaluation Conference, Seattle, WA.
- Waide, P. 1997. "Refrigerators: Developments in the European Market." *Energy Efficiency in Household Appliances*. P. Bertoldi, A. Ricci, and B. Wajer, eds. Springer.
- Waide, P. 1998. Monitoring of Energy Efficiency Trends of European Domestic Refrigeration Appliances: Final Report. Manchester UK: PW Consulting.
- Waide, P. 2004. Unpublished post treatment of E.U. market transformation data from several sources. Personal communication.
- Windward, J., P. Schiellerup, and B. Boardman. 1998. *Cool Labels: The First Three Years of the European Energy Label.* Energy and Environmental Programme, Environmental Change Unit, University of Oxford, UK.

Xenergy, Inc. 1998. PG&E and SDG&E Commercial Lighting Market Effects Study. Oakland CA: Xenergy, Inc.

CHAPTER 10

- APEC. 2000. Cooperation on Energy Standards in APEC; Report of the Steering Group on Energy Standards to the APEC Energy Working Group. Asia-Pacific Economic Cooperation. Singapore. March 29.
- Borg, N., E. Mills, J. Harris, and N. Martin. 1997. "Energy Management in the Government Sector an International Review". *Proceedings of the ECEEE 1997 Summer Study*, Spingleruv Mlyn, Czech Republic. June 9–14. Also Berkeley National Laboratory, LBNL-40403.
- Borg, N. et al. 2003. "The power of the public purse; energy efficiency in Europe's public sector can save 12 billion euro/year." *Proceedings of the ECEEE 2003 Summer Study*, St. Raphaël, France. June.
- CEECAP (Central and Eastern European Countries Appliance Policy). 2004. Website at <u>www.ceecap.org</u>.
- CEE (Consortium for Energy Efficiency). June 2001. *The Residential Clothes Washer Initiative: A Case Study of the Contributions of a Collaborative Effort to Transform a Market*. Prepared for CEE by Shel Feldman Management Consulting, Research Into Action, Inc., Xenergy.
- Efficient Lighting Initiative. 2004. Website at <u>www.efficientlighting.net</u>.
- Electric Power Research Institute. 1995. Customer Systems Group: New Technologies, Strategic Alliances, Technical Support, Communication. Palo Alto, CA.
- Fanara. 1997. (U.S. Environmental Protection Agency). Personal communication.
- Fine, H, D. Fridley, and S. Nadel et al.1997. Sino-U.S. CFC-Free Super Efficient Refrigerator Project Progress Report: Prototype Development and Testing. U.S. Environmental Protection Agency. Washington, D.C. October.
- Gordon, L., et al. 1998. "Wash Wise Cleans Up the Northwest: Lessons Learned from the Northwest High-Efficiency Clothes Washer Initiative." *Proceedings of the ACEEE 1998 Summer Study on Energy Efficiency in Buildings*. Asilomar, CA, American Council for an Energy-Efficient Economy. August.
- Hagler-Bailly. 1996. *Strategies for Financing Energy Efficiency*. Report prepared for the U.S. Agency for International Development by Hagler Bailly Consulting, Inc. Arlington, VA. July.
- Harris, J. et al. 2003. "Using government purchasing power to reduce equipment standby power." *Proceedings of the ECEEE 2003 Summer Study*, St. Raphaël, France. June 2003.
- Harris, J. et al. 2004. "Energy-Efficient Purchasing by State and Local Government: Triggering a Landslide down the Slippery Slope to Market Transformation." *Proceedings of the 2004 ACEEE Summer Study on Energy Efficiency in Buildings*. Asilomar, CA, LBNL 55426, August. Available at: www.dc.lbl.gov/LBNLDC/publications/Energy%20Efficient%20Purchasing%20By%20State%20a nd%20Local%20Government.pdf.
- Hinnells, M. and J. McMahon. 1997. "Stakeholders and Market Transformation: An Integrated Analysis of Costs and Benefits." *Proceedings of the ECEEE 1997 Summer Study*. ID# 28, June 1–2.
- Hirschfeld, H. "Dual System (Energy Management/Electrical Submetering) Retrofit." *Proceedings of the ACEEE 1998 Summer Study on Energy Efficiency in Buildings*. Asilomar, CA, American Council for an Energy-Efficient Economy. August.

- Hollomon, B. et al. 2002. "Seven Years Since SERP: Successes and Setbacks in Technology Procurement." *Proceedings of ACEEE 2000 Summer Study on Energy Efficiency in Buildings*, Asilomar, CA, American Council for an Energy-Efficient Economy. August.
- International Finance Corporation. 2004. *Poland Efficient Lighting Project (PELP)*. Available at <u>www.ifc.org</u>: Environment & Social Development>Our Services>Environmental Finance>Energy Efficiency>Poland Lighting.
- Karbo, P. 1999. "Denmark Launches 'A' Procurement Program" and "Danish Procurement Pays Dividends." *Appliance Efficiency. Stockholm*, Sweden, 3(2) and 3(3).
- Ledbetter, M. et al. 1998. *IFC/GEF Poland Efficient Lighting Project: Demand-Side Management Pilot— Final Report.* #PNWD-2441, prepared for the International Finance Corporation by Battelle and the Polish Foundation for Energy Efficiency. Richland, WA, Battelle.
- Ledbetter, M. et al. 1999. U.S. Energy-Efficient Technology Procurement Projects: Evaluation and Lessons Learned. Pacific Northwest National Labnoratory. Report PNNL-12118. Richland, WA. February.
- Ledbetter, M. 2000. Technology Deployment Case Study: U.S. Department of Energy's Sub-CFL Program. "Best Practices: Technology Deployment," International Energy Agency, Paris, France.
- Lin, J. et al. 2002. "Energy-Efficient Appliance Labeling in China: Lessons for Successful Labeling Programs in Varied Markets." *Proceedings of ACEEE 2002 Summer Study on Energy Efficiency in Buildings*, Asilomar, CA, American Council for an Energy-Efficient Economy. August.
- Lin, J. et al. 2004. *Developing an Energy Efficiency Service Industry in Shanghai*. Lawrence Berkeley National Laboratory, LBNL-54964. February.
- Lowinger, M. et al. 2002. "Light Commercial Air Conditioning: Moving the Market toward High Efficiency." Proceedings of ACEEE 2002 Summer Study on Energy Efficiency in Buildings, Asilomar, CA, American Council for an Energy-Efficient Economy. August.
- McKane, A. and J. Harris. 1996. "Changing Government Purchasing Practices: Promoting Energy Efficiency on a Budget." *Proceedings pf the ACEEE Summer Study on Energy Efficiency in Buildings*. Asilomar, CA, American Council for an Energy-Efficient Economy. August.
- Meier, A. 2003. "Energy Efficiency Policies—A Global Perspective." *Proceedings of the 3rd International Conference on Energy Efficiency in Domestic Appliances and Lighting (EEDAL '03)*. Turin, Italy. October 1–3.
- Meyers, S. 1998. Improving Energy Efficiency Strategies for Supporting Sustained Market Evolution in Developing and Transitioning Countries. Berkeley, CA, Lawrence Berkeley National Laboratory, LBNL-41460. February.
- MMEE (Moving Markets for Energy Efficiency). 1999. Website sponsored by USAID; includes case studies, searchable bibliography, links to other sites. See www.globalefficiency.net.
- Nadel, S. 2002. "Appliance and Equipment Efficiency Standards." *Annual Review of Energy and the Environment. Annual Reviews.* Palo Alto, CA.
- Philips, M. 2003. *Energy Reform and Social Protection in Bulgaria (draft)*. Report prepared for the U.S. Agency for International Development. Arlington, VA.
- Pope, T. 1995. "ATHELMA: Assessing the Market Transformation Potential for Efficient Clothes Washers in the Residential Sector." EPRI Proceedings: Delivering Customer Value 7th Demand-Side Management Conference, 158. Palo Alto, CA, Electric Power Research Institute.

- Rumsey, P., and T. Flanigan. 1995. *Asian Energy Efficiency Success Stories*. Washington, D.C., International Institute for Energy Conservation.
- Siderius, H., and A. Loozen. 2003. "Energy Premium Scheme (EPR) for domestic appliances in the Netherlands." *Proceedings of the ECEEE 2003 Summer Study*, St. Raphaël, France. June 2003.
- Suozzo, M., and S. Nadel. 1996. *What Have We Learned from Early Market Transformation Efforts?* Washington, D.C., American Council for an Energy-Efficient Economy. August.
- U. S. EPA (U.S. Environmental Protection Agency). 2003. ENERGY STAR—The Power to Protect the Environment Through Energy Efficiency. EPA 430-R-03-008. July.
- Van Wie McGrory, L., J. Harris, M. Breceda Laeyre, S. Campbell, S. Constantine, M. della Cava, J. Martinez, and S. Meyer. 2002. "Market Leadership by Example: Government Sector Energy Efficiency in Developing Countries." *Proceedings of the ACEEE 2002 Summer Study*. Asilomar, CA, American Council for an Energy-Efficient Economy.
- Westling, H. 1996. Co-operative Procurement: Market Acceptance for Innovative Energy-Efficient Technologies. NUTEK. Report B-1996:3. Stockholm, Sweden.
- Westling, H. 2000. IEA DSM Annex III Co-operative Procurement of Innovative Technologies for Demand-Side Management—Final Management Report. Swedish National Energy Administration. EI 6:2000. Stockholm.
- Westling, H. 2001. "Agreed Performance Criteria Facilitates More Efficient Housing Solutions." Paper at the *CIB World Building Congress*. Wellington, New Zealand. April.
- Wiel, S., L. Van Wie McGrory, and L. Harrington. 2002. "Energy Efficiency Standards and Labels in North America: Opportunities for Harmonization." *Proceedings of the ACEEE 2002 Summer Study*. Asilomar, CA, American Council for an Energy-Efficient Economy.
- Wohlgemuth, N. and J. Painuly. 1999. "Promoting Private Sector Financing of Commercial Investments in Renewable Energy Technologies." Paper presented at the United Nations Fifth Expert Group Meeting on Financing Issues of Agenda 21. Nairobi, Kenya, 1–4 December. UNEP Collaborating Centre on Energy and Environment, Risø National Laboratory, Denmark.
- World Bank. 2004. World Bank GEF Energy Efficiency Portfolio Review and Practitioners' Handbook; Thematic Discussion Paper. World Bank Environment Department, Climate Change Team. Washington, D.C. January 21.