APPENDIX A

About the Editors and Authors

About the Editors

Daniel Sperling is a professor of civil engineering and environmental science and policy and founding director of the Institute of Transportation Studies (ITS-Davis) at the University of California, Davis. Dr. Sperling is recognized as a leading international expert on transportation technology assessment, energy and environmental aspects of transportation, and transportation policy. In the past 20 years, he has authored or coauthored over 160 technical papers and 8 books. Dr. Sperling is associate editor of *Transportation Research D* (Environment) and a current or recent editorial board member of five other scholarly journals. He is a recent member of U.S. National Academy of Sciences committees on Highway Finance (2003–2004), Hydrogen Production and Use (2002–2003), Personal Transport in China (2000–2002), Transportation Environmental Cooperative Research Program Advisory Board (1999–2001), Biomass Fuels R&D (1999), Enabling Transportation Technology R&D (1998), Transportation and a Sustainable Environment (1995–1997), Transportation Options for Megacities (1994), and Liquid Fuel Options (1989–1990). He is a founding chair and emeritus member of the Alternative Transportation Fuels Committee of the U.S. Transportation Research Board. Dr. Sperling consults for international automotive and energy companies, major environmental groups, and several national governments. He has testified numerous times to the U.S. Congress and various government agencies and provided keynote presentations and invited talks in recent years at international conferences in Asia, Europe, and North America.

James S. Cannon is an internationally recognized researcher specializing in energy development, environmental protection, and related public policy issues. He is president of Energy Futures, Inc., which he founded in 1979.

Among its activities, Energy Futures publishes the quarterly international journal *The Clean Fuels and Electric Vehicles Report* and the bimonthly newsletter *Hybrid Vehicles*. Mr. Cannon has written several books on alternative transportation fuels, including *The Drive for Clean Air* (1989), *Paving the Way to Natural Gas Vehicles* (1993), and *Harnessing Hydrogen: The Key to Sustainable Transportation* (1995). He previously collaborated with Dr. Sperling to edit another volume of presentations from the Asilomar Conference held in 2003, *The Hydrogen Energy Transition: Moving toward the Post Petroleum Age in Transportation*. Over the past decade, his research into alternative transportation fuels has taken him to over 20 countries on 5 continents. Mr. Cannon previously had a seven-year professional association with the U.S. Office of Technology Assessment, and for eight years was an energy policy analyst for the Energy, Minerals, and Natural Resources Department of the State of New Mexico. Mr. Cannon holds an A.B. degree in chemistry from Princeton University and an M.S. degree in biochemistry from the University of Pennsylvania. He lives with his family in Boulder, Colorado.

About the Authors

Feng An is an international transportation consultant and founder of Energy and Transportation Technologies LLC. In recent years, he has been actively involved in several key automotive fuel economy and GHG emissions studies around the world, especially for the United States, China, Mexico, and Brazil. He is a director of Auto Project on Energy and Climate Change (APECC), a nonprofit organization based in Beijing, China. He currently also serves as transportation consultant to Hewlett Foundation's Latin America program, Energy Foundation's China sustainable transportation program, DOE's Argonne National Laboratory and Environmental Defense. From 2000 to 2003, he served on a joint U.S.-China National Academy Committee and coauthored a book, *Personal Cars and China*. Dr. An received his Ph.D. from the University of Michigan in 1992 and M.S. from Tsinghua University in Beijing in 1986, both in Applied Physics. Dr. An has authored numerous publications, including 17 SAE papers, in the area of automotive technologies and their impacts on energy and environment. He is also a board director of Professional Association for China's Environment (PACE) and editor-in-chief of *Sinosphere Journal*, an online publication of PACE.

Anup P. Bandivadekar is a doctoral candidate at the Engineering Systems Division at the Massachusetts Institute of Technology (MIT). His research interests are focused around developing frameworks and methods to foster innovative solutions toward achieving a sustainable energy and transportation system. Currently, he is working with the MIT Laboratory for Energy and the Environment on evaluating fuels and vehicle technologies as well

as policy alternatives that could significantly reduce greenhouse gas emissions of the U.S. light-duty vehicle fleet in the next 30 years. He holds a B.A. from University of Mumbai and an M.S. from Michigan Technological University in the field of mechanical engineering, and an M.S. in Technology and Policy from MIT.

Roger Bezdek has 30 years of experience in research and management in the energy, utility, environmental, and regulatory areas, serving in private industry, academia, and the federal government, and is the founder and president of Management Information Services, Inc., a Washington, D.C.–based economic and energy research firm. He has served as corporate director, corporate president and CEO, university professor, research director in ERDA/DOE, special advisor on energy in the Office of the Secretary of the Treasury, and U.S. energy delegate to the European Community and to NATO. He has also served as a consultant to the White House, federal and state government agencies, and various corporations and research organizations. Dr. Bezdek received his Ph.D. in economics from the University of Illinois (Urbana), is an internationally recognized expert in energy market analysis, R&D assessment, and energy forecasting. He is the author of 4 books and 200 articles in scientific and technical journals and serves as an editorial board member and peer-reviewer for various professional publications. He is the recipient of numerous honors and awards, has served as a U.S. representative to international organizations on energy and environmental issues, and lectures frequently on economic, energy, and environmental topics.

Deborah Lynn Bleviss has worked in the energy and environmental field for more than 20 years. Since late 2003, she has been a partner in a new consulting group, the BBG Group, which addresses sustainable urban transportation options, both domestically and internationally. Previously, Ms. Bleviss worked first as an advisor to (1996–1998) and then as program director of (1998–2001) the Inter-American Development Bank's "Sustainable Markets for Sustainable Energy" (SMSE) program. Prior to her work at the IDB, she worked at the U.S. Department of Energy of the United States (1995–1996) as an advisor to the assistant secretary of energy for Energy Efficiency and Renewable Energy, developing international and domestic clean transportation and energy financing initiatives. Ms. Bleviss was a lead author for the transportation mitigation chapter of the *Second Assessment Report of the Intergovernmental Panel on Climate Change* (published in 1995) and the author of *The New Oil Crisis and Fuel Economy Technologies: Preparing the Light Transportation Industry for the 1990s* (published in 1988). Ms. Bleviss is also an adjunct professor at the Johns Hopkins School for Advanced International Studies. Trained as a physicist, she received her education from UCLA and Princeton University.

David L. Bodde is a professor of engineering and business at Clemson University and a senior fellow at Clemson's Spiro Center for Entrepreneurial Leadership. Dr. Bodde serves on the Board of Directors of a variety of companies: Great Plains Energy (a diversified energy company and electric utility), the Commerce Funds (a mutual fund), and several privately held ventures. His past experience includes vice president of the Midwest Research Institute, assistant director of the U. S. Congressional Budget Office, and deputy assistant secretary in the Department of Energy. He recently served as chairman of the Environmental Management Board, advising the Department of Energy on the cleanup of the U.S. nuclear weapons complex and is a member of the National Research Council's Board on Energy and Environmental Systems. Dr. Bodde holds a D.B.A. from Harvard University (1976); M.S. degrees in nuclear engineering (1972) and management (1973), both from the Massachusetts Institute of Technology (MIT); and a B.S. from the United States Military Academy (1965). He is a veteran of the U.S. Army and served in Vietnam.

André Bourbeau is an energy economist and is currently Manager of Economic Analysis in the Environmental Affairs Directorate at the Federal Ministry of Transportation, Transport Canada. In this position, André oversees Transport Canada's Sustainable Transportation Research Initiative, which is intended to fill analytical gaps and contribute to a national perspective on climate change transportation solutions. Specific objectives of this initiative include facilitating the creation and improvement of sustainable transportation data and indicators, developing tools to improve decision making, and facilitating the assessment of climate change mitigation options and impacts, including cobenefits such as congestion reduction benefits. Prior to this, André worked in different ministries in the federal government, including Environment Canada and Natural Resources Canada. André holds an M.S. in economics from Laval University (Quebec City).

David Burwell is a partner in the BBG Group, an independent consulting firm providing services in sustainable transportation in North and South America. He also serves as the senior vice president for Transportation Programs at the Project for Public Spaces in New York City. He was formerly president and CEO of Rails to Trails Conservancy (1985–2001) and the Surface Transportation Policy Project (2001–2003). He has served on the TRB Executive Committee (1992–1998) and on the TRB Study Committee on Transportation and a Sustainable Environment (1997–1998). He is past chair of the TRB Sustainable Transportation Task Force (2003–2005). He was appointed a National Associate of the National Academies in 2003. He lives in Bethesda, Maryland.

John M. DeCicco, Ph.D., is a senior fellow who specializes in automotive strategies at Environmental Defense. His work entails technology assessment and policy analysis of ways to improve efficiency and reduce emissions of cars and light trucks. He has published extensively on the subject, with recent studies addressing options for improving the fuel economy of gasoline-powered vehicles, including conventional and hybrid powertrains and mass reduction, prospects for fuel cell vehicles, and market characterizations of automotive sector oil demand and carbon dioxide emissions. He has an interest in developing regulatory, market-oriented, and consumer educational strategies to foster progressive change in the auto market. Dr. DeCicco is active in the Society of Automotive Engineers and the National Research Council's Transportation Research Board, for which he chaired the Energy Committee from 1996 to 2000. He received his doctorate in mechanical engineering from Princeton University in 1988.

Alexandre Dumas is an energy economist and currently is acting senior economist in the Environmental Affairs Directorate at the Canadian federal Department of Transportation (Transport Canada). In this position, Alexandre is involved in Transport Canada's efforts to fill analytical gaps and contribute to a national perspective on climate change transportation solutions. His work focuses on the development of tools to improve decision making and the assessment of climate change mitigation options and impacts. Prior to this, Alexandre worked for different federal government departments including Natural Resources Canada and Statistics Canada. Alexandre holds a B.A. in economics from the University of Sherbrooke.

Duncan Eggar is a chartered civil engineer. He graduated from the University of Nottingham and gained his initial experience on various heavy engineering projects, including the Thames Barrier. He joined BP in 1981, and for ten years was involved with the design, construction, installation, and maintenance of offshore oil and gas production facilities in the North Sea and on a posting to New Zealand. He also participated in and led R&D on related topics. In 1990 he joined the global aviation fuels marketing unit of BP, where he held various roles in engineering management, Health Safety and Environment, project management, and operations management; this included a posting to South Africa. In April 2004 he returned to BP as the senior business advisor on Sustainable Mobility to the Refining and Marketing Segment of the BP group.

Freda Fung is an automotive analyst at Environmental Defense, working on issues related to carbon emissions and fuel consumption of cars and light trucks. She analyzes data and develops models to estimate carbon dioxide emissions and oil use from the U.S. auto sector and conducts research on policies and alternative strategies to reduce impacts of automotive use on

climate change. Prior to joining Environmental Defense, Ms. Fung worked with Tellus Institute, a nonprofit research and consulting group in Boston, where she engaged in research on market-based supply chain management practices to reduce chemical use and waste in the automotive and aerospace sectors. She also worked as a consultant in a Hong Kong–based environmental consulting firm. Ms. Fung received an M.S. in environmental management and policy from Lund University, Sweden, in 1999 and an M.S. in economics from the Chinese University of Hong Kong in 1995.

John German is manager of environmental and energy analyses for American Honda Motor Company. His responsibilities include anything connected with environmental and energy matters, with an emphasis on being a liaison between Honda's R&D people in Japan and regulatory affairs. Mr. German has been involved with advanced technology and fuel economy since joining Chrysler in 1977, where he spent eight years in Powertrain Engineering working on fuel economy issues. Prior to joining Honda 7 years ago, he also spent 13 years doing research and writing regulations for EPA's Office of Mobile Sources' laboratory in Ann Arbor, Michigan. Mr. German is the author of a variety of technical papers and a recent book on hybrid gasoline-electric vehicles published by SAE. He was the first recipient of the recently established Barry D. McNutt award, presented annually by SAE for Excellence in Automotive Policy Analysis. He has a B.A. in physics from the University of Michigan and got halfway through an M.B.A. before he came to his senses.

David L. Greene is a corporate fellow of Oak Ridge National Laboratory (ORNL). He has spent 25 years researching transportation energy and policy issues. Dr. Greene received a B.A. from Columbia University in 1971, an M.A. from the University of Oregon in 1973, and a Ph.D. in geography and environmental engineering from Johns Hopkins University in 1978. He has published more than 175 professional publications, including three books (*Transportation and Energy, Transportation and Global Climate Change, and The Full Costs and Benefits of Transportation*), and is the recipient of four "best paper" awards from scientific societies. Dr. Greene has been active in the Transportation Research Board and National Research Council for over 25 years, serving on numerous standing and ad hoc committees dealing with energy and environmental research. In recognition of his service to the National Academy of Science and National Research Council, Dr. Greene has been designated a lifetime National Associate of the National Academies.

John B. Heywood is the director of the Sloan Automotive Laboratory and Sun Jae Professor of Mechanical Engineering at Massachusetts Institute of technology (MIT). Professor Heywood did his undergraduate work in Mechanical Engineering at Cambridge University and his graduate work at

MIT. His current research is focused on the operating, combustion, and emissions characteristics of internal combustion engines and their fuel requirements. He has also worked on issues relating to engine design in MIT's Leaders for Manufacturing Program. He was engineering codirector of the program from 1991 to 1993. He has published some 180 papers in the technical literature and has won several awards for his research publications. He holds an Sc.D. from Cambridge University for his published research contributions. He is an author of a major text and professional reference *Internal Combustion Engine Fundamentals* and coauthor with Professor Sher of *The Two-Stroke Cycle Engine: Its Development, Operation, and Design.* He is now directing MIT's Mechanical Engineering Department's Center for 21st Century Energy, which is developing a broader set of energy research initiatives. In January 2003, Professor Heywood was appointed codirector of the Ford-MIT Alliance.

Reid R. Heffner is a researcher and Ph.D. candidate at the University of California, Davis, Institute of Transportation Studies. His research focuses on the consumer response to advanced technology vehicles, including hybrid electric vehicles and hydrogen fuel cell vehicles. Currently, Mr. Heffner is investigating how advanced vehicles serve as symbols to consumers and the impact this symbolism has on consumers' decisions to purchase these vehicles. Before joining UCD-ITS in 2003, he spent six years designing, building, and marketing new technology products. Most recently, Mr. Heffner was a senior product manager at supply-chain software maker Manugistics, where he managed collaborative development projects with transportation clients that include Mitsubishi Motors and Harley-Davidson. Mr. Heffner has a B.A. from Colgate University (1993) and an M.B.A. from Georgetown University (1997).

Robert L. Hirsch is a senior energy program advisor at SAIC and a consultant in energy, technology, and management. Previously, he was a senior staff member at RAND (energy policy analysis), executive advisor at Advanced Power Technologies, Inc. (environmental and defense R & D), vice president of the Electric Power Research Institute, vice president and manager of Research and Technical Services for Atlantic Richfield Co. (oil and gas exploration and production), founder and CEO of APTI (commercial and Defense Department technologies), manager of Exxon's synthetic fuels research laboratory, manager of Petroleum Exploratory Research at Exxon (refining R & D), assistant administrator of the U.S. Energy Research and Development Administration responsible for renewables, fusion, and geothermal and basic research (presidential appointment), and director of fusion research at the U.S. Atomic Energy Commission and ERDA. He has served on advisory committees for Department of Energy programs and national laboratories, the General Accounting Office, the Office of Technology Assessment, the Gas Research Institute, and NASA. He holds 14 patents

and has over 50 publications. He is immediate past chairman of the board on Energy and Environmental Systems of the National Research Council, the operating arm of the National Academies, has served on a number of National Research Council committees, and is a national associate of the National Academies.

Walter Hook has been the executive director of the Institute for Transportation and Development Policy (ITDP) since 1993. ITDP provides technical assistance to municipalities in developing countries working on bus rapid transit, nonmotorized transport, travel demand management, and brownfield revitalization. In the past, ITDP also played a key advocacy role in the development of the Global Environmental Facility's Operational Program 11 on Transport and earlier on the transport sector lending policies of the World Bank. He earned a Ph.D. in Urban Planning from Columbia University in 1996.

Kenneth S. Kurani is a member of the professional research staff at the Institute of Transportation Studies at the University of California, Davis. Working as part of a multidisciplinary team, he develops and applies theories and methods to evaluate user responses to new transportation and information technologies. While this research is largely conducted within a household activity-based approach to travel demand analysis and interactive stated preference and reflexive survey methodologies, one of the primary goals is to expand and enrich the behavioral models applied in transportation research. His research explores how citizen/consumers can use new technologies to shape both their own lives and efforts to market transportation and communication networks according to their collective benefits such as energy efficiency, air quality, safety, and social equity. For the past 20 years, he has primarily worked within the area of consumer markets for alternative fuel and electric-drive vehicles. His ongoing research includes household response to electric, hybrid, and fuel cell vehicles and consumer/citizen valuation of automotive fuel efficiency. Dr. Kurani holds a Ph.D. in civil and environmental engineering from UC Davis.

David M. Reiner is a lecturer in technology policy at the Judge Business School, University of Cambridge, the United Kingdom. He is also a research associate of the Centre for International Business and Management and the Electricity Policy Research Group at Cambridge, of the Centre for the Study of the United States at the French Institute for International Relations in Paris, and of MIT's Joint Program on the Science and Policy of Global Change and Carbon Sequestration Initiative. Dr. Reiner received his Ph.D. in political science at the Massachusetts Institute of Technology and has taught at Tufts University in Medford, Massachusetts, and the Graduate School of International Studies in Geneva, Switzerland. His areas of research include energy and environmental policy, technology policy, competition

policy, and public perceptions. Current projects include a study on public and opinion leader perceptions of carbon capture and storage technologies (with Chalmers University of Technology in Sweden, the University of Tokyo, and MIT and funding from the Alliance for Global Sustainability and the electric power industry on three continents); institutional design for climate change policy; the potential role for the environmental aid in developing countries; and the politics and geopolitics of energy security in the United Kingdom.

Gary Toth has 32 years of experience within the New Jersey Department of Transportation (NJDOT) and is currently director of Project Planning and Development. He is a graduate of Stevens Institute of Technology in New Jersey in 1973 with a B.E. (major in civil engineering). He also is a graduate of the Environmental Management Institute at the University of Southern California in 1980. He is one of the originators of the NJDOT Task Force on Context Sensitive Design (CSD) and has participated in workshops or peer reviews on CSD or Community Impact Assessment (CIA) in Maryland, Connecticut, Washington D.C., Indiana, and Oregon. He has participated in panels on integrating transportation and land use at various locations around the country, including the New Partners for Smart Growth, Surface Transportation Policy Project, North Atlantic Transportation Planning Officials, National Community Impact Assessment Committee, Northeast Association of State Transportation Officials, and with the upcoming Executive Seminar on Transportation and Land Use, hosted by the National Cooperative Highway Research Project. Mr. Toth is the father of three children. He enjoys reading, coaching soccer, cooking, and wine.

Thomas S. Turrentine began his anthropology career studying processes of cultural change in the Peruvian Andes. For the past two decades he has been working with the Institute of Transportation Studies at the University of California at Davis integrating anthropological methods and theory with transportation research to create unique approaches to understanding the future of transportation systems, especially consumer and citizen response to new technologies and policies. Dr. Turrentine has conducted field research in the United States, Peru, Bolivia, Chile, Canada, and New Zealand, and has been an invited speaker to international conferences on the subject of the alternative fueled vehicles market and transportation research methods in Sweden, France, Canada, and England. He has served as a consultant to automobile and other corporations on the future of cars and personal transport. Recent work is focused on the market for hybrid electric and fuel cell vehicles.

Robert M. Wendling has 30 years of experience in consulting and management in the energy, environmental, statistical/econometric modeling, and regulatory areas, serving in private industry and the federal government. He

has served in industry as corporate CEO and president and as corporate vice president and in senior economic positions in the U.S. Department of Commerce and the Department of Energy. Mr. Wendling was director of Commerce's STAT-USA office, cocreator of the NRIES Regional Econometric Impact Model, and also served as the lead U.S. representative for Asian Pacific Economic Cooperative (APEC) tariff and trade negotiations. He is the author of 75 reports and professional publications on energy and environmental topics and lectures frequently on various energy, environmental, regional economic analysis, and economic modeling and forecasting topics. He received his M.A. in economics from George Washington University.