



John Byrne
Director and Distinguished Professor of
Energy and Climate Policy
University of Delaware
278 Graham Hall
111 Academy Street
Newark, DE 19716 USA
Tel.: (302) 831-8405 Fax: (302) 831-3098
E-mail: jbyrne@udel.edu
Website: <http://ceep.udel.edu/>



POSITIONS HELD

Director, Center for Energy and Environmental Policy, University of Delaware, 1984-present.

Co-executive Director, Joint Institute for a Sustainable Energy and Environmental Future, 1998-present.

Distinguished Professor of Energy and Climate Policy, University of Delaware, 2009-present.

Distinguished Professor of Public Policy, University of Delaware, 2004-2009.

Professor, Graduate School of Urban Affairs and Public Policy, University of Delaware, 1992-2004.

Director, M.A. and Ph.D. Program, Graduate School of Urban Affairs and Public Policy, University of Delaware, 1993-1996.

Associate Professor, Graduate School of Urban Affairs and Public Policy, University of Delaware, 1986-1992.

Assistant Professor, Graduate School of Urban Affairs and Public Policy, University of Delaware, 1982-1986.

Director, Energy Policy Research Group, University of Delaware, 1981-1984.

Visiting Assistant Professor, Center for the Study of Values, University of Delaware, 1981-1982.

HONORS AND SPECIAL APPOINTMENTS

Nobel Peace Prize, shared with researchers of the Intergovernmental Panel on Climate Change, 2007. (Based on service as a contributing author to Working Group III since 1992.)

United Nations Observer status, granted to CEEP for matters related to the Framework Convention on Climate Change and the UN Commission on Sustainable Development, 2000-present.

Member, Executive Board, *International Solar Cities Initiative*, 2000-present.

Policy Advisor, Environmental Forum, Korea National Assembly, 1998-present.

Environmental Expert, China National Foreign Expert Agency Register, 1997-present.

Contributing Author, Working Group III, Intergovernmental Panel on Climate Change, 1993-present.

Co-editor, *Bulletin of Science, Technology and Society*, 2004-present. (Member, Editorial Board, *Bulletin of Science, Technology and Society*, 1994-2003.)

Member of the Board, International Association of Science, Technology and Society, 2005-present.



General Editor, *Energy and Environmental Policy*, book series published by Transaction Publishers, 1982-present.

Member, Board of Directors, Environmental Market Solutions, Inc. 2001-present.

Co-founder and Principal, Urban Health and Environment Learning Project (UHELP – a collaborative organization created to address environmental justice concerns in Wilmington, Delaware – see <http://www.urbanhelp.org>), 2003-present.

Member, Board of Directors, Urban Environmental Center, 1997-present.

Evaluator, Social Science and Humanities Research Council, Canada, 2001.

Member, Advisory Board, U.S. Council for Science and the Environment, 1999-2001.

Special Advisor, Sustainable and Peaceful Energy Network of Asia, 1998-2004.

Author, Graduate Program Policy Statement for a Master of Environmental and Energy Policy and a Ph.D. in Environmental and Energy Policy. Appointed by the Provost of the University of Delaware to chair a university-wide committee to create a new multi-college graduate program in environmental and energy policy. Proposal approved October 1997.

Special Advisor, The Energy Research Institute (TERI – formerly the Tata Energy Research Institute), 1994-1997.

Member, Advisory Board, Asia Energy Institute, 1994-1997.

Fulbright Senior Lecturer/Researcher Award, jointly affiliated with Seoul National University and the Korea Energy Economics Institute, 1995.

Evaluator, U.S. Environmental Protection Agency, Science to Achieve Results Program, 1999.

Evaluator, National Science Foundation/Lucent Technologies Industrial Ecology Fellowship Program, 1997.

Member, Energy and Environmental Systems Committee, Oak Ridge Associated Universities Council, 1990-1994.

Member, Editorial Board, *Energy Sources*, 1989-1993.

Excellence in Teaching Award, University of Delaware, 1988.

Postdoctoral Fellow, Center for the Study of Values, University of Delaware, 1980-1981.

DEGREES

Ph.D., Urban Affairs and Public Policy, University of Delaware, 1980.

M.A., Urban Affairs and Public Policy, University of Delaware, 1973.

B.A., Economics, University of Delaware, 1971.

RECENT PUBLICATIONS

Books and Journals

Sustainable Energy Utilities: New Energy Strategy for the New Climate. 2009. Co-editor with Kristen Hughes. Special issue of the *Bulletin of Science, Technology and Society*, Vol. 29, No. 2.

Transforming Power: Energy, Environment and Society in Conflict. 2006. Co-editor with Noah Toly and Leigh Glover. Volume 9 in the Energy and Environmental Policy series. New Brunswick, NJ and London: Transaction Publishers.

Water Conservation-Oriented Rates. 2005. With Young-Doo-Wang and William J. Smith Jr. Denver, CO: Water American Works Association.



- Energy Revolution: Toward an Energy-Efficient Future for South Korea*. 2004. Co-author with Young-Doo Wang, Hoesung Lee, Jung Wk Kim and Jong-dall Kim. Seoul, South Korea: Maeil Kyung Jae.
- Environmental Justice: Discourses in International Political Economy*. 2002. Co-editor with Cecilia Martinez and Leigh Glover. Volume 8 in the Energy and Environmental Policy series. New Brunswick, NJ and London: Transaction Publishers.
- Energy Controversy – Part II: Reversing Course*. 2002. Guest co-editor with Steven M. Hoffman. Special issue of the *Bulletin of Science, Technology and Society*, Vol. 22, No. 2. Sage Publications.
- Energy Controversy – Part I: Change and Resistance*. 2001. Guest co-editor with Steven M. Hoffman. Special issue of the *Bulletin of Science, Technology and Society*, Vol. 21, No. 6 (December). Sage Publications.
- Governing the Atom: The Politics of Risk*. 1996. With Steven M. Hoffman. Volume 7 in the Energy and Environmental Policy series. New Brunswick, NJ and London: Transaction Publishers.
- Energy and Environment: The Policy Challenge*. 1992. Co-editor with Daniel Rich. Volume 6 in the Energy and Environmental Policy series. New Brunswick, NJ and London: Transaction Publishers.
- Toward Sustainable Energy, Environment and Development: Institutional Strategies for Indonesia, South Korea, Malaysia and Thailand*. 1991. With Young-Doo Wang et al. Prepared for ESMAP/World Bank. A joint report of the Center for Energy and Environmental Policy, University of Delaware, the Korea Energy Economics Institute and the Environmental Planning Institute, Seoul National University.
- Energy, Environment and Sustainable World Development: Energy Options for the Year 2000*. 1991. Special issue of *Energy Sources*, Vol. 13, No. 1. Co-editor with Steven M. Hoffman.
- Proceedings of the International Symposium on Energy Options for the Year 2000: Contemporary Concepts in Technology and Policy*. 1988. Four volumes. Co-editor with Jorma Heinonen, Eino Kainlahti and Daniel Rich. Newark, DE: Center for Energy and Environmental Policy, University of Delaware.
- Planning for Changing Energy Conditions*. 1988. Co-editor with Daniel Rich. Volume 4 in the Energy and Environmental Policy series. New Brunswick, NJ and London: Transaction Publishers.
- The Politics of Energy R&D*. 1986. Co-editor with Daniel Rich. Volume 3 in the Energy and Environmental Policy series. New Brunswick, NJ and London: Transaction Publishers.
- Families and the Energy Transition*. 1985. Co-editor with David A. Schulz and Marvin B. Sussman. Special issue of Marriage and Family Review 9/1-2 (Fall). Republished in book form by Haworth Press (1986).
- Energy and Cities*. 1985. Co-editor with Daniel Rich. Volume 2 in the Energy and Environmental Policy series. New Brunswick, NJ and London: Transaction Publishers.



Technology and Energy Choice. 1983. Co-editor with Mary Helen Callahan and Daniel Rich. Volume 1 in the Energy and Environmental Policy series. Newark, DE: Center for Energy and Environmental Policy.

The Solar Energy Transition: Implementation and Policy Implications. 1983. Co-editor with Daniel Rich, Allen M. Barnett and Jon M. Veigel. Boulder, CO: Westview Press for the American Association for the Advancement of Science.

Articles and Chapters

“Relocating Energy in the Social Commons: Ideas for a Sustainable Energy Utility.” 2009. With Cecilia Martinez and Colin Ruggero. *Bulletin of Science, Technology and Society*. Vol. 29, No. 2: 81-94.

“Delaware’s Sustainable Energy Utility.” 2009. With Cecilia Martinez. *Delaware Lawyer* (summer): 26-31.

“Undoing Atmospheric Harm: Civil Action to Shrink the Carbon Footprint.” 2008. With Lado Kurdgelashvili and Kristen Hughes. In *Urban Energy Transition: From Fossil Fuels to Renewable Power*. P. Droege ed. Oxford, UK: Elsevier. Pp. 27-54.

“American Policy Conflict in the Greenhouse: Divergent Trends in Federal, Regional, State, and Local Green Energy and Climate Change Policy.” 2007. With Kristen Hughes, Wilson Rickerson, and Lado Kurdgelashvili. *Energy Policy*. Vol. 35, No. 9: 4555-4573.

“Evaluating the Potential of Small-Scale Renewable Energy Options to Meet Rural Livelihoods Needs: A GIS- and Lifecycle Cost-based Assessment of Western China’s Options.” 2007. With Aiming Zhou, Bo Shen and Kristen Hughes. *Energy Policy*. Vol. 35, No. 8: 4391-4401.

“Modern Energy and Modern Society.” 2006. With Noah Toly and Young-Doo Wang. In *Transforming Power: Energy, Environment and Society in Conflict*. J. Byrne et al eds. (see Books and Journals). Pp. vii-xii.

“Energy as a Social Project: Recovering a Discourse.” 2006. With Noah Toly. In *Transforming Power: Energy, Environment and Society in Conflict*. J. Byrne et al eds. (see Books and Journals). Pp. 1-32.

“Hydrogen Highways: Lessons on the Energy Technology-Policy Interface.” 2006. With A. Waegel, D. Tobin and B. Haney. *Bulletin of Science, Technology and Society*. Vol. 26, No. 4: 288-298. Special issue “Hydrogen: Facts and Fictions.”

“Global trends in agriculture and food systems.” 2006. With Marie Trydeman Knudsen (principal author) et al. In Niels Halberg et al (eds.), *Global Development of Organic Agriculture: Challenges and Prospects*. Oxfordshire, UK: CABI Publishing. Pp. 1-48

“Globalization and sustainable development: a political ecology strategy to realize ecological justice.” 2006. With Leigh Glover and Hugo F. Alroe. In Niels Halberg et al (eds.), *Global Development of Organic Agriculture: Challenges and Prospects*. Oxfordshire, UK: CABI Publishing. Pp. 49-74.

“Organic agriculture and ecological justice: ethics and practice.” 2006. With Hugo Alroe (principal author) and Leigh Glover. In Niels Halberg et al (eds.), *Global Development of Organic Agriculture: Challenges and Prospects*. Oxfordshire, UK: CABI Publishing. Pp. 75-112.

“Can Cities Sustain Life in the Greenhouse?” 2006. With Kristen Hughes, Noah Toly and Young-Doo Wang. *Bulletin of Science, Technology and Society*. Vol. 26, No. 2: 84-95. Special issue “Solar Cities: Linking Climate Change and Human Settlement.”



- “Break-even Price Estimates for Residential PV Applications in OECD Countries with an Analysis of Prospective Cost Reductions.” 2006. With D. Poconi (principal author) and S. Hegedus. *Energy Studies Review*, Vol. 14, No. 1 (Spring): 104-117.
- “Freshwater Management in Industrialized Urban Areas: Water Conservation Practices during Droughts.” 2006. With Young-Doo Wang and William Smith. In *Water: Global Common and Global Problems*. Velma I. Grover, ed. London, UK: Oxford & IBH Publishing Co. Pp. 462-492.
- “Ellul and the Weather.” 2005. With Leigh Glover. *Bulletin of Science, Technology and Society*. Vol. 25, No. 1: 4-16. Special issue “Celebrating the Intellectual Gifts and Insights of Jacques Ellul.”
- “Commodification of Ghana’s Volta River: An Example of Ellul’s Autonomy of Technique.” 2005. With Lawrence Agbemabiese. *Bulletin of Science, Technology and Society*. Vol. 24, No. 1: 17-25. Special issue “Celebrating the Intellectual Gifts and Insights of Jacques Ellul.”
- “Beyond Oil: A Comparison of Projections of PV Generation and European and U.S. Domestic Oil Production.” 2005. With Lado Kurdgelashvili, Allen Barnett, Kristen Hughes and Aaron Thurlow. In D. Y. Goswami and K. Boer, eds., *Advances in Solar Energy*, Vol. 16. Pp. 35-70. Boulder, CO: American Solar Energy Society.
- “Island Bellwether: Climate Change and Energy Policy Strategy for Small Island Developing States.” 2005. With L. Glover, V. Inniss and G. Alleng. *Toward Mauritius 2005*. Paper Series No. 2005-2. Sponsored by UNEP/GPA and the Global Forum on Oceans, Coasts, and Islands. Pp. 1-20.
- “Assessing the Potential Extent of Carsharing: A New Method and its Implications.” 2005. With T. D. Schuster (principal author), J. Corbett and Y. Schreuder. *Transportation Record: The Journal of the Transportation Research Board*. No. 1927: 174-181.
- “Bracing for an Uncertain Energy Future: Renewable Energy and the US Electricity Industry.” 2005. With W. Rickerson, H. Wong, Y-D. Wang and S. Sasser. *Risk Management Matters*. Vol. 3, No. 1: 46-61. Available at http://ceep.udel.edu/publications/energysustainability/2005_es_renewables&risk.pdf
- “Power Liberalization and Neo-Liberalism: South Korea’s Electricity Reform at a Crossroads.” 2004. With Leigh Glover, Hoesung Lee, Young-Doo Wang and Jung-Min Yu. *Pacific Affairs*. Vol. 77, No. 3: 493-516.
- “The Role of Technology in Achieving Environmental Policy Goals in the Maritime Transport System.” 2004. With Melissa Thies, Nicole Cass, et al. *Transportation Record: The Journal of the Transportation Research Board*. No. 1877: 42-49.
- “Reclaiming the atmospheric commons: Beyond Kyoto.” 2004. With Leigh Glover, Vernese Inniss, Jyoti Kulkarni, Yu-Mi Mun, Noah Toly, and Young-Doo Wang. In Velma I. Grover (ed.), *Climate Change: Perspectives Five Years After Kyoto*. Plymouth, UK: Science Publishers, Inc. Pp. 429-452.
- “Enhancement of sustainability in cities through water conservation.” 2004. With Young-Doo Wang et al. In N. Marchettini et al, eds., *The Sustainable City III: Urban Regeneration and Sustainability*. Boston: WIT Press. Pp. 593-602.
- “The potential of solar electric power for meeting future US energy needs: A comparison of projections of solar electric energy generation and Arctic National Wildlife Refuge oil production.” 2004. With Lado Kurdgelashvili, Daniele Poconi and Allen Barnett *Energy Policy*. Vol. 32, No. 2: 289-297.



- “Rethinking reform in the electricity sector: Power liberalization or energy transformation.” 2003. With Yu Mi Mun. In Njeri Wamunkonya, ed. *Electricity Reform: Social and Environmental Challenges*. Roskilde, Denmark: UNEP-RISØ Centre. Pp. 49-76.
- “An Institutional Approach to Regional River Basin Management: Conflict Resolution in the US and South Korea.” 2003. With Young-Doo Wang, Kyoo-Yong Lee, William James Smith, Jr., Sara Wozniak, Michael Scozzafava and Joon-Hee Lee. *Korean Journal of Environmental Studies* Vol. 41: 1-17.
- “The Clean Development Mechanism and Energy Efficiency Upgrades in Developing Countries: The Case of the Residential Sector in Selected Asian Countries.” 2003. With Young-Doo Wang, Woo-Jin Chung, Jyoti Kulkarni, Aiming Zhou, Hideka Yamaguchi and Kenji Takahashi. *Proceedings of the 3rd International Conference on Energy Efficiency in Domestic Appliances and Lighting*. Turin, Italy, October 1-3.
- “The Potential of Solar Electric Power for Meeting Future European and U.S. Energy Needs: A Comparison of Projections of PV Generation and European and U.S. Domestic Oil Production.” 2003. With Lado Kurdgelashvili. *Proceedings of the ISES Solar World Congress 2003*. Vol. 1 (Solar Energy and Society), paper O1 9.
- “A Common Future or Towards a Future Commons: Globalization and Sustainable Development since UNCED.” 2002. With Leigh Glover. *International Review for Environmental Strategies*. Vol. 3, No. 1: 5-25.
- “Island Sustainability and Sustainable Development in the Context of Climate Change.” 2002. With Vernese Inniss. In *Sustainable Development for Island Societies*, M. Hsiao et al eds. Taipei, Taiwan: Academia Sinica. Pp. 3-29.
- “Renewable Energy for Rural Sustainability: Lessons from China.” 2002. With Aiming Zhou. *Bulletin of Science, Technology and Society*. Vol. 22, No. 2: 123-131.
- “Less Energy, a Better Economy, and a Sustainable South Korea: An Energy Efficiency Scenario Analysis.” 2002. With Young-Doo Wang et al. *Bulletin of Science, Technology and Society*. Vol. 22, No. 2: 110-122.
- “A Brief on Environmental Justice.” 2002. With Cecilia Martinez and Leigh Glover. In *Environmental Justice: Discourses in International Political Economy*, J. Byrne et al eds. (see Books and Journals). Pp. 3-17.
- “A ‘Necessary Sacrifice:’ Industrialization and American Indian Lands.” 2002. With Steven M. Hoffman. In *Environmental Justice: Discourses in International Political Economy*, J. Byrne et al eds. (see Books and Journals). Pp. 97-118.
- “The Production of Unequal Nature.” 2002. With Leigh Glover and Cecilia Martinez. In *Environmental Justice: Discourses in International Political Economy*, J. Byrne et al eds. (see Books and Journals). Pp. 261-291.
- “Designing Climate-Sensitive Transport Policy: Lessons from the Delaware Climate Change Action Plan.” 2002. With Leigh Glover. In *Global Change and Transportation: Coming to Terms*, D. Kulash, ed. Washington, DC: ENO Transportation Foundation.
- “Designing Revenue Neutral and Equitable Water Conservation-Oriented Rates for Use During Drought Summer Months.” 2002. With Young-Doo Wang et al. *Proceedings of the Water Sources Conference*. American Water Works Association (CD-Rom). January 27-30. Las Vegas, Nevada.
- “Decision-making Frameworks.” 2001. Contributing author. In B. Metz et al eds. *Climate Change 2001: Mitigation*. Contribution of Working Group III to the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). New York: Cambridge University Press. Pp. 601-688.



- "The Postmodern Greenhouse: Creating Virtual Carbon Reductions from Business-as-Usual Energy Politics." 2001. With Leigh Glover et al. *Bulletin of Science, Technology and Society*. Vol. 21, No. 6: 443-455.
- "Short- and Mid-Term Prospects for World Oil Prices Using a Modified Delphi Method." 2001. With Young-Doo Wang et al. Jungku Kim ed., *Factors Influencing World Prices: Alternative Methods of Prediction*. Seoul, Korea: Korea Energy Economics Institute. Pp. 156-206.
- "Economics of Building Integrated PV In China." 2001. With Gerard Alleng and Aiming Zhou. *Proceedings of the Green Buildings Workshop*. Shanghai, China. Environmental Market Solutions, Inc. (Washington, D.C.) and Pacific Energy Research Center, Tongji University (Shanghai, China) (July).
- "Using Economic Incentives to Accelerate Development of Green Technologies." 2001. With Gerard Alleng and Aiming Zhou. *Proceedings of the Green Buildings Workshop*. Shanghai, China. Environmental Market Solutions, Inc. (Washington, D.C.) and Pacific Energy Research Center, Tongji University (Shanghai, China) (July).
- "Community Participation is Key to Environmental Justice in Brownfields." 2001. With Raymond Scatton. *Race, Poverty and the Environment*. Vo. 3, No. 1 (Winter): 6-7.
- "Climate Shopping: Putting the Atmosphere Up for Sale." 2000. With Leigh Glover. In *TELA: Environment, Economy and Society* series: 28 pp. Melbourne, Australia: Australian Conservation Foundation.
- "Ecological Justice in the Greenhouse." 2000. With Young-Doo Wang, Gerard Alleng, Leigh Glover, Vernese Innis and Yu Mi Mun. Position paper prepared for the Sixth Session of the Conference of Parties (COP-6), held in The Hague, Netherlands, to negotiate implementation of the UN Framework Convention on Climate Change. Newark, DE: Center for Energy and Environmental Policy, University of Delaware.
- "The Brownfields Challenge – Environmental Justice and Community Participation: Lessons from National Brownfields Pilot Projects." 2000. With Raymond Scatton. *Proceedings of Brownfields 2000: Revisiting the American Community*, Atlantic City, NJ (October). Co-sponsored by the U.S. Conference of Mayors, U.S. Department of Housing and Urban Development, the U.S. Environmental Protection Agency, others.
- "Beyond Pollution and Risk: Energy and Environmental Policy in the Greenhouse." With Tze Luen Lin. 2000. *Proceedings of the International Conference on Sustainable Energy and Environmental Strategies*, Taipei, Taiwan (September): 1-23.
- "An International Comparison of the Economics of Building Integrated PV in Different Resource, Pricing and Policy Environments: The Cases of the U.S., Japan and South Korea." 2000. With Lawrence Agbemabiese et al. *Proceedings of the American Solar Energy Society Solar 2000 Conference*, Madison, WI (June): 81-85.
- "Efficient Global Warming: Contradictions in Liberal Democratic Responses to Global Environmental Problems." 1999. With Sun-Jin Yun. *Bulletin of Science, Technology and Society*. Vol. 19, No. 6 (December): 493-500.
- "Evaluating the Persistence of Residential Water Conservation: A 1992-97 Panel Study of a Water Utility Program in Delaware." 1999. With Young-Doo Wang et al. *Journal of the American Water Resources Association*. Vol. 35, No. 5 (October):1269-1276.
- "Mitigating CO₂ Emissions of the Republic of Korea: The Role of Energy Efficiency Measures." 1999. With Young-Doo Wang, Kyung Jin Boo, Jung Wk Kim and Jong-dall Kim. *Proceedings of the 20th Annual North American Conference of the U.S. Association for Energy Economics*. Orlando, FL (August): 319-328.



- “Climate Change and Renewable Energy: Opportunities and Challenges for Korea.” 1999. John Byrne. In *Proceedings of the International Symposium on Climate Change and Alternative Energy Development*. Sponsored by the Environmental Forum of the Korea National Assembly. Seoul, Korea: 49-82.
- “Environmental Impacts of Building Integrated PV Applications in the State Public Buildings Sector.” 1999. With Lawrence Agbemabiese, James Kliesch, Constantine Hadjilambrinos, Patrina Eiffert, and Ralph Nigro. *Proceedings of the American Solar Energy Society Solar 99 Conference*, Portland, Maine (June): 425-429.
- “The Role of Local Planning in Meeting National CO₂ Reduction Targets: An American Case Study.” 1998. With Yda Schreuder and David Redlin. In *Proceedings of the International Resource Accounting Modeling Workshop*. Groningen, The Netherlands, September 16-17.
- “Strategies to Reclaim our Atmospheric Commons.” 1998. With Young-Doo Wang et al. Position paper prepared for the Fourth Session of the Conference of Parties (COP-4), held in Buenos Aires, Argentina, to negotiate implementation of the UN Framework Convention on Climate Change. Newark, DE: Center for Energy and Environmental Policy, University of Delaware.
- “Climate Change Policy: Commons or Commodity.” 1998. With Young-Doo Wang et al. In *Proceedings of the International Workshop on Sustainable and Peaceful Energy Futures*. Tokyo, Japan: Citizens’ Nuclear Information Center.
- “An Equity- and Sustainability-Based Policy Response to Global Climate Change.” 1998. With Young-Doo Wang, Hoesung Lee and Jong-dall Kim. *Energy Policy*. Vol. 26, No. 4 (March): 335-343.
- “Climate Change: Opportunities and Challenges for Korea.” 1998. John Byrne. In the *1998 Report of the Environmental Forum*, pp. 674-704. Seoul, Korea: Korea National Assembly.
- “Sustainable Energy and Environmental Futures: The Implications of Climate Change, Technological Change and Economic Restructuring.” 1998. In J.D. Kim, ed., *Global Warming and a Sustainable Energy Future*, pp. 1-23. Daegu, Korea: Research Institute for Energy, Environment and Economy, Kyungpook National University.
- “International Policies to Avert Global Warming: Issues and Opportunities for Taiwan.” 1998. Presentation to the Taiwan Sustainable Energy and Industrial Policy Conference (March 17). Newark, DE: Center for Energy and Environmental Policy, University of Delaware.
- “The Binnan Industrial Complex: An Environmentally and Economically Costly Choice for Taiwan.” 1998. With Tze-Luen Lin. Prepared for SAVE Expert Group. Presentation to the Legislative Yuan of Taiwan (March 13). Newark, DE: Center for Energy and Environmental Policy, University of Delaware.
- “Photovoltaics as an Energy Services Technology: A Case Study of PV Sited at the Union of Concerned Scientists Headquarters.” 1998. With S. Letendre, L. Agbemabiese, D. Bouton, J. Kliesch and D. Aitken. *Proceedings of the American Solar Energy Society Solar 98 Conference*, Albuquerque, NM (June 15-17):131-136.
- “Commercializing Photovoltaics: The Importance of Capturing Distributed Benefits.” 1998. With S. Letendre, C. Weinberg, and Y-D. Wang. *Proceedings of the American Solar Energy Society Solar 98 Conference*, Albuquerque, NM (June 15-17):231-237.
- “The Economics of Sustainable Energy for Rural Development: A Study of Renewable Energy in Rural China.” 1998. With Bo Shen and William Wallace. *Energy Policy*. Vol. 26, No. 1 (January): 45-54.



- “Equity and Sustainability in the Greenhouse: Reclaiming our Atmospheric Commons.” 1997. Published monograph. Pune, India: Parisar.
- “An Equitable and Sustainable Strategy to Avert Global Warming.” 1997. With Young-Doo Wang, et al. Position paper prepared for the Third Session of the Conference of Parties (COP-3), held in Kyoto, Japan, to negotiate implementation of the UN Framework Convention on Climate Change. Newark, DE: Center for Energy and Environmental Policy, University of Delaware.
- “An Equitable and Sustainable Greenhouse Gas Mitigation Strategy for Korea.” 1997. With See Jae Lee, et al. Paper prepared for presentation at the NGO Forum of the Third Session of the Conference of Parties (COP-3), held in Kyoto, Japan, to negotiate implementation of the UN Framework Convention on Climate Change. A joint publication of the Center for Energy and Environmental Policy, University of Delaware, and the Citizens’ Institute for Environmental Studies, Korea Federation of Environmental Movements. Newark, DE: Center for Energy and Environmental Policy, University of Delaware.
- “Sustainable Energy Options for Asia: Case Studies of China and Korea.” 1997. With Young-Doo Wang, et al. Paper prepared for presentation at the NGO Forum of the Third Session of the Conference of Parties (COP-3), held in Kyoto, Japan, to negotiate implementation of the UN Framework Convention on Climate Change. Newark, DE: Center for Energy and Environmental Policy, University of Delaware.
- “Toward a Sustainable Future for the Yellow Sea Rim: Challenges and Opportunities.” 1997. Young Ho Kim, ed., *Yellow Sea Rim Management Forum*. Seoul, Korea: *Korea Economic Daily*. Pp. 1-28.
- “Sustainability and Local Economic Development in the Rapidly Industrializing Countries of East Asia.” 1997. With Young-Doo Wang and Jong-dall Kim. *Proceedings of the International Conference on Regional Competitiveness in the 21st Century*, Taegu, Korea (October): 55-69.
- “Commercial Building Integrated Photovoltaics: Market and Policy Implications.” 1997. With S. Letendre, L. Agbemabiese, D. Redlin and R. Nigro. *Proceedings of the 26th IEEE Photovoltaic Specialists Conference*, Anaheim, CA (October): 1301-1304.
- “The Economic Viability of Dispatchable Peak Shaving PV Systems in Commercial Buildings of Korea.” With Young-Doo Wang, Kyung-Jin Boo and Jin-Soo Song. 1997. *Proceedings of the International Solar Energy Society 1997 Solar World Congress*. Vol. 3 (August): 294-303.
- “Renewable Energy for Rural Development: Case Studies of Off-Grid Wind, Photovoltaic and Hybrid Systems in Rural China.” 1997. With Bo Shen and William Wallace. *Proceedings of the International Solar Energy Society 1997 Solar World Congress*. Vol. 7 (August): 94-103.
- “Power Sector Reform: Elements of a Regulatory Framework.” 1997. With C. Govindarajalu. *Economic and Political Weekly* (India). Vol. 32, No. 31 (August): 1946-1947.
- “Building Load Analysis of Dispatchable Peak-Shaving Photovoltaic Systems: A Regional Analysis of Technical and Economic Potential.” 1997. With S. Letendre, Y-D. Wang, R. Nigro and W. Ferguson. *Proceedings of the of the American Solar Energy Society Solar 97 Conference*, Washington, D.C. (April 25-30): 147-152.
- “A Generic Assessment of Response Options.” 1996. Contributing author. In J.P. Bruce et al eds. *Climate Change 1995: Economic and Social Dimensions of Climate Change*. Contribution of Working Group III to the Second Assessment Report of the



- Intergovernmental Panel on Climate Change. New York: Cambridge University Press. Pp. 225-262.
- "The Distributed Utility Concept: Toward a Sustainable Electric Utility Sector." 1996. With Steven Letendre and Young-Doo Wang. *Proceedings of the ACEEE 1996 Summer Study on Energy Efficiency in Buildings*. Vol. 7: 7.1-7.8.
- "Sustainability: From Concept to Practice." 1996. With Steven M. Hoffman. *IEEE Technology and Society*. Vol. 15, No. 2 (Summer): 6-7.
- "The Challenge of Sustainability " Balancing China's Energy, Economic and Environmental Goals." 1996. With Bo Shen and Xiuguo Li. *Energy Policy*. Vol. 24, No. 5 (May): 455-462.
- "Community versus Commodity: Environmental Protest in Taiwan." 1996. With Shih Jung Hsu. *Bulletin of Science, Technology & Society*. Vol. 16, No. 5 & 6: 329-336.
- "The Ideology of Progress and the Globalization of Nuclear Power." 1996. With Steven M. Hoffman. In J. Byrne and S. Hoffman, eds., *Governing the Atom: The Politics of Risk* (see Books and Journals). Pp. 11-45.
- "Science, Society and the State: The Nuclear Project and the Transformation of the American Political Economy." 1996. With Cecilia Martinez. In J. Byrne and S. Hoffman, eds., *Governing the Atom: The Politics of Risk* (see Books and Journals). Pp. 67-101.
- "The Asian Atom: Hard-Path Nuclearization in East Asia." 1996. With Jong-dall Kim. In J. Byrne and S. Hoffman, eds., *Governing the Atom: The Politics of Risk* (see Books and Journals). Pp. 273-300.
- "Evaluating the Economics of Photovoltaics in a Demand-Side Management Role." 1996. With S. Letendre, C. Govindarajalu, R. Nigro and Y-D. Wang. *Energy Policy*. Vol. 24, No.2 (February): 177-185.
- "The Performance and Economics of Dispatchable PV Peak Shaving Systems in Isolated Electric Utility Systems." 1996. With R. M. Nigro and W. D. Ferguson. *Proceedings of the World Renewable Energy Congress* (June).
- "The Development of a Dispatchable PV Peak Shaving System." 1996. With Ralph M. Nigro and William D. Ferguson. *Proceedings of the First International Conference on Solar Electric Buildings* (March).
- "Photovoltaic Technology as a Dispatchable, Peak-Shaving Option." 1995. With Ralph Nigro and Young-Doo Wang. *Public Utilities Fortnightly* (Sept. 1).
- "Urban Sustainability in an Industrializing Country Context: The Case of China." 1994. With Young-Doo Wang, Bo Shen, Chongfang Wang and Craig R. Kuennen. In Rusong Wang, ed., *Urban Ecological Development: Research and Application*. Beijing: Chinese Academy of Sciences. Pp. 52-70.
- "Photovoltaics for Demand-Side Management Utility Markets: A Utility/Customer Partnership Approach." 1994. With Steven Letendre, Ralph Nigro, Chandra Govindarajalu, William Wallace and Young-Doo Wang. *IEEE Proceedings of the First World Conference on Photovoltaic Energy Conversion*.
- "Deployment of a Dispatchable Photovoltaic System: Technical and Economic Results." 1994. With Young-Doo Wang, Stephen Letendre, Chandrasekhar Govindarajalu, Ralph Nigro, and William Bottenberg. *IEEE Proceedings of the First World Conference on Photovoltaic Energy Conversion*: 1200-1203.
- "Distributing Costs of Global Climate Change." 1994. With C. Hadjilambrinos and Subodh Wagle. *IEEE Technology and Society* Vol. 13, No. 1:17-24.



- "Photovoltaics as a Demand-Side Management Technology: An Analysis of Peak-Shaving and Direct Load Control Options." 1994. With Young-Doo Wang and Steven Hegedus. *Progress in Photovoltaics* Vol. 2: 235-48.
- "PV-DSM as a Green Investment Strategy." 1994. With Steven Letendre, Ralph Nigro and Young-Doo Wang. *Proceedings of the 5th NARUC-DOE National Conference on Integrated Resource Planning*: 272-285.
- "The Effects of FERC Order No. 636: Issues and Recourse for Low-Income Residential Customers." 1994. With Rajnish Barua. *Proceedings of the Ninth NARUC Biennial Regulatory Information Conference*. Vol. II: 37-43.
- "Sustainable Urban Development Strategies for China." 1994. With Young-Doo Wang, Bo Shen and Xiuguo Li. *Environment and Urbanization* Vol. 6, No. 1: 174-187.
- "Dispatchable Commercial Building Photovoltaic Demand-Side Management System Tests." 1994. With Allen M. Barnett, et al. *Proceedings of the 12th European Photovoltaics Specialists Conference*.
- "Photovoltaics in High-Value, Utility Markets: A Demand-Side Management Strategy." 1994. With Steven Letendre and Ralph Nigro. *Proceedings of the American Solar Energy Society Solar '94 Conference*: 44-48.
- "Photovoltaics in a Demand-Side Management Role." 1994. With Young-Doo Wang, Ralph Nigro and Steven Letendre. *Proceedings of the ACEEE 1994 Summer Study on Energy Efficiency in Buildings*. Vol. 2: 2.43-2.49.
- "Energy Efficiency and Renewable Energy Options for China's Economic Expansion." 1994. With Bo Shen and Xiuguo Li. *Proceedings of the ACEEE 1994 Summer Study on Energy Efficiency in Buildings*. Vol. 4: 4.25-4.36.
- "Utility Sponsored Low-Income Weatherization as a DSM Option." 1994. With G. Chandrasekar, Y. Wang and K. Ham. *Proceedings of the ACEEE 1994 Summer Study on Energy Efficiency in Buildings*. Vol. 6: 6.30-6.37.
- "Photovoltaics for Demand-Side Management." 1994. With Constantine Hadjilambrinos. *Progress in Solar Energy Technologies and Applications: An Authoritative Review*. Boulder CO: American Solar Energy Society. Pp. 22-23.
- "Urban Sustainability During Industrialization: The Case Of China." 1993. With Young-Doo Wang, Bo Shen, Chongfang Wang, Craig R. Kuennen and Xiuguo Li. *Bulletin of Science, Technology & Society* Vol. 13, No. 6: 324-331.
- "Dealing with Global Climate Change: Whose Costs? Whose Benefits?" 1993. With Constantine Hadjilambrinos and Subodh Wagle. *Proceedings of the IEEE International Symposium on Technology and Society, 1993*: 55-60.
- "Valuing Photovoltaic Technology as a Utility Demand-Side Management Application: Regulatory Issues." 1993. With Young-Doo Wang, Ralph Nigro and C. Hadjilambrinos. *Proceedings of the NARUC-DOE Conference on Renewable Energy*: 258-269.
- "Commercial Building Demand-Side Management Tools: Requirements for Dispatchable Photovoltaic Systems". 1993. With Young-Doo Wang, Ralph Nigro, and William Bottenberg. *Proceedings of the 23rd IEEE Photovoltaics Specialists Conference*: 1140-1145.
- "The Interrelationships of Economy, Energy and Environment in an Urban Context: The Case of China." 1993. With Xiuguo Li, Yingming Xing, Young-Doo Wang, Sijun Wang, Zhongbao Shen and Ningke Gu. *Proceedings of Metropolis '93 Congress*. Montreal, Canada.



- “Photovoltaic Technology as a Utility Demand-Side Management Option.” 1993. With Young-Doo Wang, Insook Han and Kyunghhee Ham. *Energex '93: Proceedings of the 5th International Energy Conference* Vol. III: 119-133.
- “Toward a Politics of Sustainability: The Responsibilities of Industrialized Countries.” 1993. With Young-Doo Wang and Subodh Wagle. *Regions* (UK) No. 183 (February): 4-7.
- “City and Technology in Social Theory: A Theoretical Reconstruction of Postindustrialism toward Sustainable Cities.” 1992. With Jong-dall Kim. *Korean Journal of Regional Studies* Vol. 8, No. 1 (June): 67-86.
- “The Political Economy of Energy, Environment and Development.” 1992. With Young-Doo Wang, Jong-dall Kim and Kyunghhee Ham. *Korean Journal of Environmental Studies* Vol. 30: 278-312.
- “Environmental Commodification and the Industrialization of Native American Lands.” 1992. With Steven M. Hoffman and Cecilia R. Martinez. *Proceedings of the Seventh Annual Conference of the National Association for Science, Technology and Society*: 170-181.
- “The Politics of Nuclear Development in South Korea.” 1992. With In-Whan Jung. *Proceedings of the Seventh Annual Conference of the National Association for Science, Technology and Society*: 132-152.
- “Toward a Political Economy of Global Change: Energy, Environment and Development in the Greenhouse.” 1992. With Daniel Rich. In *Energy and Environment: The Policy Challenge* (see Books and Journals). Pp. 269-302.
- “The Role of Photovoltaics in Demand-Side Management: Policy and Industry Challenges”. 1992. With Young-Doo Wang et al. *Proceedings of the 11th Photovoltaics Advanced Research and Development Project Review*. Golden, CO: National Renewable Energy Laboratory.
- “Applying Photovoltaics as a Demand-Side Management Tool.” 1992. With Ralph Nigro. *Proceedings of the Delmarva Photovoltaics Conference*. Wilmington, DE: Delmarva Power.
- “The Politics of Unsustainability: The US (Un)Prepares for UNCED.” 1992. With Young-Doo Wang. *Regions* (UK) No. 178 (April): 8-11.
- “Energy and Environmental Sustainability in East and Southeast Asia.” 1991. With Young-Doo Wang et al. *IEEE Technology and Society* Vol. 10, No. 4 (Winter): 21-29.
- “Meeting the Certain Challenge: A Policy Perspective on Systemic Energy and Environmental Problems.” 1991. In E. Kainlauri et al., eds., *Energy and Environment*. Atlanta, GA: ASHRAE Special Publications. Pp. 40-51.
- “The Role of Energy Conservation in Rapid Development: The Case of South Korea.” 1991. With Insook Han and Jung Ku Kim. In E. Kainlauri et al., eds., *Energy and Environment*. Atlanta, GA: ASHRAE Special Publications. Pp. 327-335.
- “The Impact of U.S. Energy Conservation Policies on Residential Energy Use and Pollution Abatement.” 1991. With Rajnish Barua and Young-Doo Wang. In E. Kainlauri et al., eds., *Energy and Environment*. Atlanta, GA: ASHRAE Special Publications. Pp. 161-166.
- “Institutional Strategies for Sustainable Development: Case Studies of Four Asian Industrializing Countries.” 1991. With Young-Doo Wang et al. *Proceedings of the Interdisciplinary Conference on Preparing for a Sustainable Society*: 105-115.
- “Energy, Environment and Sustainable World Development: Options for the Year 2000.” 1991. With Steven M. Hoffman. *Energy Sources* Vol. 13, No. 1: 1-4.



- "The Politics of Alternative Energy: A Study of Water Pumping Systems in Developing Nations." 1991. With Steven M. Hoffman. *Energy Sources* Vol. 13, No. 1: 55-66.
- "Nuclear Optimism and the Technological Imperative: A Study of the Pacific Northwest Electrical Network." 1991. With Steven M. Hoffman. *Bulletin of Science, Technology and Society* Vol. 11: 63-77.
- "The Social Structure of Nature." 1991. With Steven M. Hoffman and Cecilia Martinez. *Proceedings of the Sixth Annual Conference of the National Association of Science, Technology and Society*. Pp. 67-76.
- "Energy and Planning: Certainties in an Uncertain World." 1991. With Constantine Hadjilambros and Steve Hoffman. *Proceedings of the Sixth Annual Conference of the National Association of Science, Technology and Society*: 110-118.
- "Green Economics and the Developing World: Institutional Strategies for Sustainable Development." 1991. With Insook Han et al. *Proceedings of the Sixth Annual Conference of the National Association of Science, Technology and Society*: 97-109.
- "Technology and Development: A Study of the Washington Public Power Supply System." 1990. With S. Hoffman. *Proceedings of the Fifth Annual Conference of the National Association of Science, Technology and Society*: 22-31.
- "The Real Energy Crisis." 1990. With Daniel Rich. *Regions* (UK) No. 169 (October): 2-5.
- "Centralization, Technicization and Development on the Semi-Periphery: A Study of South Korea's Commitment to Nuclear Power." 1990. With Jong-dall Kim. *Bulletin of Science, Technology and Society* Vol. 10, No. 4: 212-222.
- "Lewis Mumford and the Living City." 1990. With Daniel Rich and Cecilia Martinez. *Regions* (UK) No. 166 (April): 10-12.
- "Ghastly Science." 1989. With Cecilia Martinez. *Society* Vol. 27, No. 1 (Nov./Dec.): 22-24.
- "Technological Politics in the Nuclear Age." 1989. With Steven M. Hoffman and Cecilia Martinez. *Bulletin of Science, Technology and Society* Vol. 8: 580-594.
- "The City as Commodity: The Decline of Urban Vision." 1989. With Cecilia Martinez, Jong-dall Kim et al. *Raumplanung* (FRG) Vol. 46, No. 47 (December): 174-178.
- "Stimulating State Energy Competitiveness." 1989. *Energy in Housing and Community Development: Report of the HUD/DOE Seventh National Conference on Community Energy Systems*. Pp. 24-25.
- "Photovoltaic-Powered Water Pumping in the South: A Socio-Technic Analysis." 1988. With Steven M. Hoffman. *Proceedings of the International Symposium on Energy Options for the Year 2000: Contemporary Concepts in Technology and Policy* Vol. 4: 77-88.
- "Energy Needs for Economic Expansion in the Developing World: Trends in the Energy-Development Relationship." 1988. With Young-Doo Wang, Insook Han and Kyunghye Ham. *Proceedings of the International Symposium on Energy Options for the Year 2000: Contemporary Concepts in Technology and Policy* Vol. 4: 109-122.
- "Nuclear Power and Technological Authoritarianism." 1988. With Steven M. Hoffman. *Bulletin of Science, Technology and Society* Vol. 7: 658-671.
- "The Political Geography of Acid Rain: The U.S. Case." 1988. With Young-Doo Wang and Kyunghye Ham. *Regions* (UK) No. 157 (Nov./Dec.): 3-6.
- "Energy and U.S. Regional Development: Mixed Signals." 1988. With Young-Doo Wang, Jong-dall Kim, Insook Han and Cecilia Martinez. *Regions* (UK) No. 153 (March/April): 7-9.



- "Economic and Policy Implications of Integrated Resource Planning in the Utility Sector." 1988. With Young-Doo Wang, Daniel Rich and Insook Han. *Proceedings of the ACEEE 1988 Summer Study on Energy Efficiency in Buildings* Vol. 8: 8.265-8.278.
- "Post-Chernobyl Notes on the U.S. Nuclear Fizzle." 1987. With Daniel Rich. *Regions (UK)* No. 150 (September/October): 3-6.
- "Policy Science and the Administrative State: The Political Economy of Cost-Benefit Analysis." 1987. In John Forester and Frank Fischer, eds., *Confronting Values in Policy Analysis: The Politics of Criteria*. Sage Yearbooks in Politics and Public Policy. Beverly Hills, CA: Sage Publications.
- "Urban Policy Without the Urban." 1987. With Cecilia Martinez. *Regions (UK)* No. 148 (May/June): 4-7.
- "Equity and Efficiency Implications of Lifeline Electric Rates." 1986. With Craig McDonnell, Francis Tannian and Young-Doo Wang. *Proceedings of the ACEEE 1986 Summer Study on Energy Efficiency in Buildings* Vol. 7: 7.7-7.19.
- "Some Lessons in the Political Economy of Megapower: WPPSS and the Municipal Bond Market." With Steven M. Hoffman. 1986. *Journal of Urban Affairs* Vol. 8, No. 1 (Winter): 35-47.
- "In Search of the Abundant Energy Machine." 1986. With Daniel Rich. In *The Politics of Energy R&D* (see Books and Journals). Pp. 141-160.
- "Household Energy Use: An Overview." 1985. With David A. Schulz and Marvin B. Sussman. *Marriage and Family Review* Vol. 9, Nos. 1-2 (Fall): 1-11.
- "Rethinking the Household Energy Crisis: The Role of Household Information in Energy Conservation." 1985. With Daniel Rich, Francis Tannian and Young-Doo Wang. *Marriage and Family Review* Vol. 9, Nos. 1-2 (Fall): 83-113.
- "The Post-Industrial Imperative: Energy, Cities and the Featureless Plain." 1985. With Cecilia Martinez and Daniel Rich. In *Energy and Cities* (see Books and Journals). Pp. 101-141.
- "Efficient Corporate Harm: A Chicago Metaphysic." 1985. With Steven Hoffman in B. Fisse and P. French, eds. *Errant Corporations: Responsibility, Compliance and Sanctions*. San Antonio: Trinity University Press.
- "Evaluation of the Effect of Increased Peak Season Utility Rates on the Residential Sector." 1984. With Cecilia Martinez, Francis Tannian and Young-Doo Wang. *Proceedings of the Energy Conservation Program Evaluation Conference*. Argonne National Laboratory and U.S. Department of Energy.
- "Deregulation and Energy Conservation: A Reappraisal." 1984. With Daniel Rich. *Policy Studies Journal* Vol. 13, No. 2 (December): 331-344.
- "Energy Markets and Energy Myths: The Political Economy of Energy Transitions." 1983. With Daniel Rich. In *Technology and Energy Choice* (see Books and Journals). Pp. 124-160.
- "The Solar Energy Transition as a Problem of Political Economy." 1983. With Daniel Rich. In *The Solar Energy Transition: Implementation and Policy Implications* (see Books and Journals). Pp. 163-186.
- "What's Wrong With Being Reasonable: The Politics of Cost-Benefit Analysis." 1982. In *Ethical Theory and Business*, N. E. Bowie and T. L. Beauchamp, eds. Englewood Cliffs: Prentice-Hall. Pp. 568-576.
- "Energy Conservation and Energy Prices." 1981. With Young-Doo Wang. *Economic Exchange* (Spring): 6-8.



“Governing Utopia: The Challenge to Political Vision.” 1981. With David E. Ingersoll and Daniel Rich. *Alternative Futures: The Journal of Utopian Studies*. Vol. 4, No. 1: 136-153.

“A Critique of Beauchamp and Braybrooke-Schotch.” 1981. In N.E. Bowie, ed. *Ethical Issues in Government*.

RECENT FUNDED RESEARCH AND PROFESSIONAL ACTIVITY

Principal investigator, “A Comprehensive Review of Solar Energy Policy, Market, and Technology Trends.” World Bank, 2008-present.

Principal investigator, “Preparation of a Carbon Emissions Inventory and Climate Change Action Plan for the University of Delaware,” University of Delaware 2008 Senior Class Gift, 2008-present.

Co-principal investigator, “Sustainable Energy from Solar Hydrogen,” National Science Foundation – Integrative Graduate Education and Training (IGERT) grant, 2006-present.

Principal investigator, “Renewable Energy Analysis and Design Yearly,” Conectiv Power Delivery, 2003-present.

Grant administrator, Endowment from the W. Alton Jones Foundation, 2001-present.

Principal investigator, “Science, Engineering and Technology Issues,” Delaware General Assembly, 1994-present.

Principal investigator, “Energy and Environmental Policy Analysis Development Grant,” UNIDEL Foundation, 1992-present.

Principal investigator, “Foundations for a U.S. Hydrogen Economy: Understanding the Role, Influences, and Relations between Policy, Planning, and Markets,” BP Foundation, 2004-2008.

Principal investigator, “Review of Renewable Energy Policies and Resource Potential in East Asian Countries,” Korea Energy Economics Institute, 2005.

Principal investigator, “Review of Climate Change Policy Responses of Australia, Japan, the UK and the U.S., Including the Role of Renewable Energy,” Korea Energy Economics Institute, 2004-2005.

Principal investigator, “Knowledge Synthesis: Organic Agriculture in a Global Perspective,” Danish Research Centre for Organic Farming, 2004-2005.

Principal investigator, “Assateague Barrier Island Education Center Renewable Energy Project,” joint U.S. Department of Energy-National Park Service award of the University-National Park Energy Partnership Program to Rochester Institute of Technology and subcontracted to CEEP, 2004-2005.

Principal investigator, “Health, Economic, Energy and Ecological Impacts of Integrated Agricultural Bioenergy Systems for Small Farms in China,” Blue Moon Fund, 2003-2005.

Principal investigator, “Review of U.S. Restructuring Experience and Its Lessons for Korea’s Electricity Industry,” Korea Electric Power Corporation, 2003-2005.

Principal investigator, “Policy Options to Support Distributed Resources,” Conectiv Power Delivery, 2003-2005.

Principal investigator, “Review of Energy-based Clean Development Mechanism Projects in Australia, Japan, and the UK,” Korea Energy Economics Institute, 2004.



- Principal investigator, "Integrated Resource Planning for Nepal: A Capability Assessment," U.S. Agency for International Development award to Academy for Educational Development and subcontracted to CEEP, 2003-2004.
- Principal investigator, "Delaware Industries of the Future Initiative," U.S. Department of Energy award to the Delaware Energy Office and subcontracted to CEEP, 2002-2004.
- Principal investigator, "Local Natural Energy Resources and Rural Development: Focus on Latin America," UN Institute for Training and Research, 2003.
- Principal investigator, "Renewable Energy Analysis," National Renewable Energy Laboratory and U.S. Department of Energy, 2001.
- Principal investigator, "Sustainable Energy and Environmental Strategies for Taiwan," W. Alton Jones Foundation, 1999-2002
- Principal investigator, "Establishment of a Joint Institute for a Sustainable Energy and Environmental Future in Korea," W. Alton Jones Foundation, 1998-2004.
- Principal investigator, "Renewable Energy Options for Asia," National Renewable Energy Laboratory and U.S. Department of Energy, 1995-2002 (includes analyses for China and Korea).
- Principal investigator, "Preparation of a State Action Plan for Reduction of Greenhouse Gas Emissions," U.S. Environmental Protection Agency, 1997-2000.
- Principal investigator, "Economic Analysis of Intermediate Applications of PV in the Buildings Sectors of Industrial Countries," National Renewable Energy Laboratory and U.S. Department of Energy, 1995-2000 (includes analyses for the U.S. and Japan).
- Principal investigator, "Restructuring the Korea Electricity Power Corporation: Economic and Environmental Lessons from U.S. Power Pool Experience," Subcontractor to Korea Energy Economics Institute on KEPCO-funded project, 1998-1999.
- Principal investigator, "Environmental Benefits of a Targeted Program of Photovoltaic Applications on U.S. Public Buildings: A State-by-State Analysis," National Renewable Energy Laboratory, 1998-99.
- Principal investigator, "National Policies and Their Impacts in Reducing CO₂ Emissions of the Republic of Korea," Subcontractor to Hagler-Bailly on USAID-funded project, 1998.
- Technical expert, "Sustainable Energy and Environmental Planning," China National Environmental Protection Agency, 1997.
- Principal investigator, "Evaluation of Photovoltaic Technology for Utility Applications," National Renewable Energy Laboratory and U.S. Department of Energy, 1991-97.
- Co-principal investigator, "Program in Energy, Environment, Resources and Sustainability," a certificate program jointly offered with the Tata Energy Research Institute for mid-career private, public and NGO officials from India, Nepal and Sri Lanka. Supported by USAID, the U.S. Department of Energy and the UN University, 1995 and 1996.
- Principal investigator, "CO₂ Mitigation Strategies for the Korean Buildings Sector," Ministry of Trade, Industry and Energy, Republic of Korea, 1995-96.
- Co-principal investigator, "Energy-Efficient Spatial Development Strategies for Korea," subcontract with the Korea Energy Economics Institute, 1995-96.
- Member, Environmental Regulation Task Force, Office of the Governor, State of Delaware and Delaware Public Policy Institute, 1995-96.
- Principal investigator, "Preparation of a State-Level Greenhouse Gas Inventory," U.S. Environmental Protection Agency, 1994-95.



- Member, Public Utility Regulation Task Force, Office of the Governor, State of Delaware, 1994-95.
- Technical expert, "Renewable Energy Options for China." United Nations Development Program and Chinese Academy of Science, 1994.
- Technical expert, "Integrated Resource Planning for the People's Republic of China," United Nations Development Program and Chinese Academy of Science, 1993.
- Co-principal investigator, "Energy Efficiency and Environmental Protection Institutions in East and Southeast Asia," ESMAP/World Bank, 1990-1991 (joint project with Korea Energy Economics Institute, Republic of Korea and Environmental Planning Institute, Seoul National University).
- Co-principal investigator, "Demand-Side Bidding: Potential and Options" (a national survey of U.S. utility industry and state regulatory authorities), Electric Power Partners Program, 1990-1991.
- Co-investigator, "Regulatory Policy for Photovoltaics: Utility Impacts and Implications" (a national survey of U.S. utility industry and state regulatory authorities), Electric Power Partners Program, 1989-1990.
- Investigator, "A Review of the U.S. Experience in Evaluating Urban Regeneration Initiatives," 1988-1990 (joint project with the University of Reading, United Kingdom).
- Principal investigator, "Evaluation of State Weatherization Assistance Programs," Division of Community Services, State of Delaware, 1988.
- Co-principal investigator, "Evaluation of Integrated Resource Plans for Delaware," Delaware Public Service Commission, 1986-1990.
- Principal investigator, "Energy Policy Analysis Development Grant," UNIDEL Foundation, 1982-1990.
- Member, Planning and Program Committees, 1991 International Symposium on Energy and Environment. Co-sponsors: UNESCO, Finnish Ministry of Trade and Industry, VGB Technical Association of Large Power Plant Operators (FRG), Institut Francais du Petrole, and University of Delaware.
- Member, Planning Committee, 1989 Global Alliance Forum for Mutual Survival. Co-sponsors: Global Tomorrow Coalition and the University of Delaware.
- Chair, Planning Committee, 1988 International Symposium on Energy Options for the Year 2000: Contemporary Concepts in Technology and Policy. Co-sponsors: U.S. Department of Energy, Finnish Ministry of Trade and Industry, Iowa State University, University of Delaware, American Council for an Energy-Efficient Economy, American Society of Heating, Refrigerating and Air-Conditioning Engineers.
- Expert staff to Joint Agency Review Committee of the Delaware State Legislature, regarding "sunset" review of the Delaware Public Service Commission, 1984-1985.
- Arranger, Environmental Policy Colloquium Series, University of Delaware, 1990-present.
- Arranger, International Development Colloquium Series, University of Delaware, 1989-present.
- Arranger, Energy Policy Colloquium Series, University of Delaware, 1980-present.
- Arranger, Science and Society Lecture Series, University of Delaware, 1995-96.