

Curriculum Vitae: Marilyn A. Brown

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Current Employment

Regents & Brook Byers Professor of Sustainable Systems
School of Public Policy
Georgia Institute of Technology
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Affiliations:

- Member, National Academy of Engineering
- Member, National Academy of Sciences
- Co-Director, Climate and Energy Policy Lab <http://cepl.gatech.edu>
- Co-Director, [Master Degree of Sustainable Energy and Environmental Management](#)

Marilyn Brown joined Georgia Tech in 2006 after 22 years at Oak Ridge National Laboratory, where she directed several national climate change mitigation studies and became a leader in the analysis and interpretation of energy futures.

Previous Employment & Education

Oak Ridge National Laboratory: Director of Engineering Science and Technology Division – 300 staff (2005-2006); Director, Deputy Director and Group Leader (1984-2004) of the Energy Efficiency and Renewable Energy Program (\$130 million annual budget).

Tenured Associate Professor of Geography, Univ. of Illinois (1983-84) (Assistant Professor 1977-83).

Lecturer, Department of Geography and Geology, Ohio Wesleyan University (1976-77).

Teaching Assistant and University Fellow, Ohio State University (1973-76).

Research Analyst, Connecticut Department of Environmental Protection (1973).

Ph.D., The Ohio State University, Geography; minor in Quantitative Methods, 1977 (Dissertation: The Role of Public and Private Agencies in the Diffusion of Innovations).

M.R.P., University of Massachusetts, Regional Planning, 1973.

B.A., Rutgers University, Political Science (major), Mathematics (minor), 1971.

C.E.M. (Certified Energy Manager), Association of Energy Engineers, 2003-2021.

2012 Graduate, Institute of Nuclear Power Operations, Goizuetta Business School, Emory University.

Research Achievements and Impact of Research

Dr. Brown's research examines the clean energy transition – modeling and evaluating the impact of technology advances, supporting policies, and their social, behavioral, and economic consequences, with a special emphasis on equity. In addition to her 6 books (most recently *Empowering the Great Energy Transition*, Columbia University Press, 2019) she has authored more than 250 publications and contributed to the 2007 Intergovernmental Panel on Climate Change assessment reports for which the IPCC shared the 2007 Nobel Peace Prize. Her H-Index is 41 and >8,000 citations. For perspective, the top journals in her field have citation factors ranging from 6.1 (*Energy Policy*) to 9.7 (*Applied Energy*). Her work has had significant influence and visibility in the policy arena as evidenced by her impact on policies and programs such as the Kyoto Protocol and the USDOE Weatherization Assistance Program,

and briefings and testimonies before state legislative and regulatory bodies, Committees of both the U.S. House of Representatives and Senate, and numerous international organizations.

Dr. Brown is an international leader in developing economic-engineering models that incorporate behavioral/social science principles into the integrated policy analysis of energy systems. She has demonstrated how specific aspects of public policies motivate or impede clean energy investments and how behavioral responses to different policy designs affect the deployment of energy technologies, as well as energy prices, pollution, health impacts, GDP, and jobs. Focusing on the electric utility industry, she has demonstrated why energy efficiency and affordability are as essential to energy security as the more traditional dimensions of energy diversity and import independence. To quantify this, Brown introduced the concept of an “energy-efficiency gap” (the difference between the most cost-effective and actual levels of energy efficiency) and analyzed this gap for states and sectors of the U.S. economy, identifying reasons for this gap and paths to closing it. Her book on *Green Savings*” identifies leading and lagging countries, states, and localities.

Dr. Brown co-founded the Southeast Energy Efficiency Alliance and chaired its Board of Directors for several years. She has served on the Boards of the American Council for an Energy-Efficient Economy and the Alliance to Save Energy, and was a commissioner with the Bipartisan Policy Center. She has served on nine National Academies committees, was a Senior Editor of *Energy Policy* and currently serves on three Editorial Boards: *Energy Policy*, *Energy Efficiency*, and *Energy Research and Social Science*.

She served two terms (2010-2017) as a Presidential appointee and US Senate-confirmed regulator on the Board of Directors of the Tennessee Valley Authority, the nation’s largest public power provider. At TVA she contributed to reducing TVA’s CO₂ emissions by 50 percent relative to 2005. As Chair of TVA’s Nuclear Oversight Committee for 8 years, she contributed significantly to bringing the first new nuclear reactor into commercial operation in this century – the Watts Bar unit 2 reactor, which achieved commercial operation in September 2016. From 2014-2018 she served on DOE’s Electricity Advisory Committee, where she led the Smart Grid Subcommittee. She currently leads the research component of the [Drawdown Georgia project](#).

She has given plenary and high-impact technical talks at prestigious conferences around the globe, and has been an invited guest at numerous universities in the U.S. and abroad. The impact of her work has been felt across the globe as the result of active international consultations and collaborations conducted in affiliation with universities, research institutes, and government agencies in numerous countries. Many of these affiliations involved visits of several weeks including government workshops, academic lectures, and interviews with local press focused on the mechanics and importance of implementing policies and technologies to promote a clean energy transition. Consultations were conducted and talks were given at, for example: Oxford University, the Tyndall Center for Climate Change at Newcastle University, Imperial College of London, Warwick University, the Science Policy Research Unit at the University of Sussex, the Paris School of International Affairs, the Potsdam Institute for Climate Impact Research, the University of Groningen, IEA-Paris, and the IEA Center for the Analysis and Dissemination of Energy-Efficient Technologies, Aarhus University, Norwegian University of Science and Technology, Copenhagen University, the Korea Advanced Institute of Science and Technology, the Korea Atomic Energy Research Institute, the University of Kyushu, Nagoya University, City University of Hong Kong, Beijing Institute of Technology, Tianjin University, and the National University of Singapore.

Teaching accomplishments

- ✓ Created the Certificate and Masters of Sustainable Energy and Environmental Management (MSEEM).
- ✓ Advised 19 PhD students, served on the PhD committees of 19 students (13 affiliated with various Schools and Colleges at Georgia Tech*).
*Analysis by the Brook Byers Institute for Sustainable Systems (BBISS) showed that she was the most connected researcher in environmental sustainability across Georgia Tech based on research proposals and projects.
- ✓ Advised numerous MS students. A number of these PhD students are now teaching at universities (e.g., Louisiana State University, Iowa State University, and Michigan Technological University). Other PhD advisees and MS graduates are now situated in positions of influence in business, nongovernmental organizations, and local, state and federal government agencies (e.g., Google, Oglethorpe Power, Southern Company, IHS Markit, Wood-Mackenzie Power and Renewables, Greenlink Analytics, the United Nations, World Bank, USDOE, Argonne, Oak Ridge and the National Renewable Energy Laboratories, USEPA, FERC, the Georgia State Energy Office, and the Georgia Public Utility Commission).

Service on committees, panels, and boards of the National Academy of Sciences, Engineering, and Medicine

- ✓ Data, Metrics, and Analytic Methods for Assessing Equity Impacts of Surface Transportation Funding Programs, 2021-2024
- ✓ Geographical Sciences Committee, 2016-2019
- ✓ Committee on Urban Sustainability, 2014-2016
- ✓ Board of Energy and Environmental Systems, 2006-2012 (two terms)
- ✓ Panel on Redesigning the Commercial Buildings and Residential Energy Consumption Surveys of the Energy Information Administration, 2010-2012
- ✓ America's Climate Choices, 2008-2011
- ✓ Limiting the Magnitude of Climate Change Panel (Co-chair), 2008-2011
- ✓ America's Energy Choices: Energy Efficiency, 2007-2009
- ✓ Alternatives to the Indian Point Nuclear Plant, 2004-2007.

Honors and Awards (Selected)

- Distinguished Professor, Georgia Tech Class of 1934 Award, 2022.
- [World Citizen Prize in Environmental Performance](#), by the Association for Public Policy Analysis and Management (APPAM) 2021
- Regents' Professor, Georgia State Board of Regents, 2017-2023.
- Election to the National Academies of Science and Engineering, 2020
- "Champion of Energy Efficiency in Industry," American Council for an Energy-Efficient Economy, 2017.
- Alliance to Save Energy ["Pioneer" Award to TVA](#) for its Energy Efficiency Planning Model, 2016
- Brook Byers Chaired Professor in Sustainable Systems, 2014-2023.
- "Who's Who in Sustainability," Atlanta Business Chronicle, 2013.

- Inaugural Ambassador for Clean Energy, Education and Empowerment (C3E), designated by the U.S. Department of Energy and announced in 2012 at the first Clean Energy Ministerial in London, 2012-2021.
- U.S. Presidential Appointee (U.S. Senate confirmed): Board of Directors, Tennessee Valley Authority, two terms: 2010-2018.
- Southface Energy Institute Award of Excellence “In recognition of exemplary leadership and a lifetime of advocacy for energy efficiency,” 2010.
- Co-recipient of the 2007 Nobel Peace Prize for co-authorship of the Intergovernmental Panel on Climate Change Working Group III Assessment Report on *Mitigation of Climate Change*.
- Elected to the Policy Council, Association for Public Policy Analysis and Management, 2006-2009.
- Anderson Medal of Applied Geography, Association of American Geographers, 2003.
- National Commissioner on Energy Policy, Bipartisan Policy Center, Washington, DC. 2002-2009.
- Commendation from Energy Secretary Hazel R. O’Leary for publication of “Weatherization Works,” December 1993.
- Member, U.S. Environmental Protection Agency, Board of Scientific Counselors, 1996-2000.
- Elected National Councilor of the Association of American Geographers, a 9,000-member organization, 1988-1991 (www.aag.org).
- “Champion of Energy Efficiency,” American Council for an Energy-Efficient Economy, for co-leading the five-laboratory study titled “Scenarios of U.S. Carbon Reductions,” which President Clinton acknowledged as a basis for signing the 1997 Kyoto Protocol, 1998.