

Deborah Gordon

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Professional Experience

Watson Institute for International and Public Affairs, Brown University

Senior Fellow
2016 to present

- Serve as principal investigator on the Oil Climate Index Plus Gas (OCI+), a *first-of-its-kind* tool to assess and compare the total lifecycle greenhouse gas impacts of global oils and gases through the supply chain from upstream production, midstream processing and refining and shipping, and downstream end use
- Collaborate with NASA Carbon Monitoring Systems scientists to assess methane emission impacts from global oil and gas operations
- Provide expertise on oil-climate policy proposals, including *Know Your Oil* legislation in California and U.S. Congress
- Advise and participate with environmental NGO and investor groups on oil and gas sector greenhouse gas assessments, certifications, disclosures, and mitigation strategies
- Initiate and collaborate with new group of oil and gas industry retirees to advance climate action for petroleum companies
- Undertake cutting-edge analysis in collaboration with U.S. Department of Energy ARPA-E scientists on the decarbonization of oil refining and gas processing
- Apply the OCI+ to develop divestment strategies and design a “smart” carbon pricing for the oil sector to equitably price producers, refiners, and end users’ climate responsibilities
- Teach undergraduate independent study courses; advise students and engage with the academic community on energy and climate policy scholarship; and mentor MPA students’ research and career decisions
- Serve on the Climate Solutions Lab, a new Brown University initiative
- Lecture and speak at Brown University and in other academic, NGO, government, and industry forums

RMI

Senior Principal, Climate Intelligence Program
2020 to present

- Manage a staff of ten and a \$5M budget focused on climate solutions for heavy industries, including oil and gas

- Update and relaunch the OCI+ web tool with lifecycle emissions coverage from 60 percent of global oil and gas supply chains
- Analyze climate intensities of global oil and gas assets using open-source tools, including advanced models, satellite data, and artificial intelligence
- Develop public policies and market activation strategies to reduce the climate impacts from the global oil and gas supply chain
- Assess decarbonization roadmaps for oil and gas production, refining, and petrochemical industries
- Study short-lived climate pollutants, focusing initially on methane, and develop strategies to reduce emissions in the oil and gas sector
- Study short-lived climate pollutants, focusing on methane and F-gases to advance actions in concert with 1.5 °C climate alignment over the next decade
- Write reports, deliver keynotes, conduct interviews, and communicate research findings and climate solutions to diverse public, private, and non-profit stakeholders
- Serve in new impactful coalitions aimed at tracking and attributing greenhouse gas emissions, including ClimateTRACE and Carbon Mapper

Carnegie Endowment for International Peace

Director and Senior Associate, Energy and Climate Program

2010 to 2018

- Managed international program staff and a \$750k budget
- Led Carnegie's *Global Oil Initiative*, investigating the growing array of global oils and gas resources and developing policies to manage their energy and climate challenges
- Launched the inaugural Oil-Climate Index to assess and compare global oils based on their lifecycle greenhouse gas emissions and expand the tool to evaluate global gas resources
- Undertook cutting-edge research on industrial energy policies to coordinate vehicle electrification and refining decision making
- Investigated climate engineering disclosure protocols and hosted discussion forums
- Collaborated with NGO, academic, government, and private stakeholders on climate-relevant energy, transport, lifecycle emission assessment, and geoengineering projects

Policy Consultant

Specializing in transportation, energy, and environmental policy

1996 to 2010

- Conducted policy analysis, design and development; strategic planning; feasibility studies; policy white papers; technical assistance, and policy advising on issues ranging from oil, innovative transport, energy and climate issues, clean vehicles, alternative fuels, fiscal measures, economic incentives, and new mobility options
- Clients included (partial listing), International Council on Clean Transportation, Hewlett Foundation; Energy Foundation, Union of Concerned Scientists, ClimateWorks, National Commission on Energy Policy, National Transportation Policy Project, California Energy Commission, Truman Security Project

Yale School of the Environment

Program Director/ Lecturer/ Senior Research Scholar

1996 to 2000

- Co-Directed the Yale Transportation and Environment Program, conducted applied research on transportation policymaking
- Designed and co-taught graduate seminar on transportation and the environment
- Advised graduate students in the Yale School of Forestry, Yale Law School, and Yale School of Management on transportation, energy, and environment research projects

Union of Concerned Scientists

Director of Transportation & Energy Programs/Senior Policy Analyst

1989 to 1996

- Supervised and directed staff of 14 professionals in four different U.S. locations and managed a program budget of \$1.5 million
- Advised the UCS Board of Directors, including the late Henry Kendall, on the establishment of a Transportation Policy Program
- Opened and staffed UCS' new West Coast office in California
- Delivered expert testimony and advice to government, foundations, media, and industry
- Developed precedent-setting transportation policies including clean-car incentive programs, alternative fuels proposals, and intelligent transportation system criteria

U.S. Department of Energy, Lawrence Berkeley National Laboratory

Policy Analyst

1988 to 1989

- Analyzed clean car *feebate* program in collaboration with laboratory staff scientists, including the late Arthur Rosenfeld and Lee Schipper
- Designed a market incentive program to increase consumer demand for green motor vehicles and, under a grant from the U.S. Environmental Protection Agency; drafted model legislation (DRIVE+) in California which was passed by the State Legislature and has served as a model for developing *feebate* programs in other states and nations

Chevron U.S.A., Inc.

Chemical and Regulatory Engineer

1982 to 1987

- Served as principal negotiator for environmental mitigation strategies and permit conditions for major offshore oil platform and onshore pipeline and gas processing facilities
- Assessed west coast production fugitive emissions and developed spill prevention control measures in California and Alaska
- Represented Chevron in the industry collaborative Western Oil and Gas Association
- Delivered public testimony, monitored regulatory developments, and advised Chevron staff to ensure environmental compliance

Author

Books

1991 to present

- No Standard Oil: Managing Abundant Petroleum in a Warming World, Oxford University Press, 2021
- Two Billion Cars: Driving Toward Sustainability, (with D. Sperling), Oxford University Press, 2009; paperback with *Afterword*, 2010; In Chinese, Shanghai JiaotongUP, July 2011, 322 pp.
- Steering a New Course: Transportation, Energy, and the Environment, (Washington, D.C.: Island Press), 1991, 236 pp. (textbook in University transportation policy courses)

Edited Volumes

2013 to present

- Green Energy for Transport in South Asia: An Approach for a Clean, Sustainable Path, chapter in edited volume (with S. Kumble), Environmental Sustainability and International Trade: Roadmap for Sustainable Development, IPAG Knowledge Series, Institute for Policy, Advocacy, and Governance, August 2020
- Petroleum Coke Use in India and South Asia: Recent Trends and Emerging Policy Options, chapter in edited volume (with D. Livingston), Institute for Policy, Advocacy, and Governance, October 2017
- Global Ten: Managing the Unconventional Oil and Gas Bonanza, Carnegie Endowment for International Peace, Edited volume (with D. Burwell), January 2013
- New Realities: Energy Security in the 2010s and Implications for the U.S. Military, United States Army War College Press, Edited volume, January 2014
- Transport Beyond Oil: Policy Choices for a Multimodal Future, Island Press, Edited volume (with D. Burwell), March 2013

Journal Articles

1990 to present

- Global Carbon Intensity of Crude Oil Refining and Mitigation Potential, (with J. Bergerson, et. al.), Nature Climate Change, June 2020
- Global Carbon Intensity of Crude Oil Production, (with M. Masnadi, et. al.), Science, August 2018
- Climate-wise Choices in a World of Oil Abundance, Environmental Research Letters, April 2018, (with A. Brandt, M. Masnadi, J. Englander, and J. Koomey)
- The Oil-Climate Index: Assessing GHG Emission Impacts Across the Oil Value Chain, (with J. Feldman, J. Bergerson, A. Brandt, and J. Koomey), Encyclopedia of Sustainable Technologies, Elsevier, Summer 2017
- Changing Oils, Changing Management, (with E. Tan and J. Feldman), Journal of Industrial Ecology, Vol. 20, No. 4, August 2016

- *Energy Return on Investment (EROI) for Forty Global Oilfields Using a Detailed Engineering-Based Model of Oil Production* (with A. Brandt, et. al.), PLoS ONE, Vol. 10, No. 12, December 2015
- *Advance Passenger Transportation Technologies* (with D. Sperling), Journal of Transportation Technology, 2008
- *DRIVE+: Promoting Cleaner and More Fuel-Efficient Motor Vehicles Through a Self-Financing System of State Tax Incentives*, (with L. Levinson), Journal of Policy Analysis and Management, Volume 9, Number 3, 1990

Major Reports

2010 to present

- Know Your Oil and Gas, (with J. Koomey, A. Brandt, J. Bergerson), RMI, 2022 (forthcoming)
- Mapping, Measuring, and Managing Methane: The Critical Role of a Potent Climate Pollutant, (with Frances Reuland), Watson Institute for International and Public Affairs, Brown University, November 2019
- Smart Tax: Pricing Oil for a Safe Climate, (with Jessica Tuchman Mathews), Carnegie Endowment for International Peace, June 2016
- Know Your Oil: Creating a Global Oil Climate Index, (with A. Brandt, J. Bergerson, J. Koomey), Carnegie Endowment for International Peace, March 2015
- The Role of Transport in Driving Climate Disruption, Carnegie Endowment for International Peace, December 2010

Education

University of California, Berkeley
Goldman School of Public Policy
Masters of Public Policy, 1989

University of Colorado, Boulder
Chemical Engineering
Bachelor of Science, 1982

Publications (selected)

- *Petroleum Companies Need a Credible Climate Plan*, (with Stephen Ziman), Carnegie Endowment for International Peace, November 2018
- *Advancing Climate Engineering Disclosure*, (with David Livingston), Carnegie Endowment for International Peace, May 2018
- *Oil Shake Up: Refining Transitions in a Low-Carbon Economy*, (with Madhav Acharya, ARPA-E), Carnegie Endowment for International Peace, April 2018
- *Understanding Climate Engineering*, Carnegie Endowment for International Peace, August 2017

- *Need to Know: The Case for Oil Transparency in California*, (with Samuel Wojciki), Carnegie Endowment for International Peace, March 2017
- *Drilling Down on Oil: The Case of California's Complex Midway Sunset Field*, (with Samuel Wojciki), Carnegie Endowment for International Peace, March 2017
- *Oil Innovations to Reduce Climate Impacts*, (with Jeffrey Feldman), October 2016
- *Getting Smart About Oil in a Warming World*, Carnegie Endowment for International Peace (with Jonathan Koomey, Adam Brandt, and Joule Bergerson), October 2016
- *China's Oil Future* (with Yevgen Sautin and Wang Tao), Carnegie Endowment, May 6, 2014
- *Texas' Oil and Water Tighrope* (with Kate Garner), Carnegie Endowment, March 11, 2014
- *Mapping California's Oil-Water Risks* (with Kate Garner), Carnegie Endowment, January 15, 2014
- *Uncovering Oils' Unknowns* (with Chris Malins), Carnegie Endowment, June 2013
- *The Carbon Contained in Global Oils*, Carnegie Endowment, December 2012
- *Policy Priorities for Advancing the U.S. Electric Vehicle Market*, Carnegie Endowment, September 2012
- *Understanding Unconventional Oil*, Carnegie Endowment, May 2012
- *Driving Force: Energy and Climate Strategies for China's Motorization* (with Yuhan Zhang), Carnegie Endowment, April 2011
- *A Review and Comparative Analysis of Fiscal Policies Associated with New Passenger Vehicle CO2 Emissions* (Contributing author), International Council for Clean Transportation, February 2011
- *The Role of Transportation in Driving Climate Disruption*, Carnegie Endowment for International Peace, December 2010
- *Driving Transportation Innovation*, Next10.org, November 2009
- *Managing Motorcycles*, International Council on Clean Transportation, 2009
- *Getting There Greener*, Union of Concerned Scientists, December 2008
- *Sipping Fuel and Saving Lives: Optimizing Vehicle Safety and Fuel Economy Simultaneously*, (co-authored), William and Flora Hewlett Foundation, June 2007
- *Climate Change Mitigation: Findings of the IPCC Fourth Assessment Report*, (co-authored), Union of Concerned Scientists, IPCC Highlight Series, 2007
- *Passenger Vehicle CO₂ and Fuel Economy Standards: A Global Review* (co-authored), International Council on Clean Transportation, 2007
- *Fiscal Policies for Sustainable Transportation: International Best Practices*, In Studies on International Fiscal Policies for Sustainable Transportation, published in English and Chinese by the China Sustainable Energy Program, Packard Foundation, Hewlett Foundation, and the Energy Foundation, March 2005
- *Federal Oil Subsidies: How Can They Best Be Targeted?* National Commission on Energy Policy, April 2004

Articles and Op Eds (selected)

- BRINK, *Not All Oil Is Equal. As Economies Recover, Which Oils Should Stay In the Ground?*, June 21, 2020
- LegalPlanet Blog, *Is California Extraordinary? Its Oil Resources Certainly Are*, (with Frances Reuland), November 15, 2018
- Medium, *California's Dirty Environmental Secret*, (with J. Koomey), September 5, 2018
- LiveMint, *India's Double Rush for Electric Vehicles and Oil Refineries*, April 25, 2018
- Houston Chronicle, *Touting Oil Exports Means Comparing Maple Syrup and Cream Soda*, March 22, 2018
- The National Interest, *Could Geoengineering Save the Planet from Global Warming?* September 21, 2017
- Sacramento Bee, *Three Ways to Clean Up California's Oil Production*, November 9, 2017
- Mark News, *From Standard Oil to Smarter Oil*, May 1, 2017
- The Hill, *If the US Government Stifles Knowledge on the Environment, States May Be Able to Help*, April 3, 2017
- Medium, *Power to the States: How Carbon Pricing Can Be a Winning Strategy Under a Trump Administration*, April 3, 2017
- The National Interest, *Together, Globalists and Localists Can Save the Environment*, (with Robert Murphy), March 15, 2017
- The International Economy Magazine, *Future Surprises that Could Shock the World*, September 14, 2016
- Pacific Standard, *California's Unspoken Oil Failure*, (with David Livingston), May 6, 2016
- The Hill Op Ed, *The Third Fossil Fuel in the Climate Conversation*, August 10, 2015
- Boao Review, *Creating an Oil-Climate Index: Key Lessons for Asian Policymakers*, July 31, 2015
- About Oil Magazine, *At the heart of OPEC: Strategies & reflections*, July 9, 2015
- The National Interest, *The Complexities of U.S. Oil Exports*, March 21, 2014
- CS Monitor, *Will California Frack: Not Without Oil*, January 18, 2014
- International Economy Magazine, *U.S. Energy Independence is Unlikely*, December 13, 2013
- Huffington Post, *The Third Carbon Age*, August 8, 2013
- Scientific American, *Fossil Fuels—A New Normal*, July 15, 2013
- The New York Times, *Let's Not Braise the Planet*, Mark Bittman, July 1, 2013 (linked report)
- The Hill, *Managing the New Oil Bonanza*, February 11, 2013
- Center for New American Security, *Read These Now: Energy & Climate Recommendations for the Second Term*, January 23, 2013
- Scientific American, *Navigating the New World of Oils*, January 15, 2013
- E&E TV, *The Future of Unconventional Oil in the United States*, May 2012
- Time Magazine, *There Will Be Oil—And That's the Problem*, March 29, 2012
- European Financial Review, *Critical Crossroads*, forthcoming October 2011
- International Monetary Fund, F&D Magazine, *Quest in Search of Itself*, Book Review (Daniel Yergin, *The Quest*), September 2011

- NPR Interview, To the Point, *Carmegeddon*, July 15, 2011
- Politico, *Big Oil's Slick Profit Day?* April 29, 2011
- C-Span Interview, *Washington Journal*, June 21, 2010
- Washington Post, *Big Oil Can't Get Beyond Petroleum*, June 13, 2010
- World Bank blog, *Following China's Lead Transforming Transportation*, June 7, 2009
- C-Span, Book TV, After Words, November 23, 2009
- Yale Environment 360, *Surviving Two Billion Cars: China Must Lead the Way*, March 5, 2009
- New York Times, Op Ed (with D. Sperling), *How High Gas Prices Can Save the Car Industry*, November 16, 2008

Web Tools, YouTube, Webpages, Reddit (selected)

- Climate Week 2020, “Climate Intelligence For The Oil And Gas Sector,” Moderator, September 22, 2020, https://www.youtube.com/watch?v=0ySwG3Y9SrI&feature=emb_logo
- Oil Climate Project Webpage, ongoing catalogue of articles, events, tools, and media, <https://www.oilclimateproject.com/>
- Oil Climate Index + Gas Web Tool, <https://dxgordon.github.io/OCIPlus/>
- Oil Initiative Webpage, Archived catalogue of articles, events, blogs, and media appearances, <http://carnegieendowment.org/specialprojects/CarnegieOilInitiative/>
- Oil Climate Index Web Tool (Archived), <http://oci.carnegieendowment.org/>
- Smart Tax Calculator, <http://carnegieendowment.org/2016/06/15/smart-tax-pricing-oil-for-safe-climate/j1ji#calculator>
- NASA, Carbon Monitoring System Policy Speaker Series, “Introducing the Oil Climate Index,” September 11, 2018, YouTube, https://www.youtube.com/watch?v=j_XQhtCJEm8
- Carnegie Endowment Podcast, “Corruption in the Oil Industry,” September 8, 2017, <https://carnegieendowment.org/2017/09/08/chayes-coll-and-suraju-on-corruption-in-oil-industry-pub-73052>
- Foreign Policy Association, “Great Decisions: Geopolitics of Oil,” January 2017, <https://www.greatdecisions.tv/example-6/episodes/the-geopolitics-of-oil/>
- Stanford Energy Seminar, “Climate-wise Choices in a World of Energy Abundance,” December 5 2016, YouTube, <https://www.youtube.com/watch?v=0L95G2pd3JY>
- Reddit AMA on the Road Through Paris, December 14, 2015, https://www.reddit.com/r/geopolitics/comments/3wsblg/we_are_four_climate_and_energy_experts_here_to/
- Platts Capitol Crude Podcast, “Index for Crude Oil’s Climate Impact Illuminates What’s Behind the Barrels,” September 14, 2015, <https://qa3.platts.com/platts/en/market-insights/podcasts/crude/091415-index-for-crude-oils-climate-impact-illuminates-whats-behind-the-barrels>
- Reddit AMA on the Oil-Climate Index, September 4, 2015, https://www.reddit.com/r/askscience/comments/3j1wuc/askscience_ama_series_were_a_team_of_researchers/

- Carnegie Europe, “The New Age of Oil Climate Impact and Policy Responses,” April 14, 2015, YouTube, <https://www.youtube.com/watch?v=nnHxN8H5SwE>
- Carnegie Endowment, “Unconventional Oil Symposium,” January 9, 2013, YouTube, <https://www.youtube.com/watch?v=O51hUGXp7Q4>
- Carnegie Endowment, “Gordon on the Oil Climate Index,” March 11, 2015, YouTube, https://www.youtube.com/watch?v=P6vKU8op_6c
- U.S. Embassy in Germany, “Deborah Gordon Talks on Unconventional Oil,” September 12, 2012, YouTube, <https://www.youtube.com/watch?v=9rqXzu1hNsY>

Fellowships and Advisory Boards

- Finalist, Andrew Carnegie Fellowship (2019)
- Colorado School of Mines, Payne Institute, Advisory Board (2018 to present)
- Environmental and Energy Study Institute, Advisory Board (2017 to present)
- University of California, Institute of Transportation Studies, Visiting Fellow (2001 to 2002)
- Transportation Research Board, Energy Committee, Appointed Member (1998 to 2004)
- National Research Council, Committee on Vehicle Inspection and Maintenance, Appointed Committee Member (1999 to 2001)
- National Research Council, Standing Committee to Review the Research Program of the Partnership for a New Generation of Vehicles, Appointed Committee Member (1994 to 1996)
- American Academy of Arts and Sciences, Appointed Committee Member *Avoiding the Collision of Cities and Cars* (1993)

Testimony, Keynotes and Lectures (selected)

- Yale School of the Environment, November 2021
- London School of Economics, October 2021
- Massachusetts Institute of Technology, MIT Energy Initiative, Seminar, October 26, 2020
- G20, Climate Sustainability Working Group, Workshop Presenter, July 13, 2020
- NASA Goddard, Climate Monitoring System, Workshop Presenter, November 11, 2019
- Brown University, Climate Interactive Lecture, May 7, 2019
- Stanford University, Bill Lane Center for the American West, Seminar, April 15, 2019
- Brown University, Watson Institute Conference on America's Climate Change Future, February 1, 2019
- Harvard Kennedy School of Government, Seminar, December 3, 2018
- Yale School of Forestry and Environmental Studies, Seminar, November 9, 2018
- Colorado School of Mines, Guest Lecture, September 12, 2018
- NASA Goddard Institute for Space Science, Carbon Research Program Policy Speaker Series, September 6, 2018

- New York Times and Energy Intelligence, 38th Oil & Money conference panelist, October 2017
- National Academy of Sciences, Presentation to the Committee on Anthropogenic Methane Emissions in the US, June 1, 2017
- NATO Parliamentary Assembly, Presentation to Delegation, June 2016
- U.S. Department of Energy, Seminar on the Developing the Oil Climate Index, January 5, 2016
- Briefings to U.S. Department of State, U.S. Department of Energy, U.S. Environmental Protection Agency, U.S. Congressional Committees, California Air Resources Board, California Energy Commission, Canadian Government, European Commission, World Economic Forum, International Energy Agency, ongoing 2015-2016
- Premier of Alberta, Energy and Environmental Briefing, April 2015
- Chevron, Oil Climate Index Webinar, 2015
- U.S. Congress, House Subcommittee on Energy and Power, December 11, 2014
- U.S. Congress, House Foreign Affairs Subcommittee on Terrorism, Nonproliferation, and Trade, April 2014
- Georgetown University, March 2014
- Kaist Business School (South Korea), *Cases in Green Finance* (MBA class), June 2017, July 2016, July 2015 / July 2014/ June 2013/September 2013/ October 2011/October 2010
- Aspen Institute Energy Forum, June 2013
- Union of Concerned Scientists, Board of Directors, May 2013
- NORDEA Bank, March 2013
- East-West Center, February 2013
- World Energy Council, Berlin, Germany, September 2012
- U.S. Department of State, German Embassy, September 2012
- University of Virginia, Batten School of Leadership and Public Policy, April 2012
- Darden Business School, University of Virginia, *Car of the Future and Future of the Car* Conference, November 2010
- Carnegie Endowment for International Peace, *Transportation Driving Climate Disruption*, Keynote Speaker, December 2010
- Miller Center for Public Affairs, University of Virginia, Speaker Series April 2010
- World Bank, Washington, D.C., January 2009 and May 2009
- Transportation Research Board, Denver, Colorado, July 2009
- Virginia Festival of the Book, Charlottesville, VA, March 2009
- World Affairs Council, Washington, D.C., January 2009
- Rodman Engineering Fellowship Program, University of Virginia, Keynote Speaker 2008
- Advisory Council on Energy, National Conference of State Legislatures, December 1998
- Climate Action Plan, White House Policy Dialogue Advisory Committee, February 1995
- California Energy Commission, Testimony on Sustainable Transportation, 1994
- U.S. House of Representatives, Subcommittee on Energy and Power, March 1991

Awards

- Transportation Research Board's Fred Burggraf Award for excellence in transportation research by researchers 35 years of age or younger whose papers have been published under the sponsorship of any Technical Activities Division Standing Group (1993)
- Lyndon Baines Johnson Congressional Fellowship Program (1988)
- Tau Beta Pi Engineering Honorary Society (1981)

Volunteering and Activities

- Launched public education initiatives, including *Arts in Western Education*, *ArtFest in the West*, *CBI Sisterhood*, *Kids' Market*
- Coached *Destination Imagination*, Virginia State Championships
- Published photographer, *San Francisco State Literary Magazine*
- Designed and served as general contractor for kitchen and bathroom renovations in Providence, Rhode Island; Charlottesville, Virginia; Woodbridge, Connecticut; and Oakland, California
- Freeform quilter, consigned pieces
- Avid baker
- Bicycle touring over Independence Pass, CO and Kancamagus Pass, NH
- Triathlon competitor

Personal

- Married to Eric Patashnik, Julius-Rabinowitz Professor of Public Policy and Political Science, Director, Master of Public Affairs Program, Watson Institute for International and Public Affairs, Brown University
- Two grown sons, Michael and Joshua Patashnik
- Reside in Providence, RI