

RYAN A JONES

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Energy consultant with experience across all aspects of electricity sector planning including long-term greenhouse gas target achievement, distributed resource portfolio optimization, and asset evaluation.

PROFESSIONAL EXPERIENCE

EVOLVED ENERGY RESEARCH, SAN FRANCISCO, CA

Co-Founder, January 2016– Present

- Founded consulting firm focused on energy-sector transformation in the context of deep decarbonization. Developer on multiple software tools – EnergyPATHWAYS (demand-side stock turnover model), the Regional Investment and Operations platform (RIO) (capacity expansion), and Emporium (production cost) – designed to answer questions posed by energy system changes.

State government:

- Maine state energy plan study
- Massachusetts: 80x50 & net zero study & clean heat study
- New Jersey Board of Public Utilities Integrated Energy Plan
- State of Washington: Office of the Governor Deep Decarbonization Pathways Analysis

Research Projects:

- United States Annual Decarbonization Perspective 2022 & 2023
- Europe Annual Decarbonization Perspective 2022
- University of Queensland: Net Zero Australia Project
- Princeton University: Net Zero America Project, REPEAT
- Environmental Defense Fund: Marginal abatement cost (MAC) curves 2.0
- SDSN: Midwest and Southeast strategies for low carbon transitions
- Our Children’s Trust: 350 PPM Pathways for the United States
- Inter-American Development Bank: Deep Decarbonization of Mexico
- NREL: Electrification Futures Study, High electrification load shapes, North American Renewable Integration Study
- DOE: Value of Flexible Load and Energy Efficiency
- Role of direct air capture (DAC) in low emission pathways in the U.S.
- Risky Business: From Risk to Return

Utilities & Investors:

- Hydro Quebec: Deep Decarbonization in the Northeastern U.S.
- Confidential electric utility work in California, Florida, Michigan, Oregon
- Greenhouse gas abatement cost curves for clients in Europe
- Pan-European study on optimal zero carbon electricity scenarios
- Optimal future electricity systems in Japan
- Energy systems advisor, Breakthrough Energy Ventures

NGO policy advising:

- Third way: Carbon-free Europe Initiative
- Environmental Defense Fund: Carbon Management in Net-Zero Energy Systems
- Environmental Defense Fund: Prioritizing Innovation for Decarbonization
- Rockefeller Foundation: U.S. Federal Renewable Energy Policy Strategy
- Union of Concerned Scientists: U.S. Policy Study
- NRDC: U.S. Policy Study
- NRDC & Sierra Club: Low Carbon Transitions for Western States
- Advisor for RE-AMP an NGO umbrella group across eight mid-west states

UNITED STATES DEEP DECARBONIZATION PATHWAYS RESEARCH TEAM, SAN FRANCISCO, CA

Contributing Author, August 2015– 2016

- Contributed to the 2014 Deep Decarbonization Pathways Project (DDPP) Synthesis Report and the 2015 DDPP Synthesis Report issued to the U.N. by The Sustainable Development Solutions Network (SDSN) and the Institute for Sustainable Development and International Relations (IDDRI)

ENERGY & ENVIRONMENTAL ECONOMICS, INC., SAN FRANCISCO, CA

Senior Consultant, September 2011 – December 2015

Utility Resource Adequacy

- Lead developer of the RECAP model, commercial software that calculates reliability metrics such as Loss of Load Probability (LOLP), Loss of Load Expectation (LOLE) and Planning Reserve Margin (PRM), along with Effective Load-Carrying Capability (ELCC) of wind and solar resource, demand response programs, and other dispatch-limited resources.

Power-system Operations

- Co-developer of REFLEX, a production-simulation software module that addresses operational and planning questions in power systems with specific focus on determining the need for flexible resources under very high renewable penetration scenarios.

STANFORD UNIVERSITY, STANFORD, CA

Course Associate, March 2011 – June 2011

- Taught Course CEE 272R: Modern Power Systems Engineering; a class on power engineering with special emphasis given to modern market operations, dispatch, and modeling intermittent power sources.

TECHNISCHE UNIVERSITÄT, ECONOMICS OF CLIMATE CHANGE, BERLIN, GERMANY

Transatlantic Renewable Energy Fellow, September 2009 – March 2010

- Worked as a visiting scientist investigating CO₂ emissions from global capital investment using economic input-output analysis, under the co-chair of the Intergovernmental Panel on Climate Change (IPCC) Working Group III.
- Audited classes at Technische Universität: Geographical Economics, Economics of Climate Change.

NATIONAL RENEWABLE ENERGY LABORATORY, GOLDEN, CO

SULI Program, summer, 2008 & 2009

- Researched photo electrochemical solar cells in the Hydrogen Systems Group.
- Designed and published a research study to investigate conductive adhesive tapes for applications in flexible thin film photovoltaics; presented the research at the Material Research Society Conference, 2009.

ACADEMIC PUBLICATIONS

- Grace C Wu, Ryan A Jones, Emily Leslie, James H Williams, Andrew Pascale, Erica Brand, Sophie S Parker, Brian S Cohen, Joseph E Fargione, Julia Souder, Maya Batres, Mary G Gleason, Michael H Schindel, Charlotte K Stanley. Minimizing habitat conflicts in meeting net-zero energy targets in the western United States. Proceedings of the National Academy of Sciences. 2023.
- National Climate Assessment 5, mitigation chapter coauthor (forthcoming)
- John Bistline et al. ,Emissions and energy impacts of the Inflation Reduction Act.Science380,1324-1327(2023).DOI:10.1126/science.adg3781
- J.H. Williams, R.A. Jones, B. Haley, G. Kwok, J. Hargreaves, J. Farbes, M.S. Torn Carbon-Neutral Pathways for the United States AGU Adv, 2 (2021)
- James H. Williams, Ryan A. Jones, Margaret S. Torn, Observations on the transition to a net-zero energy system in the United States, Energy and Climate Change (2021).
- Daniel Buira, Jordi Tovilla, Jamil Farbes, Ryan Jones, Ben Haley, Dennis Gastelum, A whole-economy Deep Decarbonization Pathway for Mexico, Energy Strategy Reviews, Volume 33, (2021). <https://doi.org/10.1016/j.esr.2020.100578>
- E. Larson, C. Greig, J. Jenkins, E. Mayfield, A. Pascale, C. Zhang, J. Drossman, R. Williams, S. Pacala, R. Socolow, E. Baik, R. Birdsey, R. Duke, R. Jones, B. Haley, E. Leslie, K. Paustian, A. Swan Net-Zero America: Potential Pathways, Infrastructure, and Impacts Princeton, NJ (2020)
- Hargreaves Jeremy J., Jones Ryan A., Long Term Energy Storage in Highly Renewable Systems, Frontiers in Energy Research (2020).
- R. Jones, B. Haley, G. Kwok, J. Hargreaves and J. Williams, "Electrification and the Future of Electricity Markets: Transitioning to a Low-Carbon Energy System," in IEEE Power and Energy Magazine, vol. 16, no. 4, pp. 79-89, July-Aug. 2018.
- C.K. Woo, Jack Moore, Brendan Schneiderman, Arne Olson, Ryan Jones, Tony Ho, Nate Toyama, Jianhui Wang, Jay Zarnikau, Merit-Order Effects of Day-Ahead Wind Generation Forecast in the Hydro-Rich Pacific Northwest, The Electricity Journal, Volume 28, Issue 9, November 2015, Pages 52-62, ISSN 1040-6190
- Hargreaves, J.; Hart, E.K.; Jones, R.; Olson, A., "REFLEX: An Adapted Production Simulation Methodology for Flexible Capacity Planning," in Power Systems, IEEE Transactions on , vol.30, no.3, pp.1306-1315, May 2015
- Arne Olson, Ryan A. Jones, Elaine Hart, Jeremy Hargreaves, Renewable Curtailment as a Power System Flexibility Resource, The Electricity Journal, Volume 27, Issue 9, November 2014, Pages 49-61, ISSN 1040-6190
- C.K. Woo, T. Ho, J. Zarnikau, A. Olson, R. Jones, M. Chait, I. Horowitz, J. Wang, Electricity-market price and nuclear power plant shutdown: Evidence from California, Energy Policy, Volume 73, October 2014, Pages 234-244, ISSN 0301-4215

- Ren Orans, Arne Olson, Jack Moore, Jeremy Hargreaves, Ryan Jones, Gabe Kwok, Frederich Kahrl, C.K. Woo, Energy Imbalance Market Benefits in the West: A Case Study of PacifiCorp and CAISO, *The Electricity Journal*, Volume 26, Issue 5, June 2013, Pages 26-36, ISSN 1040-6190
- Arne Olson, Ryan Jones, Chasing Grid Parity: Understanding the Dynamic Value of Renewable Energy, *The Electricity Journal*, Volume 25, Issue 3, April 2012, Pages 17-27, ISSN 1040-6190
- "Preliminary Evaluation of Conductive Adhesive Tapes as Potential Interleafing Connects for Flexible Thin-Film PV Applications," F. J. Pern, R. A. Jones, L. M. Gedvilas, and T. A. Gessert, MRS Spring, San Francisco, CA, April 2009

EDUCATION

STANFORD UNIVERSITY, Stanford, CA

Master of Science in Civil and Environmental Engineering, Atmosphere/Energy Program, December 2011

EMORY UNIVERSITY, Atlanta, GA

Bachelor of Science in Environmental Studies and Physics, Summa Cum Laude, May 2009

Senior Honors Thesis: *Conducted a cost-benefit analysis of photovoltaics (PV) in Georgia's (USA) electric utility market in partnership with the primary regional utility, Southern Company. Paper presented at the 2011 National Solar Conference.*