

Center for Sustainability and the Global Environment, University of Wisconsin—Madison, Madison, WI

Research Assistant

February 2009 to October 2010

- Topics: assessing climate change risks associated with wind energy development and informal wind energy consulting for an energy policy publication
 - Advisers: Tracey Holloway, Greg Nemet

REFEREED
JOURNAL
PUBLICATIONS

- [1] Hsiang, S.M., R.E. Kopp, A.S. Jina, J. Rising, M. Delgado, S. Mohan, **D.J. Rasmussen**, R. Muir-Wood, P. Wilson, M. Oppenheimer, K. Larsen and T. Houser, 2017: Economic damage from climate change in the United States. *Science*. **356** (6345), 1362-1369 doi:10.1126/science.aal4369
- [2] Rasmussen D.J., M. Meinshausen, and R.E. Kopp, 2016: Probability-weighted ensembles of U.S. county-level climate projections for climate risk analysis. *J. Appl. Meteorol. Clim.* **55** (10), 2301-2322 doi:10.1175/JAMC-D-15-0302.1
- [3] Kopp, R.E., R. Horton, C.M. Little, J.X. Mitrovica, M. Oppenheimer, **D.J. Rasmussen**, B.H. Strauss, and C. Tebaldi, 2014: Probabilistic 21st and 22nd century sea-level rise projections at a global network of tide gauge sites. *Earth's Future*. **2** (8), 383-406 doi:10.1002/2014EF000239
- [4] Rasmussen D.J., J. Hu, A. Mahmud, and M.J. Kleeman, 2013: The ozone climate penalty: past, present, and future. *Environ. Sci. Technol.* **47** (24), 14258-14266 doi:10.1021/es403446m
- [5] Rasmussen D.J., A.M. Fiore, V. Naik, L.W. Horowitz, M.G. Schultz, and S.J. McGinnis. 2012: Surface ozone-temperature relationships in the eastern US: A monthly climatology for evaluating chemistry-climate models. *Atmos. Environ.* **47**, 142-153 doi:10.1016/j.atmosenv.2011.11.021
- [6] Rasmussen D.J., T. Holloway, and G.F. Nemet, 2011: Opportunities and Challenges in Assessing Climate Change Impacts on Wind Energy—A Critical Comparison of Wind Speed Projections in California. *Environ. Res. Lett.* **6** 024008 doi:10.1088/1748-9326/6/2/024008

BOOKS

- [1] Houser, T, R. Kopp, S. Hsiang, R. Muir-Wood, K. Larsen, **D.J. Rasmussen**, M. Delgado, A. Jina, S. Mohan, P. Wilson, M. Mastrandrea, and J. Rising, 2015: *Economic Risks of Climate Change: An American Prospectus*. New York, NY: Columbia University Press. 384 pp. ISBN: 9780231174565.

REPORTS

- [1] Emery, C., G. Wilson, **D.J. Rasmussen**, G. Yarwood. 2015. *CAMx Speed Improvements*. Prepared for Texas Commission on Environmental Quality, Austin, TX.
- [2] Johnson, J., G. Wilson, **D.J. Rasmussen**, G. Yarwood. 2015. *Daily Near Real-Time Ozone Modeling for Texas*. Prepared for Texas Commission on Environmental Quality, Austin, TX.
- [3] Kemball-Cook, T. Pavlovic, J. Johnson, L. Parker, **D.J. Rasmussen**, J. Zagunis, L. Ma, G. Yarwood. 2014. *Analysis of Wildfire Impacts on High Ozone Days in Houston, Beaumont, and Dallas-Fort Worth During 2012 and 2013*. Prepared for Texas Commission on Environmental Quality, Austin, TX.

- [4] Houser, T, R. Kopp, S. Hsiang, R. Muir-Wood, K. Larsen, **D.J. Rasmussen**, M. Delgado, A. Jina, S. Mohan, P. Wilson, M. Mastrandrea, and J. Rising, 2014: *American Climate Prospectus: Economic Risks in the United States*. Oakland, CA: Rhodium Group, 194 pp. <http://www.climateprospectus.org/>.
- [5] Rasmussen D.J. and M.J. Kleeman, 2012: Acceleration of CALPUFF using MPICH-2. Final Report to the California Air Resources Board. ARB Contract 11-760.
- [6] Rasmussen D.J., L.M. Keller, and M.A. Lazzara, 2010: A 20-year assessment of the frequency and intensity of McMurdo area high wind events. Preprints, *5th Antarctic Meteorological Observation, Modeling, and Forecasting Workshop*, Columbus, Ohio.

THESES

- [1] Rasmussen D.J., The ozone climate penalty: Past, present, and future. (Master's thesis) University of California–Davis, Davis, California, 24 pp.
- [2] Rasmussen D.J., An analysis of climate change impacts on future wind energy production in California (undergraduate thesis) The University of Wisconsin, Madison, Wisconsin, 70 pp.

SELECTED
PRESENTATIONS

- [1] D.J. Rasmussen and R.E. Kopp, Probabilistic U.S. county-level climate projections: A new data set for local climate risk analysis **American Geophysical Union Fall Meeting**, poster, 16 December 2015, San Francisco, CA.
- [2] R. E. Kopp, M. Delgado, R.M. Horton, T. Houser, C. M Little, R. Muir-Wood, M. Oppenheimer, **D. J. Rasmussen**, B. Strauss and C.Tebaldi, Probabilistic Projections of Future Sea-Level Change and Their Implications for Flood Risk Management: Insights from the American Climate Prospectus. **American Geophysical Union Fall Meeting**, December 2014, San Francisco, CA.
- [3] R. E. Kopp , S. M. Hsiang, T. Houser, K. Larsen, **D. J. Rasmussen**, A. Jina, J. Rising, M. Delgado, S. Mohan, R. Muir-Wood and P. S. Wilson, Managing U.S. climate risk through mitigation: Insights from the American Climate Prospectus. **American Geophysical Union Fall Meeting**, December 2014, San Francisco, CA.
- [4] D.J. Rasmussen and R.E. Kopp, It's Not Just the Heat, It's the Humidity: Down-scaled Wet-Bulb Temperature Projections and Implication for Future Summer Experiences from the American Climate Prospectus **American Geophysical Union Fall Meeting**, 17 December 2014, San Francisco, CA.
- [5] A. Jina, S.M .Hsiang, R.E. Kopp, **D. J. Rasmussen** and J. Rising. Putting climate impact estimates to work: the empirical approach of the American Climate Prospectus. **American Geophysical Union Fall Meeting**, December 2014, San Francisco, CA.
- [6] A. Jina, S. M. Hsiang, R. E. Kopp, **D. J. Rasmussen**, and J. Rising, Estimating the limits of adaptation from historical behaviour: Insights from the American Climate Prospectus. **American Geophysical Union Fall Meeting**, December 2014, San Francisco, CA.
- [7] A. Jina, R. E. Kopp , S. M. Hsiang, T. Houser, K. Larsen, **D. J. Rasmussen**, J. Rising, M. Delgado, S. Mohan, R. Muir-Wood and P. S. Wilson. The American Climate Prospectus: a risk-centered analysis of the economic impacts of climate change. **American Geophysical Union Fall Meeting**, December 2014, San Francisco, CA.

- [8] K. Gordon, R. E. Kopp, S. M. Hsiang, T. Houser, K. Larsen, **D. J. Rasmussen**, A. Jina, J. Rising, M. Delgado, S. Mohan, R. Muir-Wood and P. S. Wilson. Risky Business and the American Climate Prospectus: Economic Risks of Climate Change in the United States. **American Geophysical Union Fall Meeting**, December 2014, San Francisco, CA.
- [9] R.E. Kopp, T. Houser, S. Hsiang, K. Larsen, A. Jina, M. Delgado, R. Muir-Wood, **D.J. Rasmussen**, J. Rising, M. Mastrandrea, and P. Wilson (2014). Climate risks over space and time: Insights from the American Climate Prospectus. **Society for Risk Analysis Annual Meeting**, Denver, CO, December 2014.
- [10] T. Houser, R.E. Kopp, S. M. Hsiang, R. Muir-Wood, K. Larson, M. Delgado, A. Jina, P. Wilson, S. Mohan, **D.J. Rasmussen**, J. Rising, and M. Mastrandrea, U.S. Climate Risk Assessment. **Bloomberg Philanthropies**, 13 May 2014, New York, NY.
- [11] R.E. Kopp, K. Miller, B. Horton, J. Browning, J. X. Mitrovica, C. Hay, E. Morrow, A. Kemp., M. Oppenheimer, C. Little, A. Maloof, F. Simons, R. Horton, **D.J. Rasmussen**, B. Strauss, C. Tebaldi, Uncertainties and risks of regional sea-level change: Past, present and future. **Pardee Center for the Longer-Range Future, Boston University**, 10 February 2014, Boston, MA.
- [12] D.J. Rasmussen and M.J. Kleeman, Parallel Acceleration of CALPUFF. **California Air Resources Board, Atmospheric Modeling and Support Section**, 3 December 2012, Sacramento, CA.
- [13] A.M. Fiore, M. Lin, V. Naik, L.W. Horowitz, A.J. Turner, and **D.J. Rasmussen**, Establishing process-oriented constraints on chemistry-climate models for projecting air quality over the next century. **IGAC/SPARC Global Chemistry-Climate Modeling and Evaluation Workshop**, poster, 21 May 2012, Davos, Switzerland.
- [14] D.J. Rasmussen, A.M. Fiore, V. Naik, L.W. Horowitz, M.G. Schultz, and S.J. McGinnis, Evaluating surface ozone-temperature relationships over the eastern US in chemistry-climate models. **American Geophysical Union Fall Meeting**, 5 December 2011, San Francisco, CA.
- [15] D.J. Rasmussen, A.M. Fiore, V. Naik, L.W. Horowitz, M.G. Schultz, and S.J. McGinnis, Evaluating surface ozone-temperature relationships over the eastern US in chemistry-climate models. Lunchtime seminar. **Geophysical Fluid Dynamics Laboratory**, 17 August 2011, Princeton, NJ.
- [16] A.M. Fiore, H. Levy II, M. Lin, V. Naik, L.W. Horowitz, **D.J. Rasmussen**, A.J. Turner, M.D. Schwarzkopf, Y.Fang, and O.Wild, Air pollutants: Drivers or riders on the climate change express? **Gordon Research Conference: Atmospheric Chemistry**, oral presentation, 25 July 2011, West Dover, VT.
- [17] **D.J. Rasmussen**, T. Holloway, and G.F. Nemet, A critical evaluation of wind speed projections for California. **Second Conference on Weather, Climate, and the New Energy Economy**, poster, 26 January 2011, Seattle, WA.
- [18] M.A. Lazzara, L.M. Keller, **D.J. Rasmussen**, and K.E. Willmot, Antarctic meteorological data: access, distribution, and challenges. **27th Conference on Interactive Information Processing Systems (IIPS)**, oral presentation, 27 January 2011, Seattle, WA.

- [19] **D.J. Rasmussen**, L.M. Keller, and M.A. Lazzara, A 20-year assessment of the frequency and intensity of McMurdo area high wind events. **5th Antarctic Meteorological Observation, Modeling, and Forecasting Workshop**, oral presentation, 12 July 2010, Columbus, OH.

HONORS AND
AFFILIATIONS

- Eagle Scout, Boy Scouts of America
- American Meteorological Society, American Geophysical Union

PROFESSIONAL
COMMITTEES

American Meteorological Society, Energy Committee; term 2011—2013

REFEREE
SERVICE

Nature Clim. Change, Atmos. Chem. Phys., Clim. Chang., Atmos. Environ., Atmos. Res.

TEACHING

TA, *The Environment: Science and Policy* (Princeton University, Spring 2017)

HARDWARE AND
SOFTWARE SKILLS

Computer Programming:

Python, Fortran, R, UNIX shell scripting (BASH and C shell)

High performance computing:

Experience with operating and maintaining “Beowulf” Linux clusters, MPI, some experience with OpenMP, TORQUE, Hadoop, UNIX admin

HOBBIES

Alpine skiing, CrossFit, guitar

CITIZENSHIP

USA