SHARON J.W. KLEIN

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Orono, ME 04469

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**EDUCATION**

2011 *Ph.D.,* *Engineering and Public Policy,* Carnegie Mellon University

2009 *M.S.,* *Engineering and Public Policy,* Carnegie Mellon University

2004 *California Teaching Credential (Chemistry)*, National University

1999 *B.S., Environmental Science, Cum Laude,* University of Massachusetts, Amherst

**EMPLOYMENT**

2011-present **Assistant Professor**, School of Economics, University of Maine, Orono, ME

2006-2007 **Teacher**, *Physical Science and Astronomy (Eighth Grade),* Colegio Americano, Quito, Ecuador

2005-2007 **Teacher**, *International Baccalaureate Environmental Systems (Eleventh and Twelfth Grade),* Colegio Americano, Quito, Ecuador

2005-2006 **Teacher**, *International Baccalaureate Theory of Knowledge (Eleventh and Twelfth Grade),* Colegio Americano, Quito, Ecuador

2002-2005 **Teacher**, *Physical Sciences (Eighth Grade),* King/Chavez Academy, San Diego, CA

2002-2005 **Teacher**, *Natural Sciences (Seventh Grade),* King/Chavez Academy, San Diego, CA

2000-2002 **Environmental Technician**, Hargrave Environmental Consulting, Inc., San Diego, CA

1999-2000 **Corps Member**, Americorps National Civilian Community Corps, Southeast Region

**HONORS**

2015-present University of Maine Faculty Fellow

2012 White House Champion for Change - Americorps Alums:

http://www.whitehouse.gov/champions/americorps-alums/dr.-sharon-wagner

2011 World Renewable Energy Congress Best Paper Award in Solar Thermal

Applications

2010 Graduate Student Assembly/Provost Conference Fund Award

2010 Neuworth Scholarship Travel Grant, Carnegie Mellon University

2009-2011 National Science Foundation Graduate Research Fellowship

2008-2009 Steinbrenner Graduate Fellowship, Carnegie Mellon University

2007 Carnegie Institute of Technology Dean’s Fellowship Engineering Award

1999 Commonwealth Honors, University of Massachusetts Amherst

1996-1999 Golden Key National Honor Society, University of Massachusetts Amherst

1996-1999 Phi Kappa Phi Honors Fraternity, University of Massachusetts Amherst

1998 William F. Field Alumni Scholar, University of Massachusetts Amherst

**RESEARCH & TEACHING INTERESTS**

1. Technical, economic, environmental and social tradeoffs inherent in the production, distribution, and use of sustainable energy options
2. Grassroots community renewable energy and energy efficiency
3. Engineering-economic analysis
4. Environmental life cycle assessment
5. Social benefit-cost analysis
6. Multi-criteria decision analysis
7. Tradeoffs associated with a variety of environmental issues: water, waste, pollution, climate change, ecosystems, biodiversity

**PUBLICATIONS**

*Note: I changed my last name from Wagner to Klein in January 2013*

*\*Student coauthor*

Peer-Reviews Journal Articles

1. Whalley\*, S., **Klein, S.J.W.**, Benjamin, J., Economic analysis of woody biomass supply chain in Maine, *Biomass Bioenergy*, vol. 96, pp. 38–49, Jan. 2017.
2. **Klein**, **S.J.W**., Coffey\*, S., 2016, Building a sustainable energy future, one community at a time, *Renewable and Sustainable Energy Reviews*, vol. 60, pp. 867–880, doi: 10.1016/j.rser.2016.01.129.
3. Rubin, J., Neupane\*, B., Whalley\*, S., **Klein**, S., 2015. Woody Biomass Supply, Economics, and Biofuel Policy. *Transportation Research Record: Journal of the Transportation Research Board 2502*, 108–115. doi:10.3141/2502-13
4. **Klein, S.J.W.**, Whalley\*, S., 2015, Comparing the sustainability of U.S. electricity options through multi-criteria decision analysis (MCDA), *Energy Policy*, *79,* 127-149.
5. Anderson, M., Teisl, M., Noblet, C., **Klein, S**., 2014, The incompatibility of benefit-cost analysis with sustainability science, *Sustainability Science*, September, 1-9. doi:10.1007/s11625-014-0266-4.
6. **Wagner, S**., Rubin, E., 2014, Economic implications of thermal energy storage for concentrated solar thermal power, *Renewable Energy, 61C,* 81-95, http://dx.doi.org.prxy4.ursus.maine.edu/10.1016/j. 545 renene.2012.08.013.
7. Teisl, M.F., McCoy, S., Marrinan\*, S., Noblet, C.L., Johnson, T., Wibberly\*, M., Roper, R., and **Klein, S.** 2014, Will offshore energy face ‘fair winds and following seas’?: Understanding the factors influencing offshore wind acceptance. *Estuaries and Coasts.* published online February 6, 2014, DOI 10.1007/s12237-014-9777-6.
8. **Klein**, **S.J.W**. 2013, A multi-criteria decision analysis of concentrated solar power with thermal energy storage and dry cooling, *Environmental Science & Technology*, *47*, 13925-13933, <http://dx.doi.org/10.1021/es403553u>.
9. **Klein**, **S.J.W.**, Rubin, E.S. 2013, Life cycle assessment of greenhouse gas emissions, water and land use for concentrated solar power plants with different energy backup systems, *Energy Policy*, *63*, 935-950*,* DOI: 10.1016/j.enpol.2013.08.057.

Journal Articles in Preparation

1. **Klein, S.J.W.**, Noblet, C.L., Exploring sustainable energy economics: net metering, rate designs and consumer behavior, *Current Sustainable/Renewable Energy Reports* (**Invited, submitted**).
2. Song\*, C., Gardner, K., **Klein, S.J.W.**, Pereira Souza, S., Mo, W., Moving beyond hydropower: life cycle greenhouse gas emissions from dams, *Environmental Science & Technology* (**submitted, revised & resubmitted**).
3. **Klein, S.J.W.**, Coffey\*, S., Motivations and behavior of community solar participants in New England, *Energy Research & Social Science* (**submitted**).
4. **Klein, S.J.W**., Langton\*, R.B.W., Hunt, G., The cost of producing drop-in biodiesel from woody biomass residues in the Northeast United States, *in preparation* *for: Biomass & Bioenergy*
5. Neupane\*, B., **Klein, S.**, Wheeler, C., Life cycle assessment of energy and greenhouse gas emissions from drop-in diesel from forest biomass in Maine. *in preparation* *for: Journal of Industrial Ecology*
6. **Klein**, **S.J.W**, Coffey\*, S., Comparing community solar policies in three New England states. *in preparation* *for: Energy Policy*
7. **Klein**, **S.J.W**, Coffey\*, S., Costs and benefits of different community-based solar approaches in the United States. *in preparation* *for: Energy Policy*
8. **Klein**, **S.J.W.**, Mistro\*, D. Community window insert builds: a growing social movement. *in preparation* *for:* *Journal of Cleaner Production*
9. **Klein, S.J.W**, Dutra\*, S. Costs and benefits of solar water heating in Maine*. in preparation* *for:* *Renewable Energy*
10. Fox\*, E., **Klein, S.J.W**, Dam(n) information: tailoring small hydropower project models for use in New England communities. *in preparation* *for:* *Renewable and Sustainable Energy Reviews*
11. Fox\*, E., **Klein, S.J.W**., Liddell\*, C., Raffier\*, K., Eliciting preferences from people who give a dam(n): group participatory multi-criteria decision analysis in a dam decision context. *in preparation* *for:* *Renewable and Sustainable Energy Reviews*

Chapters in Books/Conference Papers

*(†peer-reviewed)*

1. *†***Klein, S.J.W**. and Coffey\*, S., 2017, United States Community Energy. *Handbook on Energy Transition and Participation* Springer VS, Wiesbaden; Lars Holstenkamp and Jörg Radtke, editors. *In press*. **(INVITED)**
2. **Klein, S.J.W.**, Mistro\*, D., 2016 Community energy for a sustainable future: window insert builds in Maine. Second International Sustainable Consumption Research and Action Initiative (SCORAI) Conference “Transitions Beyond a Consumer Society”, June 15-17, 2016, Wells Conference Center, University of Maine, Orono, ME.
3. *†*Rubin, J., Neupane\*, B., Whalley\*, S., and **Klein, S**., 2015, Woody Biomass Supply, Economics, Biofuel Policy: Maine and Northeastern Forests, Transportation Research Board 2015 Annual Meeting, Washington D.C., January 11-15, 2015.
4. *†***Wagner, S**., Rubin, E., 2012. Evaluating renewable energy systems along the hybrid spectrum: concentrated solar power, *International Conference on Clean Energy (ICCE).* Quebec, Canada.

Research Reports and Technical Papers

1. **Klein, S.**, Criner, G., Allen, T., Mid-Coast Solid Waste Corp Landfill Project Phase 2 Report. *Technical Report*, November 13, 2013.
2. Criner, G., **Klein, S.**, Allen, T., Leighton\*, R., Mid-Coast Solid Waste Corp Landfill Project Phase 1 Report, *Technical Report*. September 24, 2013.
3. Whalley\*, S., Neupane\*, B., **Klein, S.**, Rubin, J., Woody Biomass Supply in Maine, *Technical Report.* June 2, 2013.
4. **Klein, S.** Report on Gender Income Disparity in Maine. Prepared for Maine Development Foundation. April 2016.

Popular Media Publications

1. **Klein, S**. “5 myths people hold about solar power in Maine.” Bangor Daily News [Online] April 28, 2016 Published: http://bangordailynews.com/2016/04/28/opinion /5-myths-people-hold-about-solar-power-in-maine/.
2. Neiman, E., **Klein**, **S**. “One site ranks Maine 4th best for women, but there’s more to the story | BDN Maine.” Bangor Daily News [Online] April 1, 2016 Published: http://bangordailynews.com/2016/04/01/the-point/one-site-ranks-maine-4th-best-for-women-but-theres-more-to-the-story/.
3. **Wagner, S.**, Serving the United States Through AmeriCorps, White House Champions of Change Blog, August 17, 2012, http://www.whitehouse.gov/champions/blog?page=12.

**RESEARCH GRANTS**

### Awarded Research Grants

### *(total awarded = $ 4,030,156; total based on my % responsibility = $638,629)*

1. *Stakeholder-Engaged Hydropower Decision-Making*, Principal Investigator: Sharon Klein (100%). Sponsor: University of Maine Research Reinvestment Fund. June 2017-May 2018. Amount: **$7,000**.
2. *Travel Support to Present at Behavior, Energy and Climate Change Conference (BECC),* Principal Investigator: Sharon Klein (100%). Sponsors: Bangor Savings Bank Faculty Development Fund, Lyndon Paul LoRusso Memorial Faculty Development Fund. October 2016. Amount: **$1,500**.
3. *Community‐Based Sustainable Energy Solutions*, Principal Investigator: Sharon Klein (100%). Sponsor: Senator George J. Mitchell Center for Sustainability Solutions, University of Maine. July 2016-June 2017. Amount: **$49,971**.
4. *Mandela Washington Fellowship Public Management Institute*, Principal Investigators: J. Hecker, C. Kim, D. Dixon, J. Rubin. Senior Personnel: S. Klein, others. Sponsor: IREX and US Department of State. June-August 2016. Amount: **$145,000**.
5. *RII Track-2 FEC: Strengthening the scientific basis for decision-making about dams: Multi-scale, coupled-systems research on ecological, social, and economic trade-offs*, Principal Investigators: D. Hart, J. Zydlewski, B. Mcgreavy, S. Klein (20%), S. Smith. Sponsor: National Science Foundation EPSCoR. September 2015-August 2019. Amount: **$1,800,001**.
6. *Community‐Based Sustainable Energy Solutions*, Principal Investigator: Sharon Klein (100%). Sponsor: Senator George J. Mitchell Center for Sustainability Solutions, University of Maine. July 2015-June 2016. Amount: **$49,939**.
7. *Campuses for Environmental Stewardship*, Principal Investigators: C. Sullivan, D. Dixon, S. Klein (13%), C. Isenhour, S. De Urioste-Stone, B. McGreavy. Sponsor: Campus Compact Coalition. April 2015-May 2016. Amount: **$4,000**.
8. *NSF CAREER Grant Development,* Principal Investigator: S. Klein (100%). Sponsor: Margaret Chase Smith Policy Center. June 2015. Amount: **$4,000**.
9. *NSF CAREER Grant Writing Workshop,* Principal Investigator: S. Klein (100%). Sponsor: ADVANCE Rising Tide Center. June 2015. Amount: **$6,148**.
10. *Mid-Coast Solid Waste Landfill Project Phase II*, Principal Investigators: S. Klein (85%) and G. Criner. Sponsor: Mid-Coast Solid Waste Corporation. August 2013 - June 2014. Amount: **$17,330**.
11. *Pretenure Research and Creativity Fellowship*, Principal Investigator: S. Klein (100%). Sponsor: PRE-VUE grant supported by President’s Office University of Maine. 2013-2014. Amount: **$24,914**.
12. *Mid-Coast Solid Waste Landfill Project*, Principal Investigators: S. Klein (85%) and G. Criner. Sponsor: Mid-Coast Solid Waste Corporation. January-June 2013. Amount: **$17,330**.
13. *SEP Integrated National Framework for Cellulosic Drop In Fuels*, Principal Investigators: H. Pendse, J. Rubin, L. Silka, C. Wheeler, I. Fernandez; Senior Personnel: Sharon Klein (5%), along with eight others. Sponsor: National Science Foundation – Sustainable Energy Pathways. 2012-2016, extended to 2017. Amount: **$1,895,523**.
14. *Renewable Energy in Maine.* PrincipalInvestigator: S. Klein (100%). Sponsor: USDA National Institute of Food and Agriculture, 230040 [Maine Agricultural and Forest Experiment Station ME0-H-3-00526-13]. Project Dates: October 1, 2012-September 30, 2017.
15. *Assessment of the economic, environmental, and social implications of solar water heating in Maine*, Principal Investigator: S. Klein (100%). Sponsor: Faculty Research Funds Committee, University of Maine. July 2012. Amount: **$7,500**.

**PROFESSIONAL PRESENTATIONS** (since 2011)

*Note: I changed my last name from Wagner to Klein in January 2013*

*\*Student coauthor*

*Presenter in* ***Bold***

1. **Klein, S.J.W.**, Nittel, S., Stinson\*, K., Noblet, C.L., Isenhour, C., Coffey\*, S., Oral Presentation. Communities taking solar into their own hands: a social science look at the growing community solar movement, American Solar Energy Society’s 46th National Solar Conference, University of Colorado, Denver, Colorado, October 9-12, 2017 (*abstract submitted*).
2. **Song\*, C**., Mo, W., Gardner, K., Klein, S.J.W., Pereira Souza, S., Oral Presentation. Understanding the Cradle-to-Grave Greenhouse Gas Emissions of Dams, Association of Environmental Engineers and Science Professors (AEESP) Research and Education Conference, University of Michigan, Ann Arbor, Michigan, June 21-22, 2017. *(abstract accepted)*
3. **Raymond\*, G.,** Klein, S.J.W., Oral Presentation. Using Multi-Criteria Decision Analysis to Compare Fuel Production Processes, UMaine Student Symposium: Research & Creative Activity, Cross Insurance Center, Bangor, Maine, April 24, 2017. *(abstract accepted)*
4. **Mistro\*, D.,** Klein, S.J.W., Oral Presentation. Window Inserts and the Communities Adopting Them, UMaine Student Symposium: Research & Creative Activity, Cross Insurance Center, Bangor, Maine, April 24, 2017. *(abstract accepted)*
5. **Raffier\*, K.,** Klein, S.J.W., Fox, E., Poster Presentation. Analysis of Dams through Fact Sheet Creation to Aid in Future Dam Decision Making, UMaine Student Symposium: Research & Creative Activity, Cross Insurance Center, Bangor, Maine, April 24, 2017. *(abstract accepted)*
6. **Fox\*, E.,** Klein, S.J.W., Raffier, K., Poster Presentation. Group Participatory Multi-Criteria Decision Analysis (PMCDA) and Dam Decisions, UMaine Student Symposium: Research & Creative Activity, Cross Insurance Center, Bangor, Maine, April 24, 2017. *(abstract accepted)*
7. **Mata\*, R.,** Klein, S.J.W., Poster Presentation. Developing Best Practice Methods by Using Survey Data, UMaine Student Symposium: Research & Creative Activity, Cross Insurance Center, Bangor, Maine, April 24, 2017. *(abstract accepted)*
8. **Michaud\*, K.,** Klein, S.J.W., Poster Presentation. EnergySmart Bangor Residential Rebate Program Presentation, UMaine Student Symposium: Research & Creative Activity, Cross Insurance Center, Bangor, Maine, April 24, 2017. *(abstract accepted)*
9. **Fox\*, E.**, Klein, S.J.W., Raffier\*, K., Poster Presentation. Participatory Group MCDA in a Dam Decision Context, Maine Water & Sustainability Conference, Augusta Civic Center, Augusta, Maine, March 30, 2017.
10. **Raffier\*, K.,** Klein, S.J.W., Fox, E. Poster Presentation. Analysis of Dams through Fact Sheet Creation to Aid in Future Dam Decision-Making, Maine Water & Sustainability Conference, Augusta Civic Center, Augusta, Maine, March 30, 2017.
11. **Klein, S.J.W**., Oral Presentation (**Invited**). Sustainable Energy Workshop, Expanding Horizons Conference, Little Hall, University of Maine, Orono, Maine, March 16, 2017.
12. **Klein, S.J.W**., Mistro\*, D., Oral Presentation (**Invited**). Window Insert Research, WindowDressers Annual Local Coordinators Meeting, St Francis of Assisi Church, Belfast, Maine, March 17, 2017.
13. **Klein, S.J.W**, Oral Presentation (**Invited**). Community Solar in the United States, Conference on the Practical Engagements and the Social-Spatial Dimensions of the Post-Petroleum Future, Le Studium, Tours, France, November 7-9, 2016.
14. **Klein**, **S.J.W**., Oral Presentation. What are the financial and social costs and benefits of different community solar approaches? Behavior, Energy, and Climate Change Conference (BECC), Baltimore, Maryland, October 20-22, 2016
15. **Silka, L**., Sullivan, C., Blais, J., de Urioste-Stone, S. Dixon, D., Hart, D., Isenhour, C., Klein, S., McGreavy, B., Oral Presentation. How to inspire students, energize faculty and serve your community. 17th Annual Engagement Scholarship Consortium Conference, University of Nebraska, Omaha, Nebraska, October 12, 2016.
16. **Klein, S.J.W.**, Panelist (**Invited**). Teaching Panel Discussion, University of Maine Faculty Orientation, Wells Conference Center, Orono, Maine, August 25, 2016.
17. **Klein, S.J.W.**, Oral Presentation (**Invited**). Economics of Solar in Maine, Bangor Solar Forum, Eastern Maine Community College, Bangor, Maine, June 28, 2016.
18. **Klein, S.J.W.**, Coffey\*, S. Oral Presentation. A comparison of community solar policy incentives in three New England states. Northeastern Agricultural and Resource Economics Association (NAREA) Annual Meeting, Bar Harbor Regency, Bar Harbor, Maine, June 19-21, 2016.
19. **Klein**, **S.J.W.**, Mistro\*, D. Oral Presentation. Community energy for a sustainable future: window insert builds in Maine. Second International Sustainable Consumption Research and Action Initiative (SCORAI) Conference “Transitions Beyond a Consumer Society”, Wells Conference Center, University of Maine, Orono, Maine, June 15-17, 2016.
20. **Klein**, **S.J.W**., Greco, V. Oral Presentation. (**Invited**) Community solar decision support tool. National Community Solar Partnership Regional Workshop, US Environmental Protection Agency Region 1 Headquarters, Boston, MA, June 9, 2016.
21. **Langton\*, R**., Klein, S. Oral Presentation. Biofuels from Trees: A New Process to Produce Drop-in Biofuels from Woody Biomass, International Conference on Environment and Renewable Energy. Sheraton Munich Westpark Hotel. Munich, Germany, May 26, 2016.
22. **Raymond\***, **G.**, Klein, S. Poster Presentation. Should Maine fund sustainability by selling license plates? UMaine Student Research Symposium, Cross Insurance Center, Bangor, Maine, April 27, 2016.
23. **Klein**, **S.** Oral Presentation. Update on a New Decision Support Tool for Diverse Community Solar Stakeholders, National Community Solar Partnership Community Building Working Group Monthly Webinar Series, April 12, 2016.
24. **Mistro\***, **D.**, Klein, S. Poster Presentation. Window Inserts and the Communities Adopting Them. Maine Water & Sustainability Conference, Augusta Civic Center, Augusta, Maine, March 29, 2016.
25. **Langton\***, **R.**, Klein, S. Oral Presentation. Biofuels from Trees: A New Process to Produce Drop-in Biofuels from Woody Biomass. Maine Water & Sustainability Conference, Augusta Civic Center, Augusta, Maine, March 29, 2016.
26. **Coffey\***, **S.**, Klein, S. Oral Presentation. Does Community Solar Have a Future in New England? Maine Water & Sustainability Conference, Augusta Civic Center, Augusta, Maine, March 29, 2016.
27. **Klein, S.J.W**., Oral Presentation (**Invited**). Sustainable Energy Workshop, Expanding Horizons Conference, Little Hall, University of Maine, Orono, Maine, March 17, 2016.
28. **Mistro\*, D., Klein, S., Brannigan\*, J., Cormier\*, N., Cushing\*, T., Gillis\*, O., Lemmler\*, S., Masi\*, M., Noble\*, W., Peterson\*, S., Sturrock\*, E.** Oral Presentation. Window Insert Project. Campuses for Environmental Stewardship Presentations, Orono, Maine, December 10, 2015.
29. **Klein, S.,** Coffey\*, S. Oral Presentation. Community Solar: Harnessing the Power of the People. Mitchell Center for Sustainability Solutions Fall 2015 Seminar Series, Orono, Maine, <http://umaine.edu/mitchellcenter/news/multimedia/video-on-demand/#fall15>, November 30, 2015.
30. **Klein, S**., Oral Presentation. (**Invited**) Multi-Criteria Decision Analysis. Future of Dams Kickoff Meeting, University of New Hampshire, November 20, 2015.
31. **Klein, S**., Oral Presentation. (**Invited**) Multi-Criteria Decision Analysis. Future of Dams Knowledge Systems Meeting, webinar, November 13, 2015.
32. **Sullivan, C., Dixon, D**., Isenhour, C., DeUrioste-Stone, McGreavy, B., Klein, S. Oral Presentation. Where Service Learning Meets Sustainability: Connecting Classrooms with Communities for Stewardship and Civic Engagement. Mitchell Center for Sustainability Solutions Fall 2015 Seminar Series, Orono, Maine <http://umaine.edu/mitchellcenter/news/multimedia/video-on-demand/#fall15>, October 26, 2015.
33. **Klein**, **S.** Oral Presentation. Renewable Energy Solutions. 33rd United States Association for Energy Economics/IAEE North American Conference, Pittsburgh, PA, <http://www.usaee.org/usaee2015/program_concurrent.aspx>, October 25-28, 2015.
34. **Klein, S.,** Rubin, J., Neupane\*, B., Langton\*, R., Whalley\*, S. Oral Presentation (**Invited**). Integrated Sustainability Assessment of Forest-based Drop-In Biofuel in Maine. FBRI Board Meeting, University of Maine, Orono, Maine, October 9, 2015.
35. **Neupane\***, **B.**, Klein, S., Wheeler, C., Rubin, J., Oral Presentation. Life Cycle Energy and Greenhouse Gases Emissions Assessment of Forest-based Drop-in Biofuel Production in Maine. American Center for Life Cycle Assessment Annual Meeting XV, Vancouver, British Columbia, October 6-8, 2015.
36. **Klein, S.**, Oral Presentation (**Invited**). Comparing Sustainable Energy Tradeoffs. University of Massachusetts Mechanical and Industrial Engineering Seminar Series, Amherst, MA, <https://mie.umass.edu/seminars/archive>, September 21, 2015.
37. **Brannigan\*, J.,** Klein, S., Oral Presentation (**Invited**). Building Sustainable Energy Communities. Old Town Rotary Club Meeting, Black Bear Inn, Orono, Maine, September 10, 2015.
38. **Klein, S.**, Oral Presentation (**Invited**). Solar Energy in Maine. Environment Maine Lighting the Way Press Event, University of Maine, Orono, Maine, September 3, 2015.
39. **Klein, S.**, Oral Presentation (**Invited**). Community Window Insert Build Fall 2015. Old Town Rotary Club Meeting, Black Bear Inn, Orono, Maine, May 21, 2015.
40. **Klein, S**., Oral Presentation (**Invited**). Community Solar Trends and Opportunities, Solar Powering Your Community Workshop, Bangor, Maine, May 2, 2015.
41. **Klein**, S.Oral Presentation (**Invited**). Climate Change Solutions: Carbon Pricing and Community Energy, Earth Week Seminar, University of Maine, Orono, Maine, April 20, 2015.
42. **Neupane\*, B.**, Klein, S., Wheeler, C. Oral Presentation. Environmental Life Cycle Assessment of Drop-in Biofuel Production in Maine. GradExpo, University of Maine, Orono, Maine, April 3, 2015.
43. **Coffey\*, S**., Klein, S. Poster Presentation. What is Community Energy?, GradExpo, University of Maine, Orono, Maine, April 2, 2015.
44. **Klein**, **S.**, Oral Presentation. Creating a Sustainable Energy Future One Community at a Time, School of Economics Seminar Series, University of Maine, Orono, Maine, November 14, 2014.
45. **Dutra\*, S.**, Klein, S., Poster Presentation. Economic Feasibility of Distributed Solar Water Heat in Maine. Maine Economics Conference, Colby College, Waterville, Maine, April 26, 2014.
46. **Whalley\***, **S.**, Klein, S., Oral Presentation. Toward a Sustainable Energy Future: A Multi-Criteria Decision Analysis of Electricity Options for the United States. TEDx UMaine: The Student Experience. University of Maine, Orono, Maine, April 5, 2014.
47. **Whalley\***, **S.**, Klein, S., Rubin, J., Oral Presentation. An Estimation of the Cost to Harvest and Deliver Biomass Chips in Maine. University of Maine Graduate Academic Exposition, University of Maine, Orono, Maine, April 3, 2014.
48. **Whalley\***, **S.**, Neupane\*, B., Klein, S., Rubin, J., Oral Presentation. Sustainability Assessment of Drop-In Biofuels in Maine. 20th Maine Water & Sustainability Conference. Augusta Civic Center, Augusta, Maine, April 1, 2014.
49. **Klein, S.**, Criner, G., Allen, T., Oral Presentation. Jacobs Quarry Development: Economic Analysis Phase 2. Mid-Coast Solid Waste Corporation Meeting. Rockport Town Hall, Rockport, Maine, November 13, 2013.
50. **Pendse**, **H.**, **Klein, S**., Poster Presentation (**Invited**). Integrated national framework for cellulosic drop-in fuels. National Science Foundation Sustainable Energy Pathways Meeting, Westin Arlington Gateway, Arlington, Virginia, June 6, 2013.
51. Teisl, M., McCoy, S., **Marrinan\***, **S.**, Noblet, C., Johnson, T., Wibberly\*, M., Roper, R., Klein, S., Oral Presentation. Will offshore energy face fair winds and following seas?: Understanding what influences offshore wind acceptance. Maine Economics Conference, Bates College, April 27, 2013.
52. **Klein**, **S.**, Criner, G., Allen, T., Oral Presentation. Jacobs Quarry development: Economic analysis phase 2, Rockport Town Meeting, Rockport, Maine, November 13, 2013.
53. **Criner**, **G.**, Klein, S., Allen, T., Leighton\*, R., Oral Presentation. Jacobs Quarry North: Economic analysis phase 1, Rockport Town Meeting, Rockport, Maine, May 20, 2013.
54. **Wagner**, **S.**, Oral Presentation. Sustainable solar power, School of Economics Seminar Series, University of Maine, Orono, Maine, March 16, 2012.
55. **Klein**, **S.** Panel Discussion (**Invited**). White House Champions of Change Panel Discussion, Americorps Alums Day at the White House, Washington, D.C., August 17, 2012.
56. **Wagner**, **S**., Oral Presentation and Panel Discussion (**Invited**). Energy-related solutions to climate change. Maine EPSCoR Conference, Breakout Session 3A “Research Frontiers in Sustainability”, University of Maine, Orono, Maine, September 26, 2011.

**JOURNAL REVIEWS**

*Renewable & Sustainable Energy Reviews,* 2016

*Journal of Renewable and Sustainable Energy,* 2014

*Energy Policy*, 2013-present

*Environmental Science and Technology*, 2010-2011

*World Renewable Energy Congress*, 2011

**PROFESSIONAL MEMBERSHIPS**

American Solar Energy Society (ASES)

United States Association for Energy Economics (USAEE)

International Association for Energy Economics (IAEE)

Sustainable Consumption Research and Action Initiative (SCORAI)

**SELECTED PRESS**

*NOTE: I changed my last name to Klein in January 2013*

Zachary Warren, “U-Maine Students Stay Energy Efficient While Helping Others,” *WABI TV5*, October 29, 2016, <http://wabi.tv/2016/10/29/u-maine-students-stay-energy-efficient-while-helping-others/>.

Sharon Klein and Special to the BDN, “5 Myths People Hold about Solar Power in Maine,” *The Bangor Daily News*, accessed June 24, 2016, <http://bangordailynews.com/2016/04/28/opinion/5-myths-people-hold-about-solar-power-in-maine/>.

Elizabeth Neiman and Sharon Klein, “One Site Ranks Maine 4th Best for Women, but There’s More to the Story | BDN Maine,” *Bangor Daily News*, April 1, 2016, http://bangordailynews.com/2016/04/01/the-point/one-site-ranks-maine-4th-best-for-women-but-theres-more-to-the-story/.

### Wagner, S., Serving the United States Through AmeriCorps, White House Champions of Change Blog, August 17, 2012, http://www.whitehouse.gov/champions/blog?page=12.

*Bangor Daily News,* August 17, 2012, UMaine professor honored at White House for Americorps service, <http://bangordailynews.com/2012/08/17/education/umaine-professor-honored-at-white-house-for-americorps-service/?ref=regionbangor>

*Pittsburgh Post-Gazette*, May 6, 2010, Study finds soda pop sales tied to obesity in Allegheny County.

*“h” - The Magazine of the Heinz Endowments*, Spring 2010, Food fight.

**TEACHING**

**ECO 180 – Citizens, Energy, and Sustainability** (2011-present) introduces students to the technical, economic, environmental, and social implications of energy production and use, providing students with a broad understanding of energy issues. Students learn how citizens play a vital role in determining the direction that the future energy system and policies will take. This course adopts a “flipped” classroom and active learning approach to instruction.

**ECO 405/590 – Sustainable Energy Economics and Policy** (2011-present) is a mixed undergraduate/graduate level course that engages students in quantifying and assessing the technical, economic, environmental, and social implications of energy supply, distribution, and use in the context of transitioning toward a sustainable energy future. Students examine a variety of energy options, including fossil fuels, nuclear power, and renewable energy (solar, wind, biomass, hydro, and geothermal).  The effects of energy use on greenhouse gas emissions and climate change, on air and water quality, and on human health are considered alongside policies to mitigate these effects, such as carbon prices, emissions targets, efficiency requirements and investments, and renewable portfolio standards. Alternative future energy paths are developed that are consistent with environmental stewardship, energy security, and sustainable economic growth and development. This course adopts a “flipped” classroom and active learning approach to instruction.

**ECO 370 - Sustainable Community Energy through Service Learning** (pilot course in Fall 2015) taught students about the role of community action in creating a sustainable energy future. Students engaged in service learning – “a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities” (see http://umaine.edu/upcc/files/2014/05/Service-Learning-at-UMaine.pdf). Students also engaged in original research - preparing a final project that evaluated the costs and benefits of the service learning project.  For the service project, we partnered with [WindowDressers](http://windowdressers.org/window-insulating-inserts/) and the [Unitarian Universalist Society of Bangor](http://uubangor.org/) to do a [window insert build](http://windowdressers.org/window-insulating-inserts/), in which we built 375 interior wood-framed, plastic window inserts to reduce heat loss and save energy in old, drafty windows for 33 clients, with 27% of the inserts available to low-income families for a suggested contribution of $1/insert (up to $10; regular customers paid $2/square ft). Another window insert build is planned for Fall 2016, which will be integrated as a service project into the existing ECO 180 and ECO 405/590 courses.