

## **Shannon Liburd, Senior Associate**

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Synapse Energy Economics | 485 Massachusetts Avenue, Suite 3 | Cambridge, MA 02139 | 617-453-7039  
sliburd@synapse-energy.com

## **PROFESSIONAL EXPERIENCE**

**Synapse Energy Economics, Inc.**, Cambridge, MA. *Senior Associate*, 2020 – present

- Led two stakeholder workshops on behalf of the Minnesota Department of Commerce to discuss grid security and customer confidentiality issues related to the public display of grid data on hosting capacity maps. Wrote a report on the privacy and security implications of public access to electric distribution grid data in the context of Xcel Energy's hosting capacity map and created a risk/cost-benefit framework for balancing grid security and customer privacy concerns with the public interest.
- Modeled the Oahu electric grid in EnCompass to determine the value of distributed energy resources (DERs) aligned with Hawaii's goal of achieving 100% renewable energy generation by 2045.
- Collaborating in an energy stakeholder working group to develop a framework for optimizing the deployment of transmission and distribution infrastructure and DER solutions for enhancing the resiliency of the Puerto Rican grid.

**U.S. Department of State**, Washington, DC. *Economic and Commercial Officer*, 2018 –2020

- Worked to launch a global Deal Team initiative, enabling increased coordination between U.S. embassies and federal agencies, and helping American companies win business overseas.
- Developed process for tracking and transmitting deals from U.S. embassies to American businesses, and assisted in the creation of the Deal Team website, online content, and trainings.
- Advocated on behalf of U.S. clean tech companies to foreign governments and advised and assisted U.S. firms seeking export sales, investment, and major infrastructure development opportunities in Latin America and the Caribbean.

**ICF International**, Fairfax, VA. *Distributed Energy Resource Consultant*, 2018

- Led development of an electric utility's Distribution Resource Planning (DRP) Roadmap as part of its Grid Modernization Strategy through assessing its current efforts, soliciting input from internal stakeholders, and evaluating DRP elements such as data integration and forecasting, interconnection, hosting capacity, and locational value.
- Drafted technical responses to requests for proposal from several U.S. electric utilities on a range of distributed energy resource and grid modernization topics.

**City University of New York**, New York, NY. *Renewable Energy Project Manager*, 2017 - 2018

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- Collaborated with Con Edison and NREL to develop solutions for mitigating the technical and financial barriers associated with grid interconnection of large-scale solar PV projects in NYC.
  - Analyzed the NY-Sun Value Stack Calculator to estimate how compensation for specific solar projects in New York varied underneath the net energy metering and value stack mechanisms.
  - Accelerated the development of NYC's first grid-interactive electric vehicle demonstration project, in collaboration with Nuvve and Queens College, to make the business case for vehicle-to-grid technology in New York City.

**GE Renewable Energy**, Schenectady, NY. *Technical Project Manager*, 2015 - 2016

- Created a standard protocol for integrating third party wind turbines into GE's remote turbine monitoring operations, and led the integration of 436 Alstom wind turbines in high growth regions into GE's remote monitoring system.
- Improved customer satisfaction by providing enhanced turbine troubleshooting services for customers in North America.
- Increased the efficiency of Alstom turbine fleet by 25% by leading a team of three to develop fault handling procedures for resolving recurring turbine operational errors.
- Completed market research and competitive analysis on annual global blade production to provide senior leadership with key insights on business growth opportunities for onshore and offshore wind.

**U.S. Department of State**, Washington, DC.

*Renewable Energy Officer*, Washington, DC. 2014 – 2015

- Designed a utility-scale microgrid system using HOMER energy modeling software to meet the electricity needs of 100,000 Syrian refugees in a UN refugee camp in Jordan.
- Organized and executed workshop with over 150 attendees on commercially viable mini-grid systems.
- Wrote report on best business practices for commercially scaling mini-grid deployments in developing countries.

*Political and Economic Officer*, Guayaquil, Ecuador. 2012 - 2014

- Tracked, analyzed, and reported on political, economic, and social issues of U.S. interest in coastal Ecuador through cultivating strong working relationships with senior representatives in local government, as well as the private and civil sectors.
- Discussed local regulatory barriers to exports with U.S. agricultural companies, and lobbied local government officials to help overcome them. Facilitated visit of U.S. irrigation equipment manufacturer to expand market opportunities.

*Environment, Science, and Technology Officer*, Washington, DC. 2010 - 2012

- Coordinated with U.S. government agencies to develop and implement a set of policy recommendations concerning bilateral fisheries, environment, science, and technology issues with Canada.
- Developed a unified U.S. government interagency position to respond to Canadian government concerns over New York's stringent environmental ship vessel water regulations, while maintaining the environmental integrity of NY waters.

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- Influenced high-level North Dakota flooding negotiations by conducting a techno-economic analysis of commercially available water filtration systems that met Canadian water quality standards and satisfied U.S. federal budget constraints.
  - Wrote concise policy papers on transboundary water and arctic issues to aid principals in their negotiations with Canadian government officials over Arctic maritime boundary disputes.

## EDUCATION

**Massachusetts Institute of Technology**, Cambridge, MA

Master of Science in Technology and Policy, 2010

Bachelor of Science in Aerospace Engineering, 2008

## SKILLS

Microsoft Excel, Microsoft Project, Python, PostgreSQL, JIRA, MATLAB, HOMER. Fluent in Spanish.

## PUBLICATIONS

Liburd, S., E. Sinclair, T. Woolf, C. Roberto. 2021. *Hosting Capacity Analysis and Distribution Grid Data Security*. Synapse Energy Economics for the Minnesota Department of Commerce.

Liburd, S., X. Li, L. Lissell, T. Case, K. Anderson, L. Reilly. 2017. *Grid Ready: Strategies for Interconnecting Large-Scale PV in New York City*. [https://nysolarmap.com/media/1933/grid-ready-report\\_finalcuny.pdf](https://nysolarmap.com/media/1933/grid-ready-report_finalcuny.pdf)

Liburd, S. 2014. *Commercially Operating Mini-Grid System Workshop Final Report*.  
<https://www.esmap.org/sites/esmap.org/files/DocumentLibrary/Commercially%20Operating%20Mini%20Grid%202014%20Workshop%20Report%20.pdf>

Liburd, S. 2010. *Solar-driven HDH Desalination for Potable Use in Haiti*.  
<https://dspace.mit.edu/handle/1721.1/62033>

*Resume updated June 2021*