Chelsea Petrenko, Ph.D.

One Broadway, 9th Floor, Cambridge, MA 02142
chelsea.petrenko@ethree.com

ENERGY AND ENVIRONMENTAL ECONOMICS, INC. Boston, MA
Associate Director

Chelsea Petrenko supports E3's work in distributed energy resources, emerging technologies, and other components of the clean energy transition as a member of E3's Climate Pathways and Electrification group. Chelsea has been the project manager of several significant E3 studies including the development of Master Transit Plans for the five largest upstate transit agencies in New York as well as E3's Integrated Decarbonization Strategy for Baltimore Gas & Electric. She has also contributed to E3 analysis on a fleet electrification strategy for a large utility and developing forecasting scenarios for EV and charging adoption.

Chelsea completed her Ph.D. at Dartmouth College, where she studied GHG emissions associated with climate change and ecosystems. She brings deep experience in research design, execution, and publication, along with subject matter expertise in clean energy and climate change mitigation. Dr. Petrenko has led a range of research projects pertinent to the unique attributes of the proposed research, including evaluating pilot programs, emerging technologies, and demand response strategies, in addition to collecting primary data through extensive interview, survey, and panel efforts. In addition to the experience and knowledge Chelsea brings from her research, she is an alumnus and organizer of the Clean Energy Leadership Institute and a graduate of the National Science Foundation Interdisciplinary Research Traineeship.

Act on Climate and RI PUC Support, Rhode Island Energy (2022-Present). Chelsea is managing a project for Rhode Island Energy evaluating the role of the gas distribution system in the context of the Act on Climate. E3's scope of work includes developing a set of decarbonization pathways consistent with state policy and informed by stakeholder input, deep dives on analytical topics raised during the stakeholder process, and evaluation of impacts on the gas system and customers.

New York Power Authority, Transit Agency Master Transit Plans (2021-2022). Chelsea led an E3 team with several subcontractors in the development of Master Transit Plans for the five largest upstate transit agencies in New York—Westchester County, Suffolk County (Long Island), Albany, Buffalo, and Rochester.

Large Utility Fleet Electrification Strategy (2022). Chelsea led a project in which E3 partnered with Gladstein, Neandross & Associates (GNA), experts in zero emission fleet deployment, to develop a strategy to proactively promote and manage fleet electrification for large investor-owned utility in the Northeast. E3 and GNA identified the unique needs and barriers for commercial fleet operators that electric utilities are well positioned to address. Chelsea's leadership enabled rapid development of a program proposal on an accelerated timeline that was positively received by senior management.

OPINION DYNAMICS Oakland, CA
Principal Consultant 2019-2021

- Served a range of clients in conducting research on zero net energy buildings, distributed energy resources, and emerging technologies
- Led all aspects of complex projects, including managing subcontractors, serving as the day-to-day contact for clients, and driving results
- Interpreted statutory guidelines and emerging state policy and assist clients in successfully meeting those guidelines
- Presented research at national conferences and represented company in a range of business development initiatives

Managing Consultant 2017-2019

- Implemented and supervised research on energy efficiency and grid innovations
- Played an instrumental role in securing multi-million dollar contracts for my firm
- Forged relationships with diverse stakeholders and clients such as the California Public Utilities Commission and major national utilities
- Coordinated day-to-day activities, including budget and staff, for up to eight concurrent energy-related projects

Senior Consultant 2016-2017

- Quantified energy savings and economic impacts achieved by energy efficiency and financing innovations
- Analyzed large data sets and completed qualitative research to inform decision-making by industry stakeholders

CLEAN ENERGY LEADERSHIP INSTITUTE San Francisco, CA
Program Leadership Team July 2018 – October 2019

- Led and organized the SF Clean Energy Leadership Institute, which trains and empowers working professionals to advance the clean energy economy and mitigate climate change

Fellow March 2018 – June 2018

- Completed a Fellowship Training Program focused on critical aspects of the national and international energy industry, including strategies for deep decarbonization and deployment of climate solutions

INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION Washington, DC
Independent Consultant 2015 - present

- Authored several studies that examine the role and feasibility of biofuels as a solution to climate change, which have influenced national in international biofuels policy
- Examined the feasibility of generating liquid fuel using direct air carbon capture across Europe, resulting in a publication that directly informed the European Commission's Renewable Energy Directive 2
- Influenced biofuel implementation strategy and policy in collaboration with a range of international stakeholders

PROJECT DRAWDOWN Sausalito, CA
Independent Consultant 2015

- Contributing researcher for Drawdown, a New York Times best-selling publication that examines a broad range of strategies and technologies for addressing climate change
- Performed economic and climate impact analyses of biofuels as a solution to climate change, resulting in recommendations on its deployment on a global scale

NATIONAL SCIENCE FOUNDATION Hanover, NH
Trainee in Interdisciplinary Science 2011-2013

- Completed a rigorous two-year traineeship in interdisciplinary science, communication, and collaboration
- Completed science expeditions in Greenland and Antarctica and engaged indigenous leaders and politicians
- Created science communication products, one of which was featured in the New York Times and Boston Globe

Education

Dartmouth College Hanover, NH
Ph.D., Ecology and Evolutionary Biology 2015

University of New Hampshire Durham, NH
B.S., Environmental Science 2008

Publications

1. *Searle, S., **C.L. Petrenko**, & N. Pavlenko (In press) The potential for advanced biofuels in India: Assessing the availability of feedstocks and deployable technologies. International Council on Clean Transportation Working Paper. Washington, D.C.*

2. ***Petrenko, C.L.** & S. Searle. "Is the Renewable Fuel Standard enough to spur progress in advanced biofuels? Probably not." International Council on Clean Transportation, 18 October 2018, www.theicct.org/blog/staff/renewable-fuel-standard-enough-spur-progress-advanced-biofuels-probably-not*

3. *Hawken, P. (2017). Drawdown: The most comprehensive plan ever proposed to reverse global warming. New York, New York: Penguin Books*

4. ***Petrenko, C.L.** & S. Searle (2017) CO2-based synthetic fuel: Assessment of Potential European Capacity and Environmental Performance. International Council on Clean Transportation Working Paper. Washington, D.C.*

5. ***Petrenko, C.L.*** *& S. Searle (In Press) Classification of alternative fuel feedstocks as waste or by-products in the EU. International Council on Clean Transportation Working Paper. Washington, D.C.*

6. ***Petrenko, C.L.*** *& S. Searle (2016) Assessing the profitability of growing dedicated energy versus food crops in four European countries. International Council on Clean Transportation Working Paper. Washington, D.C.*

7. ***Petrenko, C.L.****, J. Paltseva, and S. Searle (2016) Ecological impacts of palm oil expansion in Indonesia. International Council on Clean Transportation White Paper. Washington, D.C.*