

Dr. Ian Lange
Colorado School of Mines

April 18, 2017

Dear Dr. Lange

I am excited to apply for the Colorado Technology Primer for Economists and Social Scientists being held this summer. I am applying for the first week (July 31 - August 4). Currently, I am a 3rd year PhD student in the University Program in Environmental Policy at Duke University and a PhD Fellow in the Duke University Energy Initiative. My dissertation is focused on a variety of energy-related economic issues, including a chapter which examines the optimal operation of battery storage on the grid. To this end, I am developing a dynamic optimization of hourly energy storage operation, but am interested in incorporating feedback from operation decisions including congestion and peak-/off-peak price changes. The brief description of your technology primer's topics is essentially a list of necessary background for my dissertation.

My research interest in general is highly focused on energy economics, but has only recently expanded into areas that require a technical knowledge of the U.S. grid. My previous work has been in reduced-form policy evaluations, including a program evaluation of Property Assessed Clean Energy that was published in the *Journal of Environmental Economics and Management*. From 2012-2014, I was an economist for the National Marine Fisheries Service, and worked primarily on modeling the effect of offshore wind development on the U.S. Atlantic fisheries. A solid background in energy technology would round out my experience and skills.

I look forward to hearing from you, and hope to join you in July.

Sincerely,

Justin Kirkpatrick

Attached: curriculum vitæ

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