#### Matthew Ridge Butner

October 2018

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#### Research Interests

Environmental and Energy Economics, Industrial Organization, Applied Microeconometrics.

# Education

Ph.D. Economics, University of Colorado Boulder, 2019 (expected)

Dissertation Title: "Environmental Policy, Energy, and Emissions"

Committee: Jonathan Hughes (chair), Dan Kaffine, Scott Savage, Yongmin Chen

M.A. Economics, University of Colorado Boulder, 2015

B.A. Economics, University of South Florida, 2013

B.S. Environmental Science and Policy, University of South Florida, 2013 Summa Cum Laude, Minor in Mathematics

NSF Research Experience for Undergraduates at Tulane University, 2012

### Research

# Working Papers, abstracts below

- 1. Gone with the Wind: Consumer Surplus from Renewable Generation.
- 2. Concentration Effects of Heterogeneous Standards: Refinery Response to the Clean Air Act.

# Works in Progress

- 3. Demand-Side Emission Policies.
- 4. Market Risk and Investment Incentives (with Cameron Duff).

# Honors & Awards

Best Student Paper Award, U.S. Association for Energy Economics, 2018

Graduate Award for Public Policy Research, University of Colorado Boulder, 2017

Domestic Travel Grant, University of Colorado Boulder, 2016, 2017

Partial Fellowship, University of Colorado Boulder, 2013, 2016, 2018

Alumni Scholarship, University of South Florida, 2012

Sustainability Scholar, University of South Florida, 2012

Burton Memorial Scholarship in Economics, University of South Florida, 2011

#### Presentations and Seminars

- 2018 Front Range Energy Economics Camp, Western Economic Association International Annual Conference Graduate Student Workshop, United States Association for Energy Economics Student Paper Competition, Colorado State University Agricultural Economics Department Seminar (planned), Colorado School of Mines Economics Department Seminar (planned).
- 2017 Front Range Energy Economics Camp, Western Economic Association International Annual Conference (AERE session, discussant), CU Workshop on Environmental and Resource Economics, Heartland Environmental and Resource Economics Workshop (poster), Southern Economic Association Annual Meeting (AERE session).
- 2016 Front Range Energy Economics Camp, Economic History Association Annual Conference (poster), Southern Economic Association Annual Meeting (AERE session).

#### Research Abstracts

#### Gone with the Wind: Consumer Surplus from Renewable Generation.

I use a supply function equilibrium framework to show how increased renewable generation can increase electricity generators' incentive to withhold capacity. Taking advantage of detailed data on the largest wholesale electricity market in the United States, I provide direct evidence that horizontally integrated firms that own wind turbines and conventional generation will withhold their conventional generation when their own wind turbine is generating electricity. As a result, over 30% of wind generation is replacing withheld units suggesting a decrease in potential consumer surplus of 3.3 billion US Dollars from 2014 to 2016.

# Concentration Effects of Heterogeneous Standards: Refinery Response to the Clean Air Act.

Environmental regulations can alter the geographic and product markets in which firms compete. This impacts a firm's ability to exercise market power, and profits subsequently. This ability to charge a higher markup-over-cost can counteract the increase in the cost of production associated with the environmental regulation. In the context of the Boutique Fuel Standards resulting from the 1990 Clean Air Act Amendments, I use a latent profit approach to show how refineries that were more exposed to the environmental regulation were less likely to exit the market. I show this is consistent with a model of spatial Cournot competition in which firms can invest in a technology that allows them to charge a higher mark up.

# **Teaching**

# University of Colorado Boulder, Instructor of Record

Instructor rating in parenthesis when available.

Econ 3070 Intermediate Microeconomic Theory

Maymester 2018 (5.4/6), Fall 2017 (5.3/6), Spring 2016 (4.3/6)

Econ 3818 Intro to Statistics with Computer Applications:

Fall 2018, Spring 2017 (5.2/6)

# University of Colorado Boulder, Teaching Assistant

Econ 3535 Natural Resource Economics: Spring 2018

Econ 3545 Environmental Economics: Fall 2016

Econ 3070 Intermediate Microeconomic Theory: Fall 2015

Econ 3818 Intro to Statistics with Computer Applications: Summer 2015

Econ 2020 Principals of Macroeconomics: Spring 2014, Summer 2016

Econ 2010 Principals of Microeconomics: Fall 2013

#### Miscellaneous

Participant in Sloan Technology Primer in Electricity for Social Scientists, 2017
Participant in Sloan Summer School in Environmental and Energy Economics, 2016
Research Assistant, Wolfgang Keller and Carol Shiue, AY 2015
Departmental Tutor, University of Colorado Boulder, AY 2014
Environmental Education Intern at Learning Gate Community School, 2013
Legislative Intern for County Commissioner Al Higginbotham, 2012
University Tutor, University of South Florida, 2009-2013

Environmental Conservation Campaign Leader, Gulf Restoration Network, 2009

# References

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