

## **Sebastien Houde**

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### **Educational Background**

Ph.D., Management Science and Engineering, Stanford University, 2007-2012

M.S., Economics, Université Laval, Québec, 2003-2004

B.A., Economics and Mathematics, Université Laval, Québec, 1999-2003

### **Academic Appointments at UMD**

Assistant Professor, Department of Agricultural and Resource Economics, 2013-present

### **Articles in Refereed Journals**

Houde, S and J. E. Aldy, “*Consumers' Response to State Energy Efficient Appliance Rebate Programs*”, *American Economic Journal: Economic Policy*, forthcoming

Houde, S and C. A. Spurlock, “*Minimum Energy Efficiency Standards for Appliances: Old and New Economic Rationales*”, *Economics of Energy & Environmental Policy*, (2016), Vol 5(2)

Fassbender, C., S. Houde, S. Silver-Balbus, K. Ballard, B. Kim, K. J. Rutledge, J. F. Dixon, A. A. M. Iosif, J. B. Schweitzer, S. M. McClure, “*The Decimal Effect: Behavioral and Neural Bases for a Novel Influence on Intertemporal Choice in Healthy Individuals and in ADHD*”, *Journal of Cognitive Neuroscience*, (2014), Pages 1-14

Houde S., A. Todd, A. Sudarshan, J. F. Flora and C. K. Armel, “*Real-time Feedback and Electricity Consumption: A Field Experiment Assessing the Potential for Savings and Persistence*”, *The Energy Journal*, (2013), Vol 34(1), Pages 87-102

Safirova, E., K. Gillingham and S. Houde, “*Measuring Marginal Congestion Costs of Urban Transportation: Do Networks Matter?*”, *Transportation Research Part A: Policy and Practice*, 2007, Vol 41(8), Pages 734-749

### **Book Chapters**

Safirova E., S. Houde and W. Harrington, "Spatial Development and Energy Consumption", *Urban and Regional Policy and its Effects*, Turner M.A., Wial, H. and Wolman H. editors Vol 1. Brookings Institution Press. Washington, DC

## **Working Papers**

Houde, S., “*Consumers' Response to Quality Disclosure and Certification: An Application to Energy Labels*”, The RAND Journal of Economics (Revise and Resubmit, 2<sup>nd</sup> round)

Giraudet, L. G., S. Houde and J. Maher, “*Moral Hazard and the Energy Efficiency Gap: Theory and Evidence*”, Journal of the Association of Environmental and Resource Economics (Revise and Resubmit, 2<sup>nd</sup> round)

Houde, S. and A. Spurllock, “*Do Energy Efficiency Standards Improve Quality? Evidence from a Revealed Preference Approach*”

Houde, S., “*Bunching With the Stars: How Firms Respond to Environmental Certification*”

Houde, S. and J. E. Aldy, “*Efficiency and Equity Trade-offs Due to Heterogeneous Behavioral Responses to Energy Fiscal Policies*”

## **Works in Progress**

Houde, S. and C. Wolfram, “*The Impact of Energy Education on Low Income Urban Households: Evidence from a Randomized Encouragement Design*”

Houde, S. and E. Myers, “*Quantifying Inattention in Markets for Energy Intensive Durables: A Novel Approach*”

Gillingham, K., S. Houde and A. van Benthem, “*Car Lies: How Consumers Respond to Fuel Economy Information*”

Houde, S, J. West, and M. Zaki “*Cash-for-kWh: Incentivizing Low Income Urban Households to Save Energy*”

## **Grants and Sponsored Research**

New Economics of Energy Markets, NBER, \$23,000, 2016-2017, Co-PI (with Erica Myers)

Energy Policy Tradeoffs between Economic Efficiency and Distributional Equity, NBER and Sloan Foundation, 2015-2016, Co-PI (with Joseph Aldy)

Minimum Standard and Market Structure, Lawrence Berkeley National Lab, \$59,000, February-October 2014, PI

Stanford ARPA-E Sensor and Behavior Initiative, 2014

## Academic Presentations

### 2017

"Do Energy Efficiency Standards Improve Quality? Evidence from a Revealed Preference Approach", *Resource for the Future* (02/2017).

Discussant Behavioral Economics and the Environment, ASSA, Chicago (01/2017).

### 2016

"Efficiency and Equity Trade-offs Due to Heterogeneous Behavioral Responses to Energy Fiscal Policies ", *NBER Conference on Efficiency-Equity Trade-Off, North Carolina* (10/2016).

"Inattention and Energy-Intensive Durables, New Evidence from the US Appliance Market", *AERE Summer Conference* (06/2016).

"Do Energy Efficiency Standards Improve Quality? Evidence from a Revealed Preference Approach", *Recent Advances in the Economic Analysis of Energy Demand Insights for Industries and Households, Munster Germany*, (04/2016)

### 2015

"Do Energy Efficiency Standards Improve Quality? Evidence from a Revealed Preference Approach", *Department Seminar, Colorado School of Mines* (11/2015).

"Do Energy Efficiency Standards Improve Quality? Evidence from a Revealed Preference Approach", *Stanford Institute Theoretical for Economics* (08/2015).

"Do Energy Efficiency Standards Improve Quality? Evidence from a Revealed Preference Approach", *Association of Environmental and Resource Economists, Summer Conference* (06/2015).

"Do Energy Efficiency Standards Improve Quality? Evidence from a Revealed Preference Approach", *Department Seminar, University of Alberta* (03/2015).

"Do Energy Efficiency Standards Improve Quality? Evidence from a Revealed Preference Approach", *Department Seminar, University of Calgary* (03/2015).

"How Consumers Respond to Environmental Certification", Presenter and session organizer, ASSA 2015, Boston (01/2015)

## 2014

"Market Structure and Standards", (joint work with A. Spurlock), *Department Seminar, Université Laval (11/2014)*

"Information, Framing and the Adoption of Energy Intensive Durables", (joint work with C. Armel and S. McClure), NBER 2014 EEE Summer Institute, Cambridge MA (07/2014).

"Bunching with the Stars: How Firms Respond to Environmental Certification", Presented at the following conferences: ASSA meeting, Philadelphia (01/2014); International Industrial Organization Society Annual Meeting, Chicago (03/2014); European Econometric Society Annual Meeting, Toulouse (08/2014).

## 2013

"Bunching with the Stars: How Firms Respond to Environmental Certification", *Southern Economic Association Annual Conference, Tampa Bay (11/2013)*.

"Did the Stimulus Benefit the Environment", Presented at the following conferences: Stanford Institute for Theoretical Economics, Stanford (08/2013); AERE summer conference, Banff (06/2013)

"Bunching with the Stars: How Firms Respond to Environmental Certification", Presented at the following locations: Energy Institute, University College London (12/2013); Fondazione Eni Enrico Mattei, Milan (12/2013); CIRED, Ecole des Ponts ParisTech (12/2013); CEPE, ETH Zurich (12/2013); ARE, UC Davis (06/2013); TREE Seminar Series, NC State University, RTI International and Duke University (02/2013)

## Fellowships, Gifts and Other Funded Research

Social Sciences and Humanities Research Council Doctoral Fellowship, 2008-2010

Stanford School of Engineering Fellowship, 2007

GREEN/Environment Québec Fellowship, Université Laval, 2003

## Courses Taught

Environmental and Energy Economics (AREC 456, AREC 489J), Spring 2014 and 2016, (55 students),

Advanced Natural Resource Economics (AREC 785), Fall 2014, 2015, and 2016 (co-taught with Jorge Holzer)

Microeconomic Applications in Agricultural and Resource Markets (AREC 610), Spring 2015  
(co-taught with B. Chambers, L. Barrage, L. Olson, and K. McConnell)

### **Advising: Doctoral Students**

Sarah Ball 2013-2014, graduated (committee member, AREC), placement: NOAA  
Daniel Werner 2013-2014 graduated (main advisor, AREC), placement: On-Point Analytics  
Yuangong Qi 2013 (first-year paper, AREC)  
Guanghai Que 2014 (first-year paper, AREC)  
Shirley Pon 2013-2014 (committee member, AREC)  
Ron Chan 2014, graduated (committee member, Econ Department), placement: University of Manchester  
Yichen (Christy) Zhou 2014 (committee member, Econ Department)  
Joe Maher 2014 – today (committee member, AREC)  
Jen Zhe 2014 – today (main advisor, AREC)  
Aaron Ashok Adalja 2014 – today (main advisor, AREC)  
Jun Zhang 2016 – today (main advisor, AREC)

### **Reviewing Activities for Journals and Presses**

American Economic Review, Review of Economics and Statistics, American Economic Journal:  
Economic and Policy, Journal of Public Economics, Journal of the Association of Environmental  
and Resources Economics, The Energy Journal, Journal of Environmental Economics and  
Management, Journal of Industrial Ecology, Energy Economics, Economic Inquiry

### **Reviewing Activities for Agencies and Foundations**

Swiss National Science Foundation, Sloan Foundation

### **Campus Service - Department**

Chair: Computer Oversight Committee (09/2013 - today)

Academic Seminar Committee AREC (09/2016 - today)

Search Committee: Communication Director College of Agriculture and Natural Resources (2016)

Search Committee: Open Rank Faculty AREC (2016)

## Extension Programs

### Overview and Philosophy of my Extension and Outreach Program

The overarching goal of my extension and outreach effort is to advance and teach evidence-based policy making in the energy domain. My extension program is centered on energy issues and more particularly on issues that impact residential households. My extension education effort takes mainly two forms. First, I am working directly with institutions that develop and implement energy programs targeting households in the State of Maryland. My role is to advise how to introduce best practices based on existing academic research in those programs, and design and evaluate the programs to test new hypotheses. All my evaluations focus on introducing experimental and/or quasi-experimental design. The second component of my extension education effort consists of teaching experimental methods to the various stakeholders in the energy domain in the State of Maryland. For this purpose, I have developed a short class (3-5 hours) tailored directly to practitioners and policy-makers that teaches the value and shortcoming of introducing experimental methods for the evaluation of social programs.

### Ongoing Extension and Outreach Programs

- I. *Evaluation of Watt Watcher: An Energy Education Program for Low Income Households (in collaboration with the Fuel Fund of Maryland, Maryland Public Service Commission, Baltimore Gas & Electric, and Catherine Wolfram, UC Berkeley and E2e Initiative).*

My role in this project is to design and implement a detailed evaluation plan for the Watt Watcher program. This program offers energy education to low-income households to help reduce energy bills and the need for financial bill assistance. The evaluation plan consists of a field experiment spanning 3 years and targeting more than 10,000 low-income households. The program is now completed and we are in the process of writing the final report and academic publications. Outreach and extension presentations will also be made once the data analysis is completed. Funding for this program came from the Customer Investment Fund and the E2e Initiative.

- II. *Personalized Education and Financial Incentives to Improve Energy Bill Assistance (in collaboration with the Fuel Fund of Maryland, Maryland Public Service Commission, Baltimore Gas & Electric, and Mari Zaki, UMD and Jeremy West, UC Santa Cruz).*

The goal of this program is to implement and evaluate a new program aimed at making energy bills more affordable for low-income Maryland households while at the same time promoting energy conservation. The program will be made up of two main components: 1) personally-tailored energy education and 2) financial incentives tied to energy conservation efforts. First, we will design and automate the creation of personalized energy usage reports that will be integrated into energy education workshops conducted by our non-profit partners, the Fuel Fund of Maryland. Second, we will offer households financial incentives that reward them for each unit of energy that they forgo relative to a personalized daily benchmark.

Rewarding households for energy conservation is a novel and promising way to offer bill assistance without incentivizing an increase of energy usage, as typically occurs in traditional approaches to energy bill assistance. Furthermore, personalized energy education will help households identify the most efficient sources of energy conservation in their housing units. For evaluation, the program will be implemented using a randomized control trial to enable measurement of the true causal impact of various components of our intervention on outcomes such as energy consumption, bill payments, demand for energy assistance programs and energy efficient technology take-up. The launch of the program is scheduled for Spring 2017.

III. *The Economics of Solar and Wind Leases for Utility-Scale Renewable Generation on Maryland Farmland (in collaboration with Paul Goeringer, Sarah Everhart, and Ashley Newhall).*

The goal of this outreach program is to provide information to Maryland farmers on the economics and legal issues involved in the leasing of farmland for utility-scaled renewable energy operations. Our main outreach program consists of a two hour presentation that was presented throughout the state.

### **Extension Presentations**

Houde, S., “The Economics of Wind and Solar Leases in Maryland”, (Dorchester County 03/2017, Chesapeake College 12/2016, Washington County 11/2016, Washington College 06/2016).

Houde, S., “Progress Report on the Evaluation of Watt Watchers”, Fuel Fund of Maryland, Baltimore, (10/2016).

Houde, S., “The Impact of Energy Education on Low Income Urban Households”, Behavior and Climate Change Conference, Baltimore (11/2016).

Member of the academic panel for the Conference on Distributional Consequences of Energy Efficiency and Conservation Programs, Howard Baker Center for Public Policy, the University of Tennessee, Knoxville. (03/2016).

Houde, S., “Old and New Economic Rationales for Appliance Standards” US Department of Energy (01/2016).

Houde, S., “Belt and Suspenders and More: The Incremental Impact of Energy Efficiency Subsidies”. POWER Conference, Energy Institute at Haas, University of California Berkeley. (03/2015).

Houde, S., “Energy and Agriculture.”, 16th Annual Agricultural Outlook and Policy Conference, 2014, Annapolis (12/2014)

Houde, S., “Opportunities for Energy Research at UMD.”, 2014, Maryland Department of Energy, Annapolis (10/2014)

Houde, S., “Energy and Agriculture”, MACAA Annual Summer Meeting, 2014, Ocean City (06/2014)

Houde, S., “Experimental Design for the Evaluation of Behavioral Strategies.”, Fuel Fund of Maryland, 2014, Baltimore City (04/2014)

Houde, S. (with Catherine Wolfram), “Experimental Design for the Evaluation of Behavioral Strategies. Maryland Public Service Commission, 2014, Baltimore City (02/2014)

Houde, S. (with Anna Alberini and Charles Towe), “Overview of Energy Research at UMD.”, Maryland Department of Energy, 2013, Annapolis (06/2014)

Houde, S., “Overview of Research on Energy Star.”, U.S. Department of Energy, Washington DC (05/2013)

Houde, S., “Overview of Research on Energy Star.”, National Center for Environmental Economics, 2013. U.S. EPA, Washington DC (04/2013)

Houde, S., “Energy Subsidies and Freeriders”, 14th Annual Agricultural Outlook and Policy Conference, 2013, Annapolis (03/2013)

## **Media Coverage and Outreach**

Washington Post (01/29/15): Interviewee for the series “Your Brain and Energy” by Chris Mooney.