

NICHOLAS H. JOHNSON

1 Maybeck Place, Elsah, IL 62028
618.979.3744 / nick.johnson@principia.edu

AREAS OF EXPERTISE: *Sustainability, economics, Regional Transmission Organizations, climate change, environmental policy, electricity markets, optimization, network analysis, renewable energy (wind, solar, biofuels)*

EDUCATION

- (2019) **Doctor of Philosophy [Candidate, ABD], Energy & Mineral Engineering**
Focus: Energy Management & Policy
Pennsylvania State University
Dissertation: “Essays on Regional Transmission Organizations and Transmission”
- 2009 **Master of Science, Environmental Policy**
Michigan Technological University
Thesis: “A Cost-Benefit Analysis for a Proposed Wind Turbine at Principia College”
- 2004 **Bachelor of Science, Majors: Physics, Religion; Minor: Mathematics**
Principia College, Illinois
Senior Physics Capstone: “Rare Gas Moderators for the PIASA Beam”
Senior Religion Capstone: “The Christian Science Liturgy”

PUBLICATIONS

- Johnson, NH, S Lenhart, B Stafford, E Wilson and S Blumsack. The evolution of participatory policy-making in regional electric grids. In preparation.
- Johnson, NH, J McCann, E Couzo, C Barrows, S Blumsack, W Vizueté and JJ West. Marginal cost curves for ozone abatement in the electricity sector. In preparation.
- Johnson, NH, K Yoo, B Stafford and S Blumsack. Policy network analysis of voting in the PJM stakeholder process. In preparation.
- Solomon, B and NH Johnson. **2012**. Public policies, economics, public perceptions, and the future of bioenergy crops, p.285-299. *In*: Kole, C, CP Joshi and DR Shonnard (Editors), *Handbook of Bioenergy Crop Plants*. Boca Raton, FL: Taylor & Francis Group.
- Johnson, NH and B Solomon. **2010**. A net-present value analysis for a wind turbine purchase at a small U.S. college. *Energies* 3(5):943-959.
- Johnson, NH. **2010**. Biofuels, p.201-204. *In*: Warf, B (Editor), *Encyclopedia of Geography, Volume I*. Thousand Oaks, CA: Sage Publications.
- Solomon, B and NH Johnson. **2009**. Valuing climate protection through willingness to pay for biomass ethanol in the Upper Midwest. *Ecological Economics* 68(7):2127-2144.
- Solomon, B and NH Johnson. **2008**. Introduction, p.3-27. *In*: Solomon, BD and VA Luzadis (Editors), *Renewable Energy from Forest Resources in the United States*. Oxfordshire, UK: Routledge.

PRESENTATIONS

- Johnson, NH. **2019**. “The Power Grid.” American Association of University Women branch meeting, Minneapolis, MN. 21 January 2019.
- Johnson, NH. **2016**. “Voting networks in Regional Transmission Organizations: The benefits and burdens of participation.” Industry Studies Association Conference: Meeting the Productivity Challenge, Minneapolis, MN. 24-25 May 2016.
- Johnson, NH. **2015**. “Of social structures and infrastructure: Voting networks in Regional Transmission Organizations,” Energy Policy Research Conference, Denver, CO. 10-11 September 2015.

Johnson, NH and S Blumsack. 2014. "Comparing innovation in Regional Transmission Organizations," Energy Policy Research Conference, San Francisco, CA. 4-5 September 2014.

Johnson, NH and S Blumsack. 2014. "Transmission planning in regional transmission organizations," Industry Studies Association Conference: Sustaining Sustainability in the Face of Increasing Risk, Portland, OR. 27-30 May 2014.

TEACHING EXPERIENCE

2017- Instructor, Center for Sustainability, Principia College

2015- Visiting Faculty, Center for Sustainability, Principia College

2016 SUS 280 *Topics in Sustainability: Modern Climate Change* (Fall 2015, Fall 2016)

SUS 250 *Energy & Living Systems* (Fall 2016)

SUS 401 *Independent Sustainability Project* (Spring 2017)

2015- Visiting Faculty, Department of Economics, Principia College

2016 ECON 203 *Principles of Microeconomics* (Fall 2016, Spring 2017)

ECON 271 *Environmental Economics* (Spring 2015, Spring 2016)

2013- Guest Lecturer [energy, climate change, adaptation/mitigation], Center for Sustainability, Principia College

2016 SUS 151 *Introduction to Sustainability* (Spring 2013, Spring 2014, Spring 2015, Spring 2016)

2011- Teaching Assistant, Department of Energy and Mineral Engineering, Pennsylvania State University

2012 EBF 304W *Global Management for the Earth, Energy, and Materials Industries*

EME 460 *Geo-resource Evaluation and Investment Analysis*

2011 Visiting Faculty, Department of Biology & Natural Resources, Principia College

BNR 381 *Advanced Natural Resources Seminar: Energy & the Environment* (Spring 2011)

2008 Instructor, Michigan Technological University, Future Fuels Teacher Institute

2007- Teaching Assistant, Department of Social Sciences, Michigan Technological University

2008 SS 2100 *Introduction to Cultural Anthropology*

SS 2801 *Science Technology and Society: Interactions and Interrelationships*

2007 Lab Instructor, Department of Physics, Principia College

2006- Positron Beam Project Manager, Principia College Physics Department

2007

2005- Technician, Principia College Physics Department

2007

OTHER EMPLOYMENT

2012- Research Assistant (Dr. Seth Blumsack), Pennsylvania State University

2015

2009- Wind Turbine Project Manager, Principia College

2011

2009- Head Rugby Coach, Athletic Department, Principia College

2011

2008- Research Assistant (Dr. Barry Solomon), Michigan Technological University
2009

PROFESSIONAL AFFILIATIONS

American Solar Energy Society
Industry Studies Association
International Association for Energy Economics
International Society of Sustainability Professionals
United States Association for Energy Economics

ACTIVITIES & OTHER WORK EXPERIENCE

2018- Member, Climate Protection and Energy Efficiency Committee, Alton, IL

2015- Assistant Rugby Coach, Principia College
2015 10th Place USA Rugby Men's DII College 7s National Championship
2016 5th Place USA Rugby Men's DII College 7s National Championship
2017 Round of 32 USA Rugby Men's DII College 15s National Championship
2017 10th Place USA Rugby Men's DII College 7s National Championship
2018 5th Place USA Rugby Men's DII College 7s National Championship
2019 TBD Place USA Rugby Men's DII College 7s National Championship

2014- Journal Referee, Power & Energy Society (Journal: IEEE Transactions on Smart Grid)

2014- Member, Advisory Board, Institute for Energy, St. Francis University
2016

2012- Head Rugby Coach, Happy Valley Barbarians, State College, Pennsylvania
2014 2014 Round of 32 USA Rugby Men's DIII Club 15s National Championship

2009- Volunteer Firefighter, Quarry-Elsah-Mississippi Townships Fire Department, Illinois
2011

2006 M.I.T. Vehicle Design Summit, Dean of Undergraduate Education, Office of Experiential Learning

2005- Head Rugby Coach, Principia College
2007

2004- Volunteer Firefighter, Quarry-Elsah-Mississippi Townships Fire Department, Illinois
2007

2004 NASA Summer Institute Program, Atmospheric Sciences Division, Goddard Space Flight Center, Maryland
Independent Project: "Correlation between groundwater fluctuations in the Mississippi River Basin and fluctuations in the Earth's gravitational field"

2000- Member of Principia Solar Car Team
2005

SKILLS AND CERTIFICATIONS

Sustainability: Home Energy Audit License; Leadership in Energy and Environmental Design (LEED, USGBC) *Green Associate* (in process)

Computer Applications: Modeling software and programming: NVivo, SPSS, GAMS, PowerWorld, Mathematica, AutoCAD, Matlab

Professional Skills: Metalworking machinist

Coaching: USA Rugby Level 200 certification

Driving: Valid Illinois Driver's License; Illinois Class-B License

REFERENCES

(Available on request)