

CHIARA LO PRETE

Assistant Professor of Energy Economics
John and Willie Leone Family Department of Energy and Mineral Engineering
The Pennsylvania State University
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ACADEMIC POSITIONS

July 2014-present: Assistant Professor of Energy Economics
John and Willie Leone Family Department of Energy and Mineral Engineering
The Pennsylvania State University

2012 - 2014: Ziff Environmental Fellow
Harvard University

EDUCATION

2012: Ph.D., Geography and Environmental Engineering
The Johns Hopkins University

2009: M.S., Geography and Environmental Engineering
The Johns Hopkins University

2004: M.A., Energy Economics
Scuola Enrico Mattei

2003: B.A., Economics
LUISS University

RESEARCH INTERESTS

- Electricity market design
- Energy economics
- Applied econometrics
- Mathematical programming models of energy markets

WORK EXPERIENCE

2004 - 2007: Energy Analyst
Energy Studies Department, Eni S.p.A., Rome

TEACHING EXPERIENCE

The Pennsylvania State University

- Econometrics II (graduate)
- Introduction to Electricity Markets (undergraduate)
- Introduction to Energy and Environmental Economics (undergraduate)
- Corporate Finance (undergraduate)

The Johns Hopkins University

- Introduction to Applied Econometrics (undergraduate) (Instructor, winter intersession 2012)
- Microeconomics (undergraduate) (Teaching Assistant)

PUBLICATIONS

Journal articles

C. Lo Prete and B.F. Hobbs (2016). “A cooperative game theoretic analysis of incentives for microgrids in regulated electricity markets”. *Applied Energy* 169, pp. 524-541.

C. Lo Prete and B.F. Hobbs (2015). “Market power in power markets: an analysis of residual demand curves in California’s day-ahead energy market in 1998-2000”. *The Energy Journal* 36(2), pp. 191-218.

S. Cano-Andrade, M.R. von Spakovsky, A. Fuentes, C. Lo Prete and L. Mili (2015). “Upper level of a sustainability assessment framework for power system planning”. *Journal of Energy Resources Technology* 137(4), pp. 1-11.

C. Lo Prete and C.S. Norman (2013). “Rockets and feathers in CO₂-power markets? New evidence from the second phase of the EU ETS”. *Energy Economics* 36, pp. 312-321.

C. Lo Prete, B.F. Hobbs, C.S. Norman, S. Cano-Andrade, A. Fuentes, M.R. von Spakovsky and L. Mili (2012). “Sustainability and reliability assessment of microgrids in a regional electricity market”. *Energy* 41, pp. 192-202.

Refereed conference papers

Y. Shan, C. Lo Prete, G. Kesidis and D.J. Miller (2017). “A simulation framework for uneconomic virtual bidding in day-ahead electricity markets”. *Proceedings of the 2017 American Control Conference (ACC)*, Seattle, WA, May-24-26.

C. Lo Prete and B.F. Hobbs (2013). “Modeling the interaction between microgrids and electric utilities: a regulator’s perspective”. *Proceedings of the Fourth IEEE International Conference on Smart Grid Communications*, Vancouver, October 21-24.

S. Cano-Andrade, M.R. von Spakovsky, A. Fuentes, C. Lo Prete, B.F. Hobbs and L. Mili (2012). “Multi-objective optimization for the sustainable-resilient synthesis/design/operation of a power network coupled to distributed power producers via microgrids”. *Proceedings of ASME International Mechanical Engineering Congress and Exposition*, vol. 6, Energy: Sustainable Technologies, Houston, TX, November 9-15.

WORKING PAPERS

C. Lo Prete, N. Guo and U.V. Shanbhag. Virtual bidding and financial transmission rights: an equilibrium model for cross-product manipulation in electricity markets. *Under Review*.

A.N. Kleit, C. Lo Prete, S. Blumsack and N. Guo. Weather or not? Welfare impacts of natural gas pipeline expansion in the Northeastern U.S.

RESEARCH IN PROGRESS

C. Lo Prete, A. Tyagi and C. Hohl. California’s cap-and-trade program and emission leakage in electricity markets: an empirical analysis.

C. Lo Prete. Equilibrium models for the analysis of price manipulation through uneconomic financial positions: theory and empirical implications.

A.Yogarathinam, N.R. Chaudhuri, C. Lo Prete and Seth Blumsack. Towards an economic mechanism for providing inertial support through wind farms.

FUNDED RESEARCH

S. Blumsack, C. Lo Prete, N.R. Chaudhuri. Smart traction systems for weak power grids. Penn State Institutes for Energy and the Environment. Role: Co-PI. Total awarded: \$25,000. (Funded: September 1, 2017 - August 31, 2018).

C. Lo Prete. Complementarity-based equilibrium models for the analysis of market power in electric distribution networks. E. Willard and Ruby S. Miller Faculty Fellowship, College of Earth and Mineral Sciences. Role: PI. Total awarded: \$50,000. (Funded: September 1, 2016 - August 31, 2018).

C. Lo Prete. Understanding the impacts of water scarcity on the evolution of the U.S. power system. Gladys Snyder Grant Program, College of Earth and Mineral Sciences. Role: PI. Total awarded: \$10,000. (Funded: January 20, 2017 - December 31, 2017).

C. Lo Prete, M. Webster and U.V. Shanbhag. Market design and price formation in electric distribution networks deploying energy and demand resources. Penn State Institutes for Energy and the Environment. Role: PI. Total awarded: \$25,000. (Funded: September 1, 2015 - August 31, 2016).

C. Lo Prete. Theory and models of price manipulation through uneconomic bidding in wholesale electricity markets. Wilson Research Initiation Grant, College of Earth and Mineral Sciences. Role: PI. Total awarded: \$10,000. (Funded: July 1, 2015 - June 30, 2016).

A.N. Kleit, S. Blumsack and C. Lo Prete. The economic impacts of expanding the Transco pipeline. Williams Company. Role: Co-PI. Total awarded: \$91,044. (Funded: May 1, 2014 - July 31, 2014).

CONFERENCE AND WORKSHOP PRESENTATIONS

- 2017: 35th USAEE/IAEE North American Conference, Houston, TX
10th International Workshop on Empirical Methods in Energy Economics, Los Angeles, CA
36th Annual Eastern Conference, Annapolis, MD
- 2016: 86th Annual Meetings of the Southern Economic Association, Washington, D.C. (Invited)
34th USAEE/IAEE North American Conference, Tulsa, OK
35th Annual Eastern Conference, Shawnee-on-Delaware, PA
West Virginia University, Department of Economics Seminar (Invited)
- 2015: 33rd USAEE/IAEE North American Conference, Pittsburgh, PA
- 2014: 37th IAEE International Conference, New York, NY
INFORMS Annual Meeting, San Francisco, CA
- 2013: 11th Annual International Industrial Organization Conference, Boston, MA
6th International Workshop on Empirical Methods in Energy Economics, Ottawa
4th IEEE International Conference on Smart Grid Communications, Vancouver
Annual Trans-Atlantic Infraday Conference, Washington D.C.
- 2012: American Economic Association Annual Meeting, Chicago, IL
- 2011: INFORMS Annual Meeting, Charlotte, NC
4th International Workshop on Empirical Methods in Energy Economics, Dallas, TX
- 2010: ECOS 2010 Conference, Lausanne
Annual Trans-Atlantic Infraday Conference, Washington D.C.

SUPERVISION OF GRADUATE DISSERTATIONS

- Nongchao Guo (Ph.D., Department of Energy and Mineral Engineering) (July 2014 - Present).
- Cody Hohl (Ph.D., Department of Energy and Mineral Engineering) (September 2016 - Present).

UNIVERSITY SERVICE

- Doctoral oral examination committee member: S. Cui (Department of Industrial Engineering, December 2017); Y. Shan (Department of Computer Science and Engineering, April 2017); Roger Mina (Department of Energy and Mineral Engineering, April 2017)
- Master's thesis committee member: B. Raman (Department of Energy and Mineral Engineering, December 2015); A. Pruvot (Department of Energy and Mineral Engineering, August 2015)
- Ph.D. candidacy committee member (Department of Energy and Mineral Engineering)
- Faculty advisor in the Energy, Business and Finance undergraduate program (60 students)
- Undergraduate research advisor: Connor Danik (Fall 2017); Weston Bushyeager (Fall 2016 and Spring 2017); Shijie Chen (Fall 2016 and Spring 2017); Alexandra Colaizzi (Fall 2016); Elizabeth Basista (Fall 2016)
- Member of the EME Graduate Programs Committee
- Member of the EMS Diversity Council

PROFESSIONAL SERVICE AND OUTREACH

- Harvard Electricity Policy Group (HEPG)
- Program committee member for the 35th USAEE/IAEE North American Conference
- Referee for The Energy Journal, IEEE Transactions on Power Systems, Energy Economics, Networks and Spatial Economics, Energy Policy, Energy, IIE Transactions, Energy Engineering.

PROFESSIONAL AFFILIATIONS

Member, International Association of Energy Economists (IAEE)
Member, American Economic Association (AEA)