

KELLY NEILL

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RESEARCH INTERESTS

Empirical Industrial Organization, Energy Economics

EDUCATION

PhD, Economics, Rice University	2016 - 2022 (expected)
MA, Economics, University of Western Australia	2014 - 2016
BA, Economics (Honors) and Asian Studies, Australian National University	2003 - 2008

ACADEMIC AWARDS

Pre-Doctoral Fellowship on Energy and Environmental Economics, NBER	2019-2021
Fellowship, Baker Institute for Public Policy, Center for Energy Studies	2016-2019, 2021
Top Downloaded Article, <i>Economic Papers</i>	2017/18
Best Performance in Economic Theory and Econometrics Qualifying Exams, Rice University	2017
Research Grant, Woodside Petroleum	2014-2016
Australian Postgraduate Award	2014-2016

PUBLICATIONS

‘Western Australia’s Domestic Gas Reservation Policy: Modelling the Economic Impact with a CGE Approach’ *The Economic Record*, 2019, 95(308), 90-113. with Peter Hartley, Rod Tyers, and Philip Adams

‘Western Australia’s Domestic Gas Reservation Policy: The Elemental Economics’, *Economic Papers: A Journal of Applied Economics and Policy*, 2017, 36(2), 121-134.

WORKING PAPERS

‘Gas Games with Electricity’ (JMP, [link](#))

If large natural gas firms also generate electricity, is this detrimental for trade and competition? I consider eastern Australia, where three large firms dominate the market for natural gas, and also generate a significant volume of electricity from all fuel types. This is a unique opportunity to study the links between gas and electricity, because both markets are deregulated, and organized as uniform-price auctions. I also make a methodological contribution, by undertaking the first estimation of a supply function equilibrium with asymmetric information. Two potential issues arise. First, when gas firms generate electricity from non-gas fuels, such as coal and renewables, they may have an incentive to raise the gas costs for rival gas-fired generators, because this is passed through to higher electricity prices. I estimate that this has raised the price of gas on average, but by a modest 0.8 percent. Second, when gas firms generate electricity using gas as a fuel, they can use the realized gas price to improve their forecast of their own electricity generation levels. The resulting adverse selection problem leads to steeper gas-market supply schedules, and has reduced gains from trade by 10 percent on average. For the Australian market, adverse selection is more important, and increasing the frequency with which the gas market is cleared could improve market outcomes.

‘Market Power and Vertical Integration in Australia’s Eastern Natural Gas Network’ ([link](#))

Eastern Australia’s domestic market for natural gas is deregulated, and daily auctions are used to facilitate wholesale trade. These auctions occur at four major hubs, connected by a pipeline network. The market is dominated by three large vertically-integrated firms participating as both sellers and buyers. While mark-ups are determined by a firm’s net sales, this is unobserved because data on gas use by each firm’s retail customers is not available. I exploit variations between gas hubs to estimate each firms’ net sales, without relying on estimating marginal costs. I find that the three large firms have only a small exposure to the spot market, and conclude that markups and markdowns are small. Therefore, the market price is likely to be indicative of marginal cost.

WORK IN PROGRESS

‘New markets for real-time electricity reliability services’

‘Household preferences for electricity reliability’

‘Competition and new pipelines in North America’, with Nathalie Hinchey

‘Cost distortions and financial constraints: the case of PDVSA’, with Igor Hernandez

PROFESSIONAL EXPERIENCE

Independent Economics, Canberra (Australia), Economist, October 2011 - April 2014

Adam Smith International, Kabul (Afghanistan), Economic Modeller, October 2013 - February 2014

Australian Volunteers International, Pohnpei (Federated States of Micronesia), Economic Modelling Advisor, April and May 2011

KPMG Econtech, Sydney (Australia), Senior Advisor, January 2009 - September 2011

TEACHING EXPERIENCE

Teaching Assistant, Rice University: Microeconomics of Energy Sector (G), Energy Taxation (G), Economics of Energy and Environment (G), Electricity Industry Economics (G), Public Finance (U)

Tutor, University of Western Australia: Microeconomics: Prices & Markets (U), Economic Policy (U)

ACADEMIC SERVICE

Session Organizer: PhD Day, USAEE/IAEE North American Conference: Denver 2019, Washington DC 2018, Houston 201; PhD Session, IAEE Asian Conference, Perth 2016

Referee Service: *Energy Journal*, *Computational Statistics*, *Economic Papers: A Journal of Applied Economics and Policy*

Departmental Service: Graduate Economics Association (2016-2019), Interview Panel for incoming PhD students

CONFERENCES AND SEMINARS

Conferences:

2021: ASSA Annual Meeting, IAEE Session, Chicago; Australian Conference of Economists; North America Conference, USAEE; Southern Economic Association Annual Conference, Houston

2019: North America Conference, USAEE, Denver; Australian Conference of Economists, Melbourne

2018: North America Conference, USAEE, Washington DC
 2016: Asian Conference, IAEE, Perth
 2015: North America Conference, USAEE, Pittsburgh; Western Australian Regional Resource Economics Conference, Australian Agricultural and Resource Economics Society; Good Oil Conference, Fremantle; Australian Conference of Economists, Brisbane
 2012: National CGE Modelling Workshop, Canberra
 2010: Annual Conference, Australian Agricultural and Resource Economics Society, Adelaide

Seminars:

2019: Australian Competition and Consumer Commission; Monash University
 2016: University of Western Australia
 2015: University of Western Australia; Joint Program on the Science and Policy of Global Change, MIT; Rice University; Australian National University

MEDIA

‘Abundant, but not. Australia’s Gas Policy Problem’, *Forbes*, 2020 July 21.
 ‘Australia PM Looks to Henry Hub Model to Lower East Coast Gas Prices’, *NGI*, 2020 September 29.
 by Ron Nissimov

REFERENCES

Professor Peter Hartley (Chair)	Professor Isabelle Perrigne	Dr Kenneth Medlock
Rice University	Rice University	Rice University
hartley@rice.edu	isabelle.perrigne@rice.edu	medlock@rice.edu
(713) 348 2534		(713) 348-3757

MEMBERSHIPS

Economic Society of Australia, International Association for Energy Economics

LANGUAGES AND PROGRAMMING

English (Native), Japanese (Conversational).
 R, Matlab, Stata, Julia.