

*Curriculum Vitae* - Professor Richard John GREEN

Current Post: Professor of Sustainable Energy Business,  
Head of the Department of Management,  
Imperial College Business School

Male            British Citizen

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Secondary Education:

1978-9         Epsom High School  
1979-84        Winchester College (Scholar) 10 O-Levels, 4 A-Levels

University Education:

1985-8         Clare College, Cambridge                    B.A.(Hons) in Economics  
Part One: First Class  
Part Two: Upper Second  
1988-9         University of Cambridge                    M.Phil in Economics  
Equivalent to First Class  
1991-4         University of Cambridge                    PhD in Economics

**Employment:**

September 2011 – present: Professor of Sustainable Energy Business, Imperial College Business School (chair named for Alan and Sabine Howard from 2011 to 2017)

July 2005 – August 2011: Professor of Energy Economics, University of Birmingham

September 1999 – June 2005: Professor of Economics, University of Hull

October 1989 – Dec 1994: Junior Research Officer, } Department of  
January – September 1995: Research Officer, } Applied Economics,  
October 1995 – Aug 1999: Senior Research Officer, } University of Cambridge

**Subsidiary appointments:**

January – July 2004: Visiting Scholar, Center for Energy and Environmental Policy Research, Massachusetts Institute of Technology

November 1989 – Aug 1999: Fellow of Fitzwilliam College, Cambridge  
Director of Studies in Economics Oct 1992 – Aug 1999

- January – July 1998: Visiting Research Fellow, University of California Energy Institute, Program on Workable Energy Regulation
- July – September 1997: Visiting Fellow, Economic Development Institute, The World Bank
- September 1994 - Sep 1995: Seconded to Office of Electricity Regulation, Directorate of Regulation and Business Affairs (Grade 7 Post). I worked on competition in generation and on wholesale prices.

### Journals

- Utilities Policy*, European Editor, January 1996 – December 2001; Member of the Editorial Board January 2002 – December 2015
- Journal of Industrial Economics*, Member of the Editorial Board, 2000 – April 2006,
- Journal of Regulatory Economics*, Member of the Editorial Board, March 2002 – present
- Energy Economics*, Associate Editor, August 2006 – present
- The Journal of Energy Markets*, Member of the Editorial Board, September 2007 – 2015
- Economics of Energy and Environmental Policy*, Member of the Editorial Board, June 2011 – present
- Energy Policy*, Member of the Editorial Board, December 2014 – December 2017
- The Energy Journal*, Member of the Board of Editors, 2017 – present

### Advisory roles:

- April 2010 – December 2013: Chair, Research Advisory Board of the Energy Economics Institute of the University of Cologne
- May 2004 – March 2014: Member of the Academic Panel, Competition Commission
- May – November 2008: Specialist Advisor, Economic Affairs Committee of the House of Lords (The Economics of Renewable Energy, HL195 of 2007-8)
- December 2003 – March 2004: Specialist Advisor, Trade and Industry Committee of the House of Commons (Resilience of the National Electricity Network, HC 69 of 2003-04)
- February – April 2003: Specialist Advisor, Trade and Industry Committee of the House of Commons (Pre-legislative scrutiny of the draft Electricity (Trading and Transmission) Bill, HC 468 of 2002-03)
- November 2000 – October 2002: Member of the Advisory Economic Committee of the Commission de Regulation de l'électricité (the French electricity regulator).
- Summer 1997 – Summer 2000: Research Affiliate, Centre for Economic Policy Research
- September 1999 – 2012: Associate Consultant, Oxford Economic Research Associates (Oxera)

### Awards and Prizes

- November 2002: Philip Leverhulme Prize (£50,000, The Leverhulme Trust)
- August 2013: Campbell Watkins Prize for the best paper in the Energy Journal, 2012, for Green, R.J. and N. Vasilakos (2012) "Storing Wind for a Rainy Day: What kind of electricity does Denmark export?" *The Energy Journal*, vol. 33, no. 3, pp. 1-22

## Research

My research is mostly on the economics and regulation of the electricity supply industry, in particular generation and transmission.

### Published papers: Books

Damsgaard, N. and R.J.Green (2005) *Den nya elmarknaden: Framgång eller misslyckande?* (The new electricity market: success or failure?) 189 pp. Stockholm, SNS Förlag, ISBN 91-85355-23-2. Published in English as *Regulatory Reform in the Swedish Electricity Industry – Good or Bad?* SNS Occasional Paper No 95, ISSN 1400-2159

Green, R.J. and M. Rodriguez Pardina (1999) *Resetting Price Controls for Privatised Utilities; A Manual for Regulators*, 109 pp. Washington D.C.; Economic Development Institute of the World Bank, ISBN 0-8213-4338-6

### Published papers: Chapters in Books

1. Green, R.J. (forthcoming) "Shifting Supply as Well as Demand: The new economics of electricity with high renewables", in *Handbook of Electricity Economics*, edited by Jean-Michel Glachant, Paul Joskow and Michael Pollitt. Cheltenham, UK: Edward Elgar
2. Webb, R. and R.J. Green (2016) "Impact on Electricity Markets", in the *Smart Grid Handbook*, edited by Chen-Ching Liu, Stephen McArthur and Seung-Jae Lee. Chichester, UK: John Wiley & Sons, Ltd, pp. 1561-1573.
3. Green, R.J. (2015) "Markets, Governments and Renewable Energy" in (ed.) C. Donovan, *Renewable Energy Finance*, pp. 105-129, London, Imperial College Press, ISBN 978-1-78326-776-7 (second edition forthcoming 2019)
4. Staffell, I., I.G. Hamilton and R.J. Green (2015) "The Residential Energy Sector" in (eds.) I. Staffell, D.J.L. Brett, N.P. Brandon and A.D. Hawkes, *Domestic Microgeneration: Renewable and Distributed Energy Technologies, Policies and Economics*, pp. 18-48, London, Routledge, ISBN 978-0-415-81041-8 or 9781317448853
5. Green, R.J., Y. Mulugetta and Z.X. Zhang (2014) "Sustainable Energy Policy" in (eds.) G. Atkinson, S. Dietz, E. Neumayer and M. Agarwala, *Handbook of Sustainable Development*, 2<sup>nd</sup> Edition, pp. 532-550, Cheltenham, Edward Elgar, ISBN 978-1-78254-469-2
6. Green, R.J. (2010) "Energy Regulation in a Low Carbon World" in (eds.) B. Moselle, J. Padilla and R. Schmalensee *Harnessing Renewable Energy* pp. 137-158, Washington DC, RFF Press and Earthscan, ISBN 9781933115900
7. Green, R.J. (2010) "Energy Regulation in Great Britain: Lessons Learned for Collaborative Governance" in (eds.) E. Bohne and C. Karlsson *Repositioning Europe and America for Growth*, pp. 117-144, Münster, LIT Verlag, ISBN 978-3-643-10776-3
8. Green, R.J. (2009) "European Union Regulation and Competition Policy among the Energy Utilities", in Vives, X. (ed) *Competition in the EU: Fifty Years on from the Treaty of Rome*, pp. 284-313, Oxford, Oxford University Press, ISBN 978-0-19-956635-8
9. Green, R.J., A. Lorenzoni, Y. Perez and M.G. Pollitt (2009) "Policy assessment and good practices," in Glachant J. M. and F. Lévêque (eds.), *Electricity Reform in Europe:*

*Towards a Single Energy Market*, pp. 172-204, Cheltenham, Edward Elgar, ISBN 978-1-84720-973-3

10. Green, R.J. (2009) "Climate-change mitigation from renewable energy: its contribution and cost," in D. Helm and C. Hepburn (eds.) *The Economics and Politics of Climate Change*, Oxford, Oxford University Press, ISBN 978-0-19957-328-8
11. Yago, M., J.P. Atkins, K.R. Bhattarai, R.J. Green and S.D. Trotter (2008) "Modelling the economic impact of low-carbon electricity" in M. Grubb, T. Jamasb and M. Pollitt (eds.) *Delivering a Low Carbon Electricity System: Technologies, Economics and Policy*, pp. 394-413, Cambridge, Cambridge University Press
12. Green, R.J. (2007) "Institutional Evolution and Energy Reform in the UK" in *The Conference Volume from the IEA XIV Congress, 2005*, forthcoming
13. Green, R.J. (2006) "Investment and Generation Capacity" in (ed) F. Lévêque *Competitive Electricity Markets and Sustainability*, pp. 21-53, Cheltenham, Edward Elgar ISBN 978 1 84542 921 8
14. Green, R.J. (2005) "Restructuring the Electricity Industry in England and Wales", in Griffin, J.M. and S.L. Puller, *Electricity Deregulation: Choices and Challenges*, pp. 98-144, Chicago, The University of Chicago Press, ISBN 0-226-30856-1
15. Green, R.J. and J.E. Haskel (2004) "Seeking a Premier League Economy: the role of Privatisation", in Blundell, R., D. Card and R.B. Freeman (eds.), *Seeking a Premier Economy*, pp. 63-108, Chicago, The University of Chicago Press, ISBN 0-226-09284-4
16. Green, R.J. (2003) "Cost recovery and the efficient development of the grid" in (ed) F. Lévêque *Transport Pricing of Electricity Networks*, pp 137-53, Dordrecht; Kluwer, ISBN 1-4020-7455-7
17. Green, R.J. and S.D. Trotter (2003) "Electricity Regulation" in (ed) P. Vass *Regulatory Review 2002/2003*, pp 21-53, Bath, Centre for the Study of Regulated Industries, ISBN 1-85790-114-2, reprinted in (ed.) P. Vass *The Development of Energy Regulation*, pp 55-87, Bath, Centre for the Study of Regulated Industries, ISBN 1-85790-117-7
18. Green, R.J. (2001) "Restructuring the Electricity Industry in England and Wales" (in Japanese translation) in (ed) T Yamamoto and H Sato *Deregulation: The regulation revolution in network industries: What we can learn from Europe and the United States*, pp 119-134, Tokyo, Nihon Hyoron Sya, ISBN 4-535-55249-5
19. Green, R.J. (1998) 'The Political Economy of the Pool' in (ed.) Ilic et al, *Restructuring, Power Systems Engineering, and Economics*, pp 131-166, Norwell, MA; Kluwer, ISBN 0-7923-8163-7
20. Green, R.J. (1998) 'Electricity Deregulation in England and Wales' in (ed) G. Zaccour, *Deregulation of Electric Utilities*, pp 179-202, Norwell, MA; Kluwer, ISBN 0-7923-8134-3
21. Green, R.J. and D.M. Newbery (1997) 'Liberalisation of British Public Utilities' in (ed) K.P. Hagen, *Deregulering og Konkurransen, SNF Årbok 1997*, pp 135-172, Bergen-Sandviken, Fagbokforlaget, ISBN 82-7674-329-3
22. Green, R.J. and D.M. Newbery (1997) 'Competition in the English Electricity Industry' (in Finnish translation) in (ed) E. Lehto, *Monopoli vai Kilpailu?*, pp 124-161, Helsinki, Atena Kustannus, ISSN 0785-8388

23. Green, R.J. (1996) 'The Electricity Industry in England and Wales' (in Finnish Translation) in (ed) O. Rännäri *Muutoksen suunta: Energialiiketoimintaa 2000-luvulla*, Helsinki, Helsinkim Energia, ISBN 951-772-812-3
24. Newbery, D.M. and R.J. Green (1996) 'Regulation, Public Ownership and Privatisation of the English Electricity Industry' Chapter 2 of (ed) R.J. Gilbert and E.P. Kahn *International Comparisons of Electricity Regulation*, pp 25-81, Cambridge, Cambridge University Press, ISBN 0-521-49590-3
25. Green, R.J. (1995) 'Competition in the British Electricity Industry' Chapter 4 of (ed) J Fitz Gerald and J Johnston *Energy Utilities and Competitiveness* Policy Research Paper 24, Dublin, Economic and Social Research Institute, ISBN 0 7070 0159 5
26. Green, R.J. (1995) 'The English Electricity Industry in the 1990s' in (ed) O.J.Olsen *Competition in the Electricity Supply Industry: Experience from Europe and the United States*, Copenhagen, DJØF Publishing Copenhagen, ISBN 87-574-7321-8
27. Green, R.J. (1994) 'Britain's Unregulated Electricity Pool' in (ed) M. Einhorn *From Regulation to Competition: New Frontiers in Electricity Markets*, Chapter 4, pp 73-96, Norwell, Mass: Kluwer, ISBN 0-7923-9456-9
28. Green, R.J., and I. Vogelsang (1994) 'British Airways: A Turn-Around Anticipating Privatisation' in (ed) Bishop, Kay, and Mayer *Privatisation and Economic Performance* pp 89-111, Oxford, Oxford University Press, ISBN 0-19-877344-7
29. Vogelsang, I. and R.J.Green (1994) 'National Freight', Chapter 6 of A. Galal, L. Jones, P. Tandon and I. Vogelsang *The Welfare Consequences of Selling Public Enterprises* pp 143-172, New York, OUP and World Bank Publications, ISBN 0-19-520995-8
30. Vogelsang, I. and R.J. Green with M. Abdala (1994) 'British Airways', Chapter 5 of A. Galal, L. Jones, P. Tandon and I. Vogelsang *The Welfare Consequences of Selling Public Enterprises* pp 107-141, New York, OUP and World Bank Publications, ISBN 0-19-520995-8

#### Published Papers: Refereed Journals

1. Geske, J., R.J. Green and I. Staffell (2020) "Elecxit: The cost of bilaterally uncoupling British-EU electricity trade", *Energy Economics*, vol. 85, <https://doi.org/10.1016/j.eneco.2019.104599>
2. Geske, J. and R.J. Green (2020) "Optimal Storage, Investment and Management under Uncertainty: It is costly to avoid outages!", *Energy Journal*, vol. 41, no. 2, pp.1-27, <https://doi.org/10.5547/01956574.41.2.jges>
3. Ward, K., R.J. Green and I. Staffell (2019) "Getting prices right in structural electricity market models", *Energy Policy*, vol. 129, pp.1190-1206, <https://doi.org/10.1016/j.enpol.2019.01.077>
4. Vorushylo, I., P. Keatley, N. Shah, R.J. Green and N. Hewitt (2018) "How heat pumps and thermal energy storage can be used to manage wind power: A study of Ireland", *Energy*, vol. 157, pp. 539-549, <https://doi.org/10.1016/j.energy.2018.03.001>
5. Green, R.J. and I Staffell (2017) "'Prosumage' and the British Electricity Market", *Economics of Energy and Environmental Policy*, vol. 6, no. 1, pp 33-49, <https://doi.org/10.5547/2160-5890.6.1.rgre>

6. Green, R.J. and I. Staffell (2016) "Electricity in Europe: Exiting Fossil Fuels?" *Oxford Review of Economic Policy*, vol. 32, no. 2, pp 282-303,  
<http://dx.doi.org/10.1093/oxrep/grw003>, <http://hdl.handle.net/10044/1/29487>
7. Green, R.J., D. Pudjianto, I. Staffell and G. Strbac (2016) "Market Design for Long-Distance Trade in Renewable Electricity" *The Energy Journal*, vol. 37, special issue on market design with high shares of renewable energy, pp. 5-22,  
<http://hdl.handle.net/10044/1/29615>,  
<http://www.iaee.org/en/publications/ejarticle.aspx?id=2727>,  
<http://dx.doi.org/10.5547/01956574.37.SI2.agia>
8. Staffell, I and R.J. Green (2016) "Is there merit in the Merit Order Stack?" *IEEE Transactions on Power Systems*, Vol. 31, No. 1, pp. 43-53,  
<http://dx.doi.org/10.1109/TPWRS.2015.2407613>
9. Green, R.J., I. Staffell and N. Vasilakos (2014) "Divide and conquer? k-means clustering of demand data allows rapid and accurate simulations of the British electricity system" *IEEE Transactions on Engineering Management*, vol. 61, no. 2, pp. 251-260, <http://dx.doi.org/10.1109/TEM.2013.2284386>
10. Staffell, I. and R.J. Green (2014) "How does wind farm performance decline with age?" *Renewable Energy*, vol. 66, June, pp. 775-786,  
<http://dx.doi.org/10.1016/j.renene.2013.10.041>
11. Castagneto-Gissey, G. and R.J. Green (2014) "Exchange Rates, Oil Prices & Electricity Spot Prices: Empirical Insights from EU markets", *Journal of Energy Markets*, vol. 7, no. 2, pp. 3-33
12. Strbac, G., M. Pollitt, C.V. Konstantinidis, I. Konstantelos, R. Moreno, D.M. Newbery and R.J. Green (2014) "Electricity transmission arrangements in Great Britain: Time for change?" *Energy Policy*, vol. 73, October, pp. 298-311,  
<http://dx.doi.org/10.1016/j.enpol.2014.06.014>
13. Staffell, I. and R.J. Green (2013) "The Cost of Domestic Fuel Cell Micro-CHP Systems" *International Journal of Hydrogen Energy*, Vol. 38, Iss. 2, pp. 1088-1102,  
<http://dx.doi.org/10.1016/j.ijhydene.2012.10.090> also Discussion Paper 2012/8,  
<https://spiral.imperial.ac.uk:8443/bitstream/10044/1/9844/6/Green%202012-08.pdf>
14. Green, R.J. and N. Vasilakos (2012) "Storing Wind for a Rainy Day: What kind of electricity does Denmark export?" *The Energy Journal*, vol. 33, no. 3, pp. 1-22  
<http://dx.doi.org/10.5547/01956574.33.3.1> received the Campbell Watkins Prize for the best paper in the Energy Journal, 2012
15. Green, R.J. and A. Yatchew (2012) "Support Schemes for Renewable Energy: An Economic Analysis" *Economics of Energy and Environmental Policy*, vol. 1, no. 2, pp. 83-98 <http://dx.doi.org/10.5547/2160-5890.1.2.6>
16. Green, R.J. and N. Vasilakos (2011) "The Economics of Offshore Wind" *Energy Policy*, vol. 39, iss. 2, pp 496-502 <http://dx.doi.org/10.1016/j.jup.2010.10.011>
17. Hu, H. and R.J. Green (2011) "Making Markets for Hydrogen Vehicles: Lessons from LPG" *International Journal of Hydrogen Energy*, vol. 36, no. 11, pp. 6399-6406  
<http://dx.doi.org/10.1016/j.ijhydene.2011.03.046>

18. Green, R.J., H.Hu and N. Vasilakos (2011) "Turning the Wind into Hydrogen: The long-run impact on electricity prices and generating capacity" *Energy Policy*, vol. 39, no. 7, pp. 3992-8 <http://dx.doi.org/10.1016/j.enpol.2010.11.007>
19. Green, R.J. and N. Vasilakos (2010) "Market Behaviour with Large Amounts of Intermittent Generation" *Energy Policy*, vol. 38, no. 7, pp. 3211-3220  
<http://dx.doi.org/10.1016/j.enpol.2009.07.038>
20. Green, R.J. and C. Le Coq (2010) "The Length of Contracts and Collusion" *International Journal of Industrial Organization*, vol. 28, iss.1, pp 21-29  
<http://dx.doi.org/10.1016/j.ijindorg.2009.05.002>
21. Green, R.J. (2010) "Are the British Electricity Trading and Transmission Arrangements Future-proof?" *Utilities Policy*, vol. 18, no. 4, pp 186-194  
<http://dx.doi.org/10.1016/j.iup.2010.06.002>
22. Staffell, I. and R.J. Green (2009) "Estimating Future Prices for Stationary Fuel Cells with Empirically Derived Experience Curves," *International Journal of Hydrogen Energy*, vol. 34, no. 14, pp. 5617-5628 <http://dx.doi.org/10.1016/j.ijhydene.2009.05.075>
23. Green, R.J. (2008) "Electricity Wholesale Markets: Designs Now and in a Low-carbon Future," *Energy Journal*, vol. 29, Special Issue, pp. 95-124  
<http://dx.doi.org/10.5547/ISSN0195-6574-EJ-Vol29-NoSI2-6>
24. Green, R.J. (2008) "Carbon Tax or Carbon Permits: The Impact on Generators' Risks," *Energy Journal*, vol. 29, no. 3, pp. 67-89 <http://dx.doi.org/10.5547/ISSN0195-6574-EJ-Vol29-No3-4>
25. Loveday, D.L., T. Bhamra, T. Tang, V.J.A. Haines, M.J. Holmes and R.J. Green (2008) "The energy and monetary implications of the '24/7' 'always on' society" *Energy Policy* vol. 36, no. 12, pp. 4639-4645, <http://dx.doi.org/10.1016/j.enpol.2008.09.067>
26. Staffell, I., R.J. Green and K. Kendall (2008) "Cost Targets for Domestic Fuel Cell CHP" *Journal of Power Sources* vol. 181, no. 2, pp. 339-349  
<http://dx.doi.org/10.1016/j.jpowsour.2007.11.068>
27. Green, R.J. (2007) "Nodal Pricing of Electricity: How much does it cost to get it wrong?" *Journal of Regulatory Economics*, vol. 31, no.2, pp. 125-149  
<http://dx.doi.org/10.1007/s11149-006-9019-3>
28. Ault, G.W., I.M. Elders and R.J. Green (2007) "Transmission Use of System Charges under Future GB Power System Scenarios," *IEEE Transactions on Power Systems*, vol. 22, no. 4, pp. 1523-1531 <http://dx.doi.org/10.1109/TPWRS.2007.907128>
29. Al-Sunaidy, A. and R.J. Green (2006) "Electricity deregulation in OECD countries" *Energy – The International Journal*, vol. 26, nos. 6-7, pp. 769-87
30. Green, R.J. (2006) "Market power mitigation in the UK power market" *Utilities Policy*, vol. 14, no. 2, pp. 76-89, <http://dx.doi.org/10.1016/j.iup.2005.09.001>
31. Green, R.J. (2006) "Electricity liberalisation in Europe – how competitive will it be?" *Energy Policy*, vol. 34, no. 16, pp. 2532-2541, <http://dx.doi.org/10.1016/j.enpol.2004.08.016>
32. Barquin, J., L. Bergman, C. Crampes, J-M Glachant, R.J. Green, C. von Hirschhausen, F. Lévêque and S. Stoff (2005) "The Acquisition of Endesa by Gas Natural: An

- Antitrust Perspective”, *Journal of Network Industries*, vol. 6, no. 4, pp 213-25, ISBN 1389-9597
33. Green, R.J. (2005) “Electricity and Markets” *Oxford Review of Economic Policy*, vol. 21, no.1, pp. 67-87 <http://dx.doi.org/10.1093/oxrep/gri004>; reprinted (with changes) in (ed) D. Helm (2007) *The New Energy Paradigm*, Oxford, Oxford University Press, ISBN 978-0-19-922970-3
  34. Twomey, P. R.J. Green, K. Neuhoff and D.M. Newbery (2005) “A Review of the Monitoring of Market Power: The Possible Roles of TSOs in Monitoring for Market Power Issues in Congested Transmission Systems,” *Journal of Energy Literature*, vol. XI no. 2, pp 3-54  
  
[http://web.mit.edu/ceepr/www/publications/reprints/Reprint\\_209\\_WC.pdf](http://web.mit.edu/ceepr/www/publications/reprints/Reprint_209_WC.pdf)
  35. Kattuman, P. A., R.J. Green and J.W. Bialek (2004) “Allocating electricity transmission costs through tracing: a game-theoretic rationale”, *Operations Research Letters*, vol. 32, no. 2, pp 114 – 120
  36. Green, R.J. (2003) “Failing electricity markets: should we shoot the Pools?” *Utilities Policy*, Vol. 11 No 3, pp 155-167
  37. Blumstein, C. and R.J. Green (2002) “Editors’ Introduction” *Journal of Industry Competition and Trade*, Special Issue on the California Energy Crisis, Vol. 2, Nos. 1-2, pp 5-8
  38. Blumstein, C., L. Friedman and R.J. Green (2002) “The History of Electricity Restructuring in California” *Journal of Industry Competition and Trade*, Vol. 2, Nos. 1-2, pp 9-38 ISSN 1566-1679
  39. Green, R.J. (2001) “Markets for Electricity in Europe”, *Oxford Review of Economic Policy*, vol. 17 no 3, pp 329-345 ISSN 0266-903X
  40. Green, R.J. (2000) “Competition in Generation: The Economic Foundations” *Proceedings of the IEEE* Vol. 88, No 2, pp 128-139
  41. Green, R.J. (1999) “The Electricity Contract Market in England and Wales” *Journal of Industrial Economics*, Vol. XLVII, No 1, pp.107-124
  42. Green, R.J. (1999) “Draining the Pool: The Reform of Electricity Trading in England and Wales”, *Energy Policy* Vol. 27 No 9, pp. 515-525
  43. Green, R.J. and T. McDaniel (1998) “Competition in Electricity Supply: Will “1998” be Worth It?” *Fiscal Studies*, Vol. 19, No 3, pp. 273-293, <http://dx.doi.org/10.1111/j.1475-5890.1998.tb00288.x>
  44. Green, R.J. (1997) ‘Electricity Transmission Pricing - An International Comparison’ *Utilities Policy*, Vol. 6, No 3, pp 177-184 [doi:10.1016/S0957-1787\(97\)00022-2](https://doi.org/10.1016/S0957-1787(97)00022-2)
  45. Green, R.J. (1997) ‘Electricity Transmission Pricing in England and Wales’ *Utilities Policy*, Vol. 6, No 3, pp 185-193 [doi:10.1016/S0957-1787\(97\)00018-0](https://doi.org/10.1016/S0957-1787(97)00018-0)
  46. Green, R.J. and D.M. Newbery (1997) ‘Competition in the Electricity Industry in England and Wales’ *Oxford Review of Economic Policy* Vol. 13 No 1, pp 27-46, reprinted (with minor changes) in (ed) D. Helm and T. Jenkinson, (1998) *Competition in Regulated Industries*, pp 77-107, Oxford, Oxford University Press ISBN 0-19-829253-8 and 0-19-829525-X



47. Green, R.J. (1996) 'Increasing Competition in the British Electricity Spot Market', *Journal of Industrial Economics*, Vol. XLIV, No 2, pp 205-16
48. Green, R.J. (1996) 'The British Electricity Spot Market' *Pacific and Asian Journal of Energy*, Vol. 6 No 1, pp 39-52
49. Green, R.J. (1995) 'The Cost of Nuclear Power Compared with Alternatives to the Magnox Programme' *Oxford Economic Papers*, Vol. 47. pp 513-24
50. Green, R.J. (1995) 'Lessons from Electricity Privatisation in the UK' *Pacific and Asian Journal of Energy*, Vol. 5, No 2 pp 235-47
51. Green, R.J. and C. Waddams Price (1995) 'Liberalisation and Divestiture in the UK Energy Sector' *Fiscal Studies*, Vol. 16 No 1, pp 75-89 <http://dx.doi.org/10.1111/j.1475-5890.1995.tb00218.x>
52. Green, R.J. and D.M. Newbery (1993) 'The Regulation of the Gas Industry: Lessons from Electricity' *Fiscal Studies*, vol. 14 no 2 pp 37-52 <http://dx.doi.org/10.1111/j.1475-5890.1993.tb00478.x>
53. Green, R.J, and D.M. Newbery (1992) 'Competition in the British Electricity Spot Market' *Journal of Political Economy* vol. 100 no 5, pp 929-53 <http://dx.doi.org/10.1086/261846>
54. Green, R.J. (1991) 'Reshaping the CEBG: Electricity Privatisation in the UK' *Utilities Policy* Vol. 1 No 3, April, pp 245-54

#### Published Papers: Other Journals

1. Geske, J. and R.J. Green (2016) "Optimal Storage Management under Uncertainty", *IAEE Energy Forum*, Bergen Special Issue 2016, pp. 49-50 <http://www.iaee.org/en/publications/newsletterdl.aspx?id=360>
2. Green, R.J. and G. Strbac (2016) "Reforming Europe's Electricity Markets for Renewables", *Oxford Energy Forum*, issue 104, pp.17-19, <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2016/03/OEF-104.pdf>
3. Green, R.J. and I. Staffell (2015) "The Long-run Impact of Energy Storage on Electricity Prices and Generating Capacity", *IAEE Energy Forum*, Antalya Special Issue 2015, pp. 29-30 <http://www.iaee.org/en/publications/newsletterdl.aspx?id=286>
4. Green, R.J. and I. Staffell (2014) "How much does ageing in wind farms matter?", *Energy World*, no. 426, pp. 24-5
5. Green, R.J. (2012) "The Challenge of Absorbing Wind Power" *World Energy Monitor*, vol. 4, no. 6, p.7
6. Green, R.J. (2012) "How Denmark Manages its Wind Power" *IAEE Energy Forum*, Vol. 21, Third Quarter, pp. 9-11
7. Green, R.J. (2012) "Welfare Analysis of Offshore Wind by Julian Silk: A Comment" *IAEE Energy Forum*, Vol. 21, Third Quarter, pp. 27-9
8. Green, R.J., B.J. Hobbs, S. Oren and A. Siddiqui (2010) "Policymaking benefits and limitations from using financial methods and modelling in electricity markets"

9. Green, R.J. (2009) "Market Design for a low-carbon future" *Fingrid Corporate Magazine*, no 1/2009, pp. 18-19; online in *Oil, Gas and Energy Law Intelligence*, vol. 7 no. 4, article 29
10. Green, R.J. (2009) "The Economics of Renewable Energy" *Harvard College Economics Review*, vol. III, issue 2, pp.16-19
11. Barquin, J., L. Bergman, C. Crampes, J-M Glachant, R.J. Green, C. von Hirschhausen, F. L  v  que and S. Stoft (2006) "The Acquisition of Endesa by Gas Natural: Why the Antitrust Authorities Are Right to Be Cautious", *The Electricity Journal*, vol. 19, no. 2, pp 62-68
12. Green, R.J. (2002) "Redundant Rights? Transmission Access under NETA" *The Utilities Journal*, April 2002, pp.36-37
13. Green, R.J. (2000) "Trading Electricity Between Regions" *The Utilities Journal*, October 2000, pp.40-41
14. Green, R.J. (1999) "What Buyers Might Get" *The Utilities Journal*, July 1999, pp.30-31
15. Green, R.J. (1999) "Checks and Balances in Utility Regulation - The U.K. Experience" *Public Policy for the Private Sector* (World Bank) No 17, pp 29-35 (also as Viewpoint note 185)
16. Green, R.J. (1998) "Reform of Electricity Trading: A Cost-Benefit Analysis" *The Utilities Journal*, November 1998, pp.40-41
17. Green, R.J. (1997) 'Rail Pricing in Britain', (in Japanese translation) *Transportation and Economy* August, pp 58-65
18. Green, R.J. (1997) 'Utility Regulation - A Critical Path for Revising Price Controls' *Public Policy for the Private Sector* (World Bank) No 12, pp 21-4 (also as Viewpoint note 133)
19. Green, R.J. (1997) 'Has Price Cap Regulation of U.K. Utilities Been a Success?' *Public Policy for the Private Sector* (World Bank) No 12, pp 25-8 (also as Viewpoint note 132)
20. Green, R.J. (1996) 'Reform of the Electricity Supply Industry in the UK', *Journal of Energy Literature*, Vol. II No 1, pp 3 - 24
21. Green, R.J. (1994) 'Electricity Privatisation, Coal and Gas' *The Economic Review*, vol. 11 no 3, February, pp 24-8
22. Green, R.J. (1994) 'Price Cap Regulation in the United Kingdom' (in Japanese translation) in *Kosei Torihiki (Fair Trade)* published by the Fair Trade Commission of Japan; no 521 (March 1994) pp 57-62 and no 522 (April 1994) pp 44-8
23. Green, R.J. and C.M. Price (1994) 'Privatisation, Restructuring and the UK Energy Industries' (in Italian translation) *Energia* Vol. XV No 1, March 1994 pp 26-35
24. Green, R.J. (1991) 'Electricity Supply: Reorganisation and Privatisation' *The Economic Review* Vol. 8 No 4, March, pp 33-6

### Published Papers: Official Reports

1. Green, R.J. (2016) *Evidence on Energy Policy*, Memorandum and Supplementary Memorandum, submitted to the Economic Affairs Committee of the House of Lords, <http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/economic-affairs-committee/the-economics-of-uk-energy-policy/written/39619.pdf> and <http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/economic-affairs-committee/the-economics-of-uk-energy-policy/written/45033.pdf>
2. Strbac, G., I. Konstantelos, M. Pollitt and R.J. Green (2016) *Delivering Future-Proof Energy Infrastructure* Report to the National Infrastructure Commission, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/505221/Future-proof\\_energy\\_infrastructure\\_Imp\\_Cam\\_Feb\\_2016\\_NIC.PDF](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/505221/Future-proof_energy_infrastructure_Imp_Cam_Feb_2016_NIC.PDF)
3. Green, R.J. and I. Staffell (2015) "Evidence on Wind Farm Performance Decline in the UK" in House of Lords (2015) *The Resilience of the Electricity System: Oral and Written evidence*, HL121 of 2014-15, pp. 256-259 <http://www.parliament.uk/documents/lords-committees/science-technology/Resilienceofelectricityinfrastructure/Resilienceofelectricityinfrastructureevidence.pdf> or <http://hdl.handle.net/10044/1/21174>
4. Green, R.J. (2015) "Supplementary Written Evidence" in House of Lords (2015) *The Resilience of the Electricity System: Oral and Written evidence*, HL121 of 2014-15, pp. 251-255 <http://www.parliament.uk/documents/lords-committees/science-technology/Resilienceofelectricityinfrastructure/Resilienceofelectricityinfrastructureevidence.pdf>
5. Royal Academy of Engineering (2014) *Wind Energy: Implications of Large-Scale Deployment on the GB Energy System*, (working group member), London, Royal Academy of Engineering, <https://www.raeng.org.uk/publications/reports/wind-energy-implications-of-large-scale-deployment>
6. Green, R.J. and X-P Zhang (2013) *The Future Role of Energy in Manufacturing*, Future of Manufacturing Project, Evidence Paper 11, Foresight, Government Office for Science, <https://www.gov.uk/government/publications/future-manufacturing-role-of-energy>
7. Green, R.J. and I. Staffell (2013) *The Impact of Government Interventions on Investment in the GB Electricity Market*, Report to the European Commission, DG Comp., [http://ec.europa.eu/competition/state\\_aid/studies\\_reports/green\\_staffell\\_en.pdf](http://ec.europa.eu/competition/state_aid/studies_reports/green_staffell_en.pdf)
8. Strbac, G., M. Pollitt, C. Vasilakos Konstantinidis, I. Konstantelos, R. Moreno, D. Newbery and R.J. Green (2013) *Integrated Transmission Planning and Regulation Project: Review of System Planning and Delivery*, London, Office of Gas and Electricity Markets
9. Gross, R, P. Heptonstall, R.J. Green and I. Staffell (2012) *Supplementary evidence to the Energy and Climate Change Select Committee on the economics of wind energy*, published online as ev57a to HC 517 of 2012-13, <http://www.publications.parliament.uk/pa/cm201213/cmselect/cmenergy/writev/517/m57a.pdf>
10. Bell, K., R.J.Green, I. Kockar, G. Ault and J. McDonald (2011) *Project TransmiT: Academic Review of Charging Arrangements* London, Office of Gas and Electricity

Markets <https://www.ofgem.gov.uk/publications-and-updates/academic-review-transmission-charging-arrangements-universities-strathclyde-and-birmingham>

11. Loveday, D.L., T. Bhamra, T. Tang, V.J.A. Haines, M.J. Holmes and R.J. Green (2008) *State-of-Science Review: The energy and monetary implications of the '24/7' 'always on' society* Report for the Office of Science and Innovation Foresight Programme: Sustainable Energy Management and the Built Environment
12. Green, R.J. (2007) *Review of modelling work: NEM Rule Changes and the Snowy Region*, Report for the Australian Energy Markets Commission
13. Green, R.J. (2004) "Price Controls for Electricity Networks" Annex to Trade and Industry Committee, *Resilience of the National Electricity Network*, HC 69 of 2003-04, London, The Stationery Office
14. Evans, J.E. and R.J. Green (2003) "Memorandum on wholesale electricity prices" pp Ev 155-156 in Trade and Industry Committee, *The British Electricity Trading and Transmission Arrangements*, HC 468 of 2002-03, London, The Stationery Office
15. Green, R.J. (2002) "Memorandum on the Research Assessment Exercise" pp Ev 59-60 in Science and Technology Committee, *The Research Assessment Exercise*, HC 507 of 2001-2, London, The Stationery Office
16. Green, R.J. and T. McDaniel (1998) "Memorandum on Competition in Electricity Supply" pp 66-7 in Select Committee on Trade and Industry *Developments in the Liberalisation of the Domestic Electricity Market*, pp 354-66, HC 871 of 1997-98, London, The Stationery Office
17. Green, R.J. and D.M. Newbery (1993) "Evidence on the Regulation of the Gas Industry" pp 320-6 in Monopolies and Mergers Commission *Gas and British Gas plc: Volume 3 of reports under the Gas and Fair Trading Acts*, Cm 2317, London, HMSO
18. Green, R.J. and D.M. Newbery (1993) "The Cost of Increasing British Coal's Contract Sales" Memoranda of Evidence to the Select Committee on Trade and Industry *British Energy Policy and the Market for Coal*, pp 354-66, HC 326 II of 1992/3, London, HMSO

#### Published Papers: Book Reviews

1. Green, R.J. (2014) "Regulation of the Power Sector", edited by Ignacio Pérez-Arriaga, *Economics of Energy and Environmental Policy*, vol. 3, no. 2, pp. 169-171
2. Green, R.J. (2012) "The Future of Electricity Demand: Customers, Citizens and Loads" edited by Tooraj Jamasb and Michael Pollitt, *Energy Journal*, vol. 33, no. 2, pp.219-222
3. Green, R.J. (2009) "The German Path to Natural Gas Liberalisation: Is it a Special Case?" by Heiko Lohmann, *Energy Journal*, vol. 30, no. 2, pp. 207-209
4. Blumstein, C. and R.J. Green (2008) "Electricity and Energy Policy in Britain, France and the United States since 1945" by Martin Chick, *Journal of Economic Literature*, vol. 46, no. 4, pp. 1024-1026
5. Green, R.J. (2007) "Gas Prices in the UK: Markets and Insecurity of Supply" by Philip Wright, *Energy Journal*, vol. 28, no.3, pp 187-189

Working Papers (not subsequently published)

- Green, R.J. and I. Staffell (2020) *The Contribution of Taxes, Subsidies and Regulations to British Electricity Decarbonisation*, SSRN working paper 3744239, <https://ssrn.com/abstract=3744239>
- Halttunen, K., I. Staffell, R. Slade, R.J. Green, Y.-M. Saint-Drenan and M.Jansen (2020) *Global Assessment of the Merit-Order Effect and Revenue Cannibalisation for Variable Renewable Energy*. SSRN working paper 3741232, <https://ssrn.com/abstract=3741232> or <http://dx.doi.org/10.2139/ssrn.3741232>
- Green, R.J. and T-O Léautier (2015) *Do Costs Fall Faster than Revenues? Dynamics of Renewables Energy into Electricity Markets*, TSE Working Paper, n. 15-591, [http://www.tse-fr.eu/sites/default/files/TSE/documents/doc/wp/2015/wp\\_tse\\_591.pdf](http://www.tse-fr.eu/sites/default/files/TSE/documents/doc/wp/2015/wp_tse_591.pdf)
- Green, R. and I. Staffell (2014) *How Large Should a Portfolio of Wind Farms Be?* IAEE European Conference 2012, Venice, <http://www.iaeeu2012.it/pdf/Greenppt.pdf>; revision requested, *Energy Journal*
- Green, R. and I. Staffell (2013) *Gold on Them Thar Hills? Estimating wind farm rents in the UK's Electricity Market Reform*, Imperial College Business School working paper <http://spiral.imperial.ac.uk/bitstream/10044/1/11641/2/Green%20%26%20Staffell,%202013%20-%20Wind%20Farm%20Rents.pdf>
- Green, R.J. and N. Vasilakos (2011) *The Long-term impact of wind power on electricity prices and generating capacity* CCP Working Paper 11-4, Centre for Competition Policy, University of East Anglia [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1851311](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1851311)
- Fragaki, A., R.J. Green and D. Toke (2007) *Incentives for CHP Development in the UK: Analysis and evaluation of their relative importance*, mimeo, University of Birmingham
- Evans, J.E. and R.J. Green (2005) *Why Did British Electricity Prices Fall After 1998?* Department of Economics Working Paper 05-13, University of Birmingham; also MIT Center for Energy and Environmental Policy Research WP 2003-007 (Earlier versions were CMI Working Paper EP26, University of Cambridge, and University of Hull Business School Research Memorandum 35)
- Green, R.J. (2004) *Did English Generators Play Cournot? Capacity Withholding in the Electricity Pool*, CMI Working Paper EP41, University of Cambridge
- Green, R.J. (2004) *Retail Competition and Electricity Contracts*, CMI Working Paper EP33, University of Cambridge
- Green, R.J. (2000) *Regulators and The Poor: Lessons from the United Kingdom*, World Bank Policy Research Working Paper 2386
- Green, R.J. (2000) *Can Competition Replace Regulation for Small Utility Customers?* CEPR Discussion Paper 2406, Centre for Economic Policy Research
- Green, R.J. and T.M. McDaniel (1999) *Expected Revenues in the Balancing Market: Equivalence between pay-as-bid and SMP* DAE working paper 0002, University of Cambridge

Green, R.J. (1999) *Rebidding in the Balancing Mechanism: An economic analysis* DAE working paper 0002, University of Cambridge

Green, R.J. (1998) *England and Wales: A Competitive Electricity Market?* Power Working Paper PWP-060, University of California Energy Institute

Green, R.J. and C.M. Price (1993) *Restructuring and Privatisation: Optimal Timing*, University of Leicester Discussion Paper in Economics, No 93/15

PhD Thesis (approved November 1994) included essays on pricing in the pool and on the contract market, as well as the papers *Do Electricity Transmission Networks Need Optimal Spot Prices?*, *Britain's Unregulated Electricity Pool* and *The Cost of Nuclear Power*.

### **PhD Students supervised**

Imperial College London

Dr Giorgio Castagneto-Gissey, working on models of energy prices; (first supervisor, with Dr E Biffis), awarded 2014 (post-doc at UCL)

Dr Vitali Avgayan, working on generation investment under uncertainty (with Prof B. Rustem and Dr P. Pappas of Computer Science) (PhD awarded 2017) (Researcher, University of Edinburgh)

Mr Marios Vlachodimitropoulos, working on power system economics and electricity transmission (with Prof G. Strbac of Electrical and Electronic Engineering) (transferred to M.Phil for personal reasons; awarded 2017) (working for National Grid plc)

Mr Robert Webb, working on business models for energy storage (first supervisor, with Prof W. Distaso) (withdrew for personal reasons)

Mr David Kirkpatrick, working on solar PV physics and economic issues (second supervisor, with Drs N. Ekins-Daukes and H. Brindley of the Department of Physics) (withdrew for personal reasons)

Dr Ajay Gambhir, working on technological learning for low-carbon energy (second supervisor, with Dr R. Gross of the Centre for Environmental Policy) (PhD awarded 2017) (Researcher, Imperial College London)

Mr Saeed Alokkeh, working on electricity in Qatar (first supervisor) (Viva passed 2020)

Ms Liliana Nowakowska, working on electricity pricing (first supervisor)

University of Birmingham

Dr Iain Staffell, working on hydrogen fuel cells (with Prof K Kendall of Chemical Engineering and Prof L Macaskie of Biosciences) (PhD awarded 2010) (Senior Lecturer, Imperial College London)

Dr Aygul Ozbafli, working on consumer valuations of electricity reliability in Cyprus (second supervisor, with Dr D Maddison) (PhD awarded 2012)

Dr Andrew Fielder, working on models of competition over electricity networks (second supervisor, with Dr T Schnier and Dr J Bullinaria of Computer Science) (PhD awarded 2013) (Post-doc, Imperial College London)

Ms Amshika Amar, working on models of corruption; transferred to MPhil (awarded 2012)

Dr Jaekyun Ahn, working on models of electricity investment (approved August 2014) (Korean Energy Economics Research Institute)

Dr Sener Salci, working on models of electricity investment (approved June 2015)

University of Hull

Ms Joanne Evans, working on the impact of New Electricity Trading Arrangements (accepted lectureship at the University of Surrey; thesis not submitted)

Dr Hossein Panahi, working on the links between location and economic growth (PhD awarded 2007)

Dr Hiba Harara, working on electricity deregulation in Bahrain (PhD awarded 2009) (senior manager in the electricity industry in Bahrain)

Dr Ali Al-Sunaidy, working on electricity deregulation in the Gulf Cooperation Council states (PhD awarded 2012) (cabinet minister, Oman)

University of Cambridge

Dr Phoebe Koundouri, working on water resources in Cyprus (“inherited” when a colleague left Cambridge; Prof P. Seabright took over after my own departure; PhD awarded 2000).

### **Post-doctoral researchers supervised**

Imperial College Business School

Dr Iain Staffell, working on EPSRC projects “Top and Tail”, “Energy Storage for low-carbon grids” and UKERC; next destination, lectureship at Imperial College London

Dr Olayinka Williams, working on EPSRC project “Energy Storage for low-carbon grids”; next destination, working in Canada

Dr Joachim Geske, working on EPSRC project “Business, Economics, Planning and Policy for Energy Storage in Low-Carbon Futures”; still in post

University of Birmingham

Dr Nicholas Vasilakos, working on the Supergen networks projects (Futurenet and Flexnet); next destination, lectureship at University of East Anglia

Dr Helen Hu, working on the SCRATCH project: next destination, commercial job in China

Dr Iain Staffell, working on the Supergen Flexnet project; next destination, research fellow at Imperial College Business School

University of Hull

Dr Milton Yago, working on the ESRC Supergen networks project: next destination, lectureship at Leeds Metropolitan Business School

## **Academic Responsibilities**

Imperial College Business School

Associate Dean (Education Quality), May 2020 to date

Head of the Department of Management, Jan 2013 to July 2019 (constituted as Organisation and Management Group during 2013)

Lecturing for modules “Clean Technology Investment” (previously “Entrepreneurship in Renewable Energy”) (MBA), “Business Economics” (Joint Honours undergraduate programme), “Managerial Economics” (course for undergraduate students outside the Business School), “Business Economics” (MSc Innovation, Entrepreneurship and Management), “Globalisation and CSR” (MSc Management), “Energy Business” (MSc Management), “Energy Economics and Strategy” (MSc Economics and Strategy for Business), Business Economics (Full-time MBA), Managerial Economics (Global MBA)

Coordinator for Economics teaching allocation, 2012-13 academic year

University of Birmingham

Director, Institute for Energy Research and Policy, July 2005 to August 2011

Director of Research, Department of Economics, October 2005 to September 2009

Lecturing for modules “Economic Regulation and Competition Policy” (MSc), “The Energy System” (PhD students), “Energy Economics” (Third year Engineering students) and “Microeconomics B” (Second year)

Director of the Chevening Fellowship Programme on “The Economics of Energy” (a 3-month programme for mid-career professionals, funded by the Foreign and Commonwealth Office, run in 2009 (14 fellows) and 2010 (13 fellows))

University of Hull

Head of Economics from May 2000 to January 2004 (as the School of Economic Studies from May 2000 to July 2001, the Department of Economics from August 2001 to July 2002, and the Economics Subject Group in the Business School from August 2002 to January 2004)

Lecturing for modules “Principles of Microeconomics” (First Year), “Industrial Economics” (Third Year and MSc), “Microeconomic Theory and Policy” (MSc), “The Business Environment (MBA)

Examiner for the BSc (Econ) and MSc (Econ) in Public Policy

University of Cambridge:

Lecturing on Privatisation and Regulation (3rd Year Undergraduates), Introductory Microeconomics (1st Year Undergraduates), and Regulation (M.Phil Students)

Examiner for Diploma in Economics, 1992-4; Part Two of the Economics Tripos, 1996, 1997; M.Phil in Economics, 1998; Part One of the Economics Tripos, 1999 (all at the University of Cambridge).

Co-opted to Faculty Board of Economics and Politics, 1996

Director of Studies in Economics - coordinating supervision teaching for the College, giving advice on academic matters, and dealing with undergraduate admissions

Fellow Librarian - oversight of the Fitzwilliam College Library



## External Examining

PhD Examiner for University of Cambridge; University of Canterbury, New Zealand; University of Hull; University of Warwick; University of London; Stockholm School of Economics, Sweden; Asian Institute of Technology, Thailand; Norwegian School of Economics and Business Administration, Bergen, Norway; University of Birmingham; City University; University of Paris XI; Norwegian University of Life Sciences; University of Copenhagen, University of Edinburgh, Cranfield University, Imperial College London, University of Durham, Mines Paris-Tech (previously Ecole des Mines)

Examiner for Habilitation de diriger recherche: University of Paris I (Pantheon-Sorbonne) ; TU Vienna.

External Examiner for City University (MSc in Economic Regulation and Competition), University of Sheffield (BSc and MSc in Economics), University of Cambridge (Management Studies Tripos and Diploma), University of Stirling (MSc in Energy Management), University of Strathclyde (MSc in Global Energy Management)

## Miscellaneous Teaching

Pre-conference 2-day PhD seminar on economics of electricity and decarbonisation, linked to IAEE International Conference, Groningen, 27 participants, June 2018

Jointly ran a PhD summer workshop for the Energy Economics Institute at the University of Cologne (EWI) (with Prof Werner Antweiler), 6 hours of lectures from RG on “the future of the power system”, 13 students, July 2017

Jointly ran a PhD summer workshop for the Energy Economics Institute at the University of Cologne (EWI) (with Prof Erin Mansur), 6 hours of lectures from RG on “the economics of energy storage”, 13 students, August 2015

Jointly ran a PhD summer workshop for the Energy Economics Institute at the University of Cologne (EWI) (with Prof Matti Liski), 8 hours of lectures from RG on “the economics of wind power”, c. 16 students, July 2013

Ran a PhD course on “Electricity Economics” for the Norwegian University of Life Sciences, (20 hours contact time, c.25 students) September 2010

Ran a PhD course on “Electricity Economics” for Supergen Flexnet, June 2008 and April 2010 (24 hours contact time, c. 50 students)

Ran an MSc-level course on “Electricity Liberalisation” for the University of Cologne, June-July 2008 (11 1/2 hour lectures, 25 students); repeated in July 2009 and 2010

Ran Executive MBA courses on “Energy Markets and Energy Trading” and “European Energy Law and Regulation” for the Katz School of Business, University of Pittsburgh, in Prague, April and June 2007 (c. 18 hours contact time apiece, 20 students)

Ran a PhD course on “Electricity Markets”, March and April 2005, Norwegian School of Economics and Business Administration, Bergen, Norway (18 1/2 hour lectures, 20 students)

Refereeing for journals including *American Economic Review*, *Bulletin of Economic Research*, *Cambridge Journal of Economics*, *Econometrica*, *Economic Journal*, *Energy Journal*, *Energy Policy*, *European Economic Review*, *IEEE Transactions on Power Systems*, *Journal of Industrial Economics*, *Journal of Political Economy*, *Journal of Regulatory Economics*, *Oxford Economic Papers*, *RAND Journal of Economics*, *Scandinavian Journal of Economics*

Expert Reviewer of the Second Order Draft of *Mitigation of Climate Change, Working Group III's contribution to the Fourth Assessment Report of IPCC*

Expert Reviewer of the First Order Draft of *Mitigation of Climate Change, Working Group III's contribution to the Fifth Assessment Report of IPCC*

#### **Grants held:**

ESRC Project ES/T000112/1 (via the JPI Urban Europe/NSFC Competition): Socio-Techno-Economic Pathways for sustainable Urban energy development, (**Principal Investigator**, with G Strbac and F Teng (UK), L de Vries, S Tindemans (Delft), C Kang, Q Chen, N Zhang (Tsinghua), Y Ding, B Huo (Zhejiang)); UK budget £299,459, from 01/03/2019 to 28/02/2022

EPSRC Project [EP/R045518/1](#) *Integrated Development of Low-Carbon Energy Systems (IDLES): A Whole-System Paradigm for Creating a National Strategy*, budget £7,047,665 (c. £300k (80% FEC) with Iain Staffell and RG), from 1/11/2018 to 31/10/2023

EPSRC Project [EP/S016627/1](#) *The Active Building Centre*, budget £35,947,427 (c. £200k (80% FEC) with Business School), from 03/09/2018 to 02/03/2022

EPSRC Project [EP/N005995/1](#) *Maximising the Carbon Impact of Wind Power*, (**Principal Investigator**, with A Hawkes, I Staffell and G Strbac) budget £235,740 (c. £100k (80% FEC) with Business School), from 1/11/2015 to 31/10/2017

EPSRC Project [EP/M001369/1](#) *Multi-scale Energy Systems Modelling Encompassing Renewable, Intermittent, Stored Energy and Carbon Capture and Storage (MESMERISE-CCS)*, budget £1 million (£327k (80% FEC) with Business School), from 1/10/2014 to 30/9/2018

EPSRC Project [EP/L014386/1](#) *Business, Economics, Planning and Policy for Energy Storage in Low-Carbon Futures* (**Principal Investigator**, with M Pollitt and G Strbac), £1.017 million, from 1/9/2014 to 31/8/2017, with Chinese partners funded through their National Science Foundation

EPSRC Project [EP/L024756/1](#) *UK Energy Research Centre Phase 3*, (Co-I, led by Jim Watson), £13.5 m (c. £250 k. with RG) from 1/5/2014 to 30/4/2019

EPSRC Grand Challenge [EP/K002252/1](#) *Energy Storage for Low-Carbon Grids*, budget £5.6 million, c. £300k with RG, from 1/7/2012 to 30/6/2017

EPSRC Grand Challenge [EP/I031707/1](#) *Transforming the Top and Tail of the Energy Networks*, budget £4.1 million, £160k with RG, from 1/10/2011 to 30/09/2015

EPSRC Project [EP/I000437/1](#) *Taking on the Teenagers: Using adolescent energy to reduce energy use* (with Janet Read (Principal Investigator), Russell Beale (PI at Birmingham) and others) £267k at Birmingham, from 1/9/2010 to 31/8/2013

EPSRC Project [EP/E034888/1](#) *Supply Chain Research Applied to Clean Hydrogen*, (with K. Kendall (Principal Investigator), D. Book and L. Macaskie), £1.4 million, 1/5/2007 to 30/4/2010

EPSRC Project EP/E04011X/1 *Flexnet: Renewal of the Supergen Consortium on Future Network Technologies*, budget £6.877 million, £432 k at Birmingham, from 1/10/2007 to 30/9/2011

Grant from E.ON UK, scoping study for project on pathways to a low-carbon utility, £7,500 from 1/10/2006 to 31/1/2007 (working with M. Leach, also awarded £7,500)

ESRC Project 000220575 *An Investigation of Bidding Behaviour in the British Electricity Market* (**Principal Investigator**, with J.Evans): £35,210, from 1/5/2004 to 30/4/2005. Assessed as "Good" by the ESRC

European Commission, Specific Support Action "SESSA", €491,500 in total, €17,000 at Hull, from 1/4/2004 to 30/9/2005

EPSRC project GR/S28082/01 *SUPERGEN - Future Network Technologies*, budget £3,419,650 overall, c. £230,000 with RG, from 1/10/2003 to 30/9/2007

PhD studentship funded by BNFL Magnox Generation, to study the impact of new electricity trading arrangements in England and Wales: £54,000 (November 2000 – Nov. 2003)

Grant from the National Bureau of Economic Research, for research assistance on the "Seeking a Premier League Economy" project: £4,000 (September – October 2000)

Grant from BNFL Magnox Generation, to study the proposals to reform the electricity trading arrangements in England and Wales: £25,000 (March – June 1999)

ESRC Project 000236828 *Developing Competition in the British Energy Markets* (with D. Newbery (principal investigator) and M.Pollitt): £194,668, from 1/1/1997 to 31/12/1999. Assessed as "Good" by the ESRC

Grant from Wessex Water to investigate the relative efficiency of water companies (1993)

ESRC Project 000233766 *The Impact of Electricity Privatisation on the British Energy Markets* (with David Newbery (who was principal investigator)): £103,720 from 7/12/1992 to 6/12/1996. Assessed as "Good" by the ESRC

### **Consultancy:**

This has included work for various UK electricity companies, the regulator for the electricity industry in the Netherlands, the European Commission, the Italian System Operator (GRTN), the Australian Energy Markets Commission and work on the Russian electricity industry, funded by the World Bank. I am an Associate Consultant at Oxford Economic Research Associates (Oxera). Specific projects include:

August 2007: Australian Energy Markets Commission: Review of modelling work on the NEW rule changes and the Snowy Region. Two consultants had produced reports on the effect of proposed changes to the rules of the Australian National Electricity Market that would have eliminated one of the regions then used to set prices. I wrote a report that assessed the approach taken by the two consultants, setting out strengths and weaknesses that the Commission should consider when using those reports as evidence. It is available at <http://www.aemc.gov.au/Rule-Changes/Split-Snowy-Region/Draft/AEMC-Documents/Professor-Richard-Green-Due-Diligence-Report-Augus>

September 2010 to March 2011: a group of generating companies: Assessing the impact of Electricity Market Reform in the UK. Working with Oxera, I was part of a team that assessed how the then-proposed Electricity Market Reform would affect a number of generators that were not vertically integrated and suggested economic arguments that they might use in their responses to government consultations.

October 2010 to May 2011: Ofgem: Project TransmiT. Working with colleagues from Strathclyde University, we produced a report assessing options for the future charging model for electricity transmission in Great Britain. The report was published at <https://www.ofgem.gov.uk/publications-and-updates/academic-review-transmission-charging-arrangements-universities-strathclyde-and-birmingham>

November 2012 to June 2013: Ofgem: Integrated Transmission Planning and Regulation. I was part of a team from Imperial College and the University of Cambridge assessing possible regulatory models for planning and operating the transmission system and generation to connect low-carbon generation in a more efficient manner. The report is available at <https://www.ofgem.gov.uk/ofgem-publications/52727/imperialcambridgeitpreport.pdf>

August to December 2013: European Commission, DG Comp: Modelling work on the impact of government policies on electricity generation investment in Great Britain. With Iain Staffell, I built a multi-decade model of the GB electricity system and used it to simulate the effect of various government policies affecting the profitability of nuclear (and other) generators, writing up the work in a 61-page report available at [http://ec.europa.eu/competition/state\\_aid/studies\\_reports/green\\_staffell\\_en.pdf](http://ec.europa.eu/competition/state_aid/studies_reports/green_staffell_en.pdf)

August 2016 to date: Drax Power: one of four Imperial College authors producing *Electric Insights Quarterly*, a bulletin covering developments in the electricity market, particularly trends in the share of output from each technology and patterns of prices. Our stories have been picked up by a variety of media outlets. See [www.electricinsights.co.uk](http://www.electricinsights.co.uk).

### **Selected Seminar and Conference Presentations:**

2008 Conferences

Workshop on the Environment, Technology and Uncertainty, Frisch Centre, Oslo; Workshop on wind power, Université Paris XI; Nordic Workshop on Electricity Economics, Saltsjöbaden; Conference on the Economics of Energy, IDEI, Toulouse; Making Networks Fit for Renewables, Supergen Flexnet, London

2009 Seminars

Helsinki Centre for Economic Research, Helsinki; University of Cologne

Conferences

Fingrid Electricity Market Day, Helsinki; Flexnet Assembly, Manchester; Transatlantic Policy Consortium, Jonkoping, Sweden; Eurelectric Annual Congress, Bucharest; IFN Conference on Electricity Market Design, Stockholm; Elforsk Market Design Conference, Saltsjöbaden, Sweden

2010 Conferences

Supergen Flexnet, Glasgow; Midlands Energy Consortium Social Science Research Conference, Nottingham; Florence School of Regulation Workshop on EU Energy Law and Policy, Florence; IAEE European Conference, Vilnius;

## 2011 Seminars

Consumers' Association, London; Web Henderson, Auckland; Cired-EdF meeting on electricity institutions and decarbonisation, Paris

## Conferences

International Energy Agency meeting on nuclear investment, Paris; Spanish Association for Energy Economics (keynote), Barcelona; Royal Economic Society Annual Conference, Royal Holloway; Stirling Environment Camp; Conference on Capacity Mechanisms, Berlin; EPRG Spring Meeting, Cambridge; International Association for Energy Economics Annual Conference, Stockholm; Australian Competition and Consumer Commission, Brisbane

## 2012 Seminars

University College London Energy Institute, London Metropolitan University, ETH Zurich, Loughborough University

## Conferences

International Association for Energy Economics Annual Conference, Perth; International Association for Energy Economics European Conference, Venice; British Institute for Energy Economics Academic Conference, Oxford; 27<sup>th</sup> Jornadas de Economia Industrial, Murcia; IEA/Marketforce conferences on Investment in UK Electricity and on Nuclear New Build, London

## 2013 Seminars

Ecole des Mines de Paris; Toulouse School of Economics; Imperial College Business School

## Conferences

Conference on the economics of energy markets, Toulouse; <http://ut-capitole.ubicast.tv/videos/16-how-large-should-a-portfolio-of-wind-farms-be/> Workshop on electricity markets, Auckland; Bergen Economics of Energy and Environment Research (keynote), NHH Bergen; CERRE conference on Europe's Wholesale Electricity Markets: Future Regulatory Perspectives and Challenges, Brussels; IAEE European Conference, Dusseldorf (twin plenary session)

## 2014 Seminars

Government of Oman

## Conferences

Mannheim Energy Conference, (keynote); Toulouse Energy Conference; IfN workshop on the Performance of Electricity Markets, near Stockholm; RERC Conference, Oslo; Energy Institute Energy Systems Conference, London; Festival of Science, Royal Borough of Kensington and Chelsea

## 2015 Conferences

INREC Conference, Essen, (keynote); International Association for Energy Economics International Conference, Antalya; CIRED Electricity Distribution Conference, Lyon (invited Round Table); Offshore Energy Storage Conference, Edinburgh (keynote) IEEE Power Engineering Society Conference, Denver (Invited Super Session)

#### 2016 Conferences

Transition Pathways final dissemination conference, London  
KPSARC meeting on Renewables Integration, London  
IPEMC 2016, Hefei, China  
ACDC Conference, Beijing, China  
IAEE International Conference, Bergen, Norway  
Energy Institute Energy Systems Conference, London  
Statoil / NTNU Energy Transitions Workshop, Trondheim, Norway

#### 2017 Conferences

6<sup>th</sup> Latin American Meeting of the IAEE, Rio (joint plenary)  
Symposium in honour of Einar Hope, Bergen, Norway  
IAEE International Conference, Singapore  
IAEE European Conference, Vienna, Austria (joint plenary)  
Beesley Lecture, London

#### 2017 Seminars

Ministry of Commerce and Industry, Oman  
University of Strathclyde

#### 2018 Conferences

Workshop on power market design, Stockholm  
University of Alberta, Edmonton  
Dundee energy conference  
Oxrep conference on "the age of electricity", Oxford

#### 2018 Seminars

Technical University of Munich

#### 2019 Conferences

E-world Essen  
NHH/NTNU Winter Workshop, Norway  
Economics of Energy, Toulouse School of Economics  
IAEE European Conference, Ljubljana  
Hamburg Research Workshop on the German Energy Transition, University of Hamburg  
Benelux Association for Energy Economics, Antwerp  
iSPEC 2019, Beijing

#### 2019 Seminars

Isaac Newton Institute, Cambridge (2 sessions)  
French Association for Energy Economics workshop on Interconnector trading, Paris  
Université Paris-Dauphine

#### 2020 Conferences

IAEE Asian Conference, Auckland, New Zealand  
Global Alliance of Universities on Climate event on 'Pathways to Net Zero Emissions', online  
EdF Electricity Day, online

Workshop on Electricity Pricing and Trading in the Decarbonised Energy Sector, Florence School of Regulation, online

**Media** (recent)

FT Letters, 15 July 2019, Carbon price support has proved its worth in UK, <https://www.ft.com/content/a87f49a6-a499-11e9-a282-2df48f366f7d>

FT Letters, 6 September 2017, Renewables' side effects need to be quantified, <https://www.ft.com/content/1ba6aa46-9178-11e7-a9e6-11d2f0ebb7f0>

FT Letters, 17 July 2017, A coal-fired power station won't be charging your EV, <https://www.ft.com/content/a8c8f6f0-6661-11e7-8526-7b38dcaef614>

FT Letters, 17 November 2016, Electricity storage need not be a concern, <http://ow.ly/cfZp306pDGT>

BBC News 24, 15 September 2016, live interview on Hinkley Point C decision

FT Letters, 26 May 2016, Case for renewables still cannot be based on costs <http://on.ft.com/248fCj8>

FT Letters, 11 August 2015, Acknowledge and address renewables' shortcomings

FT Letters, 23 July 2015, Vested interests stand in the way of low-cost homes

You and Yours (BBC Radio 4), May 2015, prospects and uses for hydrogen energy

FT Letters, 10 February 2015, Swansea Tidal Lagoon

Today Programme, 19 December 2014, impact of oil price fall on UK gas and electricity

FT Letters, 3 October 2014, impact of wind power on carbon emissions

FT Letters, 7 February 2013, how to support the Hinkley Point C reactor

FT Letters, 25 July 2012, 1998 was an outlier for global temperatures

(many other interviews and letters in earlier years)