

CURRICULUM VITAE

ADONIS YATCHEW

Professor of Economics, University of Toronto
Editor-in-Chief, The Energy Journal
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Ph.D. Economics 1980
Harvard University

M.A. Economics 1975
University of Toronto

B.A. Mathematics and
Economics 1974
University of Toronto

Adonis Yatchew's research focuses on econometrics, energy and regulatory economics. Since completing his Ph.D. at Harvard University in 1980, he has taught at the University of Toronto. He has also held visiting appointments at Trinity College, Cambridge University and the University of Chicago. He has written a graduate level text on semiparametric regression techniques published by Cambridge University Press. He has served in various editorial capacities at The Energy Journal since 1995. He has advised public and private sector companies on electricity, regulatory and other matters for over 25 years and has provided testimony in numerous regulatory and litigation procedures. While studying mathematics and economics as an undergraduate at the University of Toronto, he completed practical exams for an A.R.C.T. in performance (piano) at the Royal Conservatory of Music. Adonis Yatchew currently teaches undergraduate and graduate courses in energy economics, graduate courses in econometrics and 'Big Ideas' courses on Energy with colleagues in physics and classics.

ACADEMIC EXPERIENCE

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| <i>Current Position</i> | Professor of Economics, University of Toronto |
| 2008 | Visiting academic, Department of Mathematics and Statistics, University of Melbourne |
| 2008 | Visiting academic, School of Economics and Finance, Queensland University of Technology |
| 2008 | Visitor, National Center for Econometric Research, Queensland University of Technology |
| 2005 | Visiting Fellow, ARC Center of Excellence for Mathematics and Statistics of Complex Systems, Mathematical Sciences Institute, Australian National University |
| 2001 | Visiting Fellow, School of Mathematical Sciences, Australian National University |
| 1986 to 2004 | Associate Professor, Economics, University of Toronto |

1989, 1990, 1991 Visiting Research Associate, Harvard University
1986 Visiting Fellow Commoner, Trinity College, Cambridge U.K.
1980 to 1986 Assistant Professor, Economics, University of Toronto
1984 Visiting Research Associate, National Bureau of Economic Research,
Cambridge, Massachusetts
1982 to 1984 Visiting Assistant Professor, University of Chicago
1976 Lecturer, University of Toronto, Scarborough College

EDITORIAL AND PROFESSIONAL ACTIVITIES

Current

Editor-in-Chief, The Energy Journal (2006-present) <http://www.iaee.org/en/publications/journal.aspx>
Member, Board of Editors, Economics of Energy and Environmental Policy
Member, Editorial Board, Foundations and Trends in Econometrics
Member, Council, International Association for Energy Economics
Member, National Center for Econometric Research, Econometrics of Energy and the Environment, Australia

Past

Editor, The Energy Journal, (2006)
Joint Editor, The Energy Journal (1995-2005)
Associate Chair for Graduate Studies, University of Toronto, 2006-2009
Joint Editor 1997, Distributed Generation, special issue of the Energy Journal
Advisory Editor, Economics Letters (1985-1997)
Member, Advisory Board, *Eurasia Foundation*, 1995-2007

AWARDS AND DISTINCTIONS

USAEE Senior Fellow Award, June 2014

SELECTED PRESENTATIONS

May 2016, Montebello Quebec: presentation entitled “Rational Carbon Policy and Regulation”, Canadian Energy Law Forum.

March 2016, Paris: Keynote Address “Subsidiarity and Separation”, 4th International Symposium on Energy and Finance Issues.

November 2015, Panelist, “Outlook on Oil”, University of Toronto Energy Network, University of Toronto.

June 2015, Milan: “Discerning Trends in Commodity Prices”, Invited presentation, Fondazione Eni Enrico Mattei, International Workshop on Recent Evolutions of Oil and Commodity prices.
April 2015, Bank of Canada, Workshop on Commodity Super-Cycles, “Discerning Trends in Commodity Prices.

September 2014, Beijing: Keynote address entitled “The Economics of Energy, Big Ideas for the Non-Economist”, Chinese Academy of Sciences, International Association for Energy Economics 4th IAEE Asian Conference.

June 2014, Hong Kong: Invited presentation entitled “Renewable Energy”, Hong Kong’s Electricity Future: Balancing Reliability, Environment and Cost, Hong Kong Baptist University.
July 2012, Hong Kong: Invited Speaker on “Climate Change and Electricity Generation”, Hong Kong Baptist University.

December 2010, Hong Kong: Invited paper on renewable energy, Fourth Asian Energy Conference.

October 2010, Berlin: Invited paper on quantile regression, Workshop on Quantile Regression Methods, Humboldt University.

October 2008, Gold Coast, Queensland: Keynote speaker, Australian Conference of Economists. Title of presentation: “Economics, Econometrics and Regulation”.

August 2007, Lisbon: Keynote speaker, Cemapre Conference on Advances in Semiparametric Methods and Applications. Title of presentation: “Data on Derivatives, Nonparametric Regression and the Curse of Dimensionality”.

BOOKS, EDITED VOLUMES

Yatchew, A., 2003, Semiparametric Regression for the Applied Econometrician, 213 pages, Themes in Modern Econometrics, Cambridge University Press.

Chinese Energy Economics, Special Issue of The Energy Journal, Edited by Ying Fan and Adonis Yatchew, 2016.

REFEREED PUBLICATIONS

Dimitropoulos, D. and A. Yatchew 2017, “Is Productivity Growth in Electricity Distribution Negative? An Empirical Analysis Using Ontario Data”, The Energy Journal, 38:2,175-200.

Rivard, B. and A. Yatchew 2016, “Integration of Renewables into the Ontario Electricity System”, The Energy Journal, vol 37, Special Issue 2, 221-242.

Yatchew, A. 2016, "Rational vs. 'Feel-Good' Carbon Policy – Transferability, Subsidiarity and Separation" Energy Regulation Quarterly, 4:3, 31-40.

Available at <http://www.energyregulationquarterly.ca/articles/rational-vs-feel-good-carbon-policy-transferability-subsidiarity-and-separation#sthash.u6jtvAJI.dpbs>.

John Colton, Kenneth Corscadden, Stewart Fast, Monica Gattinger, Joel Gehman, Martha Hall Findlay, Dylan Morgan, Judith Sayers, Jennifer Winter, Adonis Yatchew 2016, Energy Projects, Public Acceptance and Regulatory Systems in Canada: A White Paper

Dimitropoulos, D. and A. Yatchew, "Discerning Long-Term Trends in Commodity Prices", forthcoming, Macroeconomic Dynamics.

Yatchew, A. 2014: "Energy, Markets and Their Failures", Bulletin of the Chinese Academy of Sciences, vol. 28, no. 4, pp. 304-305.

http://english.cas.cn/bcas/2014_4/201411/P020141121529033572162.pdf

Yatchew, A. 2014: "Economics of Energy: Big Ideas for the Non-Economist", Energy Research and Social Science, 1(1), 74-82, <http://dx.doi.org/10.1016/j.erss.2014.03.004> .

Green, R. and A. Yatchew 2012: "Support Schemes for Renewable Energy: An Economic Analysis", Economics of Energy & Environmental Policy, 1, 83-98.

Yatchew, A. and A. Baziliauskas 2011: "Ontario Feed-In Tariff Programs", Energy Policy, 39, 3885-3893.

Hall, Peter and A. Yatchew 2010: "Nonparametric Least Squares in Derivative Families", Journal of Econometrics, 157, 362-374.

Yatchew, A. 2008: "Perspectives on Nonparametric and Semiparametric Modeling", The Energy Journal, Special Issue to Acknowledge the Contribution of G. Campbell Watkins to Energy Economics, 17-30.

Hall, Peter and A. Yatchew 2007: "Nonparametric Estimation When Data on Derivatives are Available", Annals of Statistics, 35:1, 300-323.

McCaig, B. and A. Yatchew 2007: "International Welfare Comparisons and Nonparametric Testing of Multivariate Stochastic Dominance", Journal of Applied Econometrics, 22:5, 951-969.

Ricciuto, L., V. Tarasuk and A. Yatchew 2006: "Socio-demographic Influences on Food Purchasing Among Canadian Households", European Journal of Clinical Nutrition, 60:6, 778-790.

Yatchew, A. and W. Haerdle 2006: "Nonparametric State Price Density Estimation Using Constrained Least Squares and the Bootstrap", Journal of Econometrics, 133:2, 579-599.

Hall, Peter and A. Yatchew, 2005: "Unified Approach to Testing Functional Hypotheses in Semiparametric Contexts", Journal of Econometrics, 127, 225-252.

Yatchew, A., Y. Sun and C. Deri, 2003: "Efficient Estimation of Semi-parametric Equivalence Scales With Evidence From South Africa", Journal of Business and Economic Statistics, 21, 247-257.

Yatchew, A. and J.A. No, 2001: "Household Gasoline Demand in Canada", Econometrica, 1697-1710.

Yatchew, A., 2000, "Scale Economies in Electricity Distribution: A Semiparametric Analysis", Journal of Applied Econometrics, 15, 187-210.

Yatchew, A., 1999, "An Elementary Nonparametric Differencing Test of Equality of Regression Functions", Economics Letters, 271-8.

Yatchew, A. 1998, "Nonparametric Regression Techniques in Economics", Journal of Economic Literature, 36, 669-721.

Yatchew, A. and L. Bos 1997, "Nonparametric Regression and Testing in Economic Models", Journal of Quantitative Economics, 13, 81-131, www.chass.utoronto.ca/~yatchew.

Yatchew, A. 1997, "An Elementary Estimator of the Partial Linear Model", Economics Letters, Vol. 57, pp.135-43. Vol. 59, 1998 403-5.

Waverman, L. and A. Yatchew (1994), "The Regulation of Electricity in Canada", in International Comparisons of Electricity Regulation, R. Gilbert and E. Kahn, editors, Cambridge University Press, 366-405.

Yatchew, A., 1992, "Nonparametric Regression Tests Based on Least Squares", Econometric Theory, Vol. 8, 435-451.

Yatchew, A., 1988, "Some Tests of Nonparametric Regression Models", in Dynamic Econometric Modelling, Proceedings of the Third International Symposium on Economic Theory, W. Barnett, E. Berndt, H. White (eds.), Cambridge University Press, 121-135.

Yatchew, A., 1986, "Comment" on Frontier Production Functions, Econometric Reviews, Vol. 4(2), 345-352.

Yatchew, A. "Multivariate Distributions Involving Ratios of Normal Variables", 1986, Communications in Statistics, Vol. A15, Number 6, Theory and Methods, 1905-26.

Yatchew, A., 1985, "A Note on Nonparametric Tests of Consumer Behaviour", Economics Letters, Vol. 18, 45-48.

Yatchew, A., and Griliches, Z., 1985, "Specification Error in Probit Models", Review of Economics and Statistics, 134-139.

Epstein, L., and A. Yatchew, 1985, "Nonparametric Hypothesis Testing Procedures and Application to Demand Analysis", Journal of Econometrics, Vol. 30, 149-169.

Epstein, L., and A. Yatchew, 1985, "The Empirical Determination of Technology and Expectations: A Simplified Procedure", Journal of Econometrics, Vol. 27, 235-258.

Bird, R., M. Bucovetsky and A. Yatchew, 1985, "Tax Incentives for Film Production: The Canadian Experience", Public Finance Quarterly, Vol. 13, 396-421.

Yatchew, A. 1984, "Generalizing the Composite Commodity Theorem", Economics Letters, 16, 15-21.

Yatchew, A. 1984, "Applied Welfare Analysis With Discrete Choice Models", Economics Letters, 18, 13-16.

Yatchew, A., 1981, "Further Evidence on 'Estimation of a Disequilibrium Aggregate Labor Market'", Review of Economics and Statistics, 142-144.

Griliches, Z. and A. Yatchew, 1981, "Sample Selection Bias and Endogeneity in the Estimation of the Wage Equation: An Alternative Specification, Annales de l'Insee, 43, 35-46.

Pesando, J., and Yatchew, A., 1977, "Real vs. Nominal Interest Rates and the Demand for Consumer Durables in Canada", Journal of Money, Credit, and Banking, 28-436.

OTHER PAPERS / STUDIES

Yatchew, A. 1995, "The Distribution of Electricity on Ontario: Restructuring Issues, Costs and Regulation", Ontario Hydro at the Millenium, University of Toronto Press, 327-342,353-354.

Yatchew, A. 1995, "Comments on The Regulation of Trade in Electricity: A Canadian Perspective", Ontario Hydro at the Millenium, University of Toronto Press, 165-7.

Yatchew, A. 2001: "Incentive Regulation of Distributing Utilities Using Yardstick Competition", Electricity Journal, Jan/Feb, 56-60.

Littlechild, Stephen 2017)and A. Yatchew, 2002: "Hydro One Transmission and Distribution: Should They Remain Combined or be Separated", www.chass.utoronto.ca/~yatchew .

Yatchew, A., 1999, "Differencing Methods in Nonparametric Regression: Simple Techniques for the Applied Econometrician", 86 manuscript pages.

CURRENT RESEARCH

Dimitropoulos, D. and A. Yatchew, "Joint Estimation of Production and Cost Models, With an Application to Electricity Distribution", manuscript, May 2015.

Cheng, Y.S., K.H. Cao, C.K. Woo and A. Yatchew, "Residential willingness to pay for deep decarbonization of electricity supply: contingent valuation evidence from Hong Kong", manuscript, April 2017, under submission.

RECENT RESEARCH GRANTS

2011-2016 SSHRC grant "Nonparametric regression when data on derivatives are available".

2007-2011 SSHRC grant "Nonparametric and semiparametric estimation when data on derivatives are available".

2004-2007 SSHRC grant "Semiparametric demand modeling and testing".

CURRENT AND RECENT SUPERVISIONS

Ph.D.

Dhruv Sinha (2017): Essays in Energy

Dimitrios Dimitropoulos (2015): Three Essays in Energy Economics and Industrial Organization, Thesis Supervisor.

Adam Found (2014): Essays in Municipal Finance, Thesis Supervisor.

M.A.

Nathan Warkentin (2015-2016): Masters of Science in Sustainability Management. "Integration of Renewable Wind Energy Sources in Ontario"

Sean Lemon (2013): M.Sc.Pl., Planning Program, Geography. An Evaluation of Ontario's Global Adjustment Mechanism (GAM). Thesis Committee.

Undergraduate

Wei, Max (2016-2017) Engineering Science. Undergraduate thesis: “Wind Energy Intermittency, Diversity and Interconnections in Ontario”. Thesis Supervisor.

Shaker, Youssef (2016-2017) Engineering Science. Undergraduate thesis: “Analyzing the Effectiveness of Conservation Programs in Ontario”. Thesis Supervisor.

Wilbur Li, (2012) Engineering Science. Undergraduate thesis: “Ontario’s Feed-In-Tariff Program. Analysis of PV Solar Feed-In-Tariff Rates”. Thesis Supervisor.

OTHER PROFESSIONAL EXPERIENCE:

(2017) Prepared expert testimony on regulatory costing of railway transportation services, filed before the *Canadian Transportation Agency*.

(2017) Prepared analyses on the degree of integration of natural gas hub prices in a major North American acquisition of pipeline and related assets.

(2016) Prepared analyses on price determination in West Coast gasoline and diesel markets as part of an asset acquisition evaluation.

(2016) Prepared statistical analyses of market power in the acquisition of MTS by Bell Canada.

(2016) Testified before the *Ontario Energy Board* on behalf of EPCOR Utilities Inc. in a proceeding relating to natural gas expansion in Ontario, EB-2016-04.

(2016) Conducted ‘extent of the market’ and market power analyses for a major hydrocarbon company seeking to acquire additional refining capacity.

(2015) Conducted analyses of utility benchmarking for a large electricity distributor as part of a regulatory rate proceeding before the *Ontario Energy Board*.

(2015) Co-authored study of integration of renewables for the *Alberta Market Surveillance Administrator*.

(2014) Conducted econometrics analyses of spot and forward prices in Alberta electricity markets in a major electricity acquisition evaluation.

(2013) Testified before the *Ontario Energy Board* on behalf of the Electricity Distributors Association on electricity rates and incentive regulation.

(2012) Prepared expert damages testimony in *Oracle America Inc. v. Micron Technology, Inc.*, U.S. District Court, Northern District of California, Oakland Division.

(2011) Coauthored study for the *Alberta Market Surveillance Administrator* on electricity market transparency and bidding.

(2011) Prepared Ontario electricity sector review for the Electricity Distributors Association.

(2011) Appointed sole representative of a major Canadian electrical utility in infrastructure pricing negotiations with an incumbent telecom carrier.

(2011) Prepared testimony on behalf of Toronto Hydro on the pricing of attachment space for wireless facilities on joint-use-poles, filed before the *Ontario Energy Board*.

(2010) Prepared testimony on behalf of Noranda Aluminum, Inc. Filed before the *Public Service Commission of the State of Missouri*.

(2009) Prepared study for major generating company on sufficient competition tests for boundary entities in the Ontario electricity market.

(2009) Prepared testimony on worldwide paraxylene markets *Interquisa Canada L.P. and Parachem Chemicals L.P.*, International Court of Arbitration of the International Chamber of Commerce.

(2008) Prepared analysis of incentive regulation of capital and operating costs and productivity growth for electricity distributors. Filed before the *Ontario Energy Board*.

(2007) Prepared analysis of distributor benchmarking of capital and operating costs on behalf of the Electricity Distributors Association. Filed before the *Ontario Energy Board*.

(2007) Prepared evidence on market power in Ontario electricity markets.

(2005-2007) Prepared analyses of pricing of investor communications services.

(2007) Prepared testimony on behalf of the Electricity Distributors Association on utility benchmarking of capital and operating costs. Filed before the Ontario Energy Board.

(2004-2007) Prepared various analyses in a class action and settlement proceeding involving billing of natural gas. Participated in settlement proceedings.

(2004, 2005, 2006) Prepared odds of winning prizes in promotions by a leading U.S.-based international fast-food chain.

(2006) Prepared testimony on incentive regulation. Filed before the *Ontario Energy Board*.

(2006) Prepared testimony on cost-sharing of capital and operating costs of joint-use power poles. Filed before the *New Brunswick Board of Commissioners of Public Utilities*.

(2005) Prepared testimony on cost-sharing of power poles by cable companies on behalf of Thunder Bay Hydro.

(2004) Prepared testimony on cost-sharing of capital costs of power poles by cable companies. Filed before the *Ontario Energy Board*.

(2003) Prepared testimony on behalf of large Ontario electricity distributors on distributor service area amendments. Filed before the *Ontario Energy Board*.

(2003) Prepared testimony on behalf of J.D. Irving Ltd. on rates of return, performance based regulation and benchmarking. Filed before the *New Brunswick Board of Commissioners of Public Utilities*.

(1982-1994) Participated in numerous Ontario Hydro rate hearings before the *Ontario Energy Board* on behalf of Ontario electricity distributors.

(1989-1991) Filed testimony before the *Ontario Environmental Assessment Board* in connection with the Ontario Hydro long-term demand supply plan.