

# JENNIFER WINTER, PhD

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This version: May 2021

## PROFESSIONAL EXPERIENCE

2020 – Associate Professor, Department of Economics, University of Calgary  
2016 – Scientific Director, Energy and Environmental Policy, School of Public Policy,  
University of Calgary  
2017 – 2020 Assistant Professor (Tenure Track), Department of Economics, University of Calgary  
2015 – 2017 Assistant Professor (Limited Term), Department of Economics, University of Calgary  
2015 – 2018 Director, Canadian Network for Energy Policy Research and Analysis, School of Public  
Policy, University of Calgary  
2014 – 2015 Associate Director, Energy and Environmental Policy, School of Public Policy,  
University of Calgary  
2012 – 2014 Research Associate, Energy and Environmental Policy, School of Public Policy,  
University of Calgary  
2011 – 2012 Research Advisor, Labour Program, Human Resources and Skills Development Canada

## OTHER AFFILIATIONS

2020 – Director, Canadian Society for Unconventional Resources  
2019 – Mitigation Expert Panel Member, Canadian Institute for Climate Choices  
2018 – Member, City of Calgary Climate Panel  
2017 – Member, Environmental Assessment Advisory Group, Global Affairs Canada  
2017 – Treasurer, World Petroleum Council Canada Future Leaders  
2016 – Treasurer, Canadian Resource and Environmental Economics Association  
2014 – Board Member, World Petroleum Council Canada Future Leaders

## RESEARCH INTERESTS

Energy and environmental economics, climate policy, emissions policy, innovation economics, Canadian economic history

## EDUCATION

University of Calgary, PhD in Economics, 2011  
DISSERTATION: “Essays on Government Policy and the Development of Natural Resources”  
University of Calgary, MA in Economics, 2007  
University of Calgary, BA in Economics (First Class Honours), 2005

## RESEARCH

### Refereed Journal Articles

- Tombe, Trevor & Jennifer Winter. 2021. "Fiscal Integration with Internal Trade: Quantifying the Effects of Equalizing Transfers." *Canadian Journal of Economics* 54(2): 1-35.  
<https://onlinelibrary.wiley.com/doi/full/10.1111/caje.12491>.
- Rioux, Jean-Sebastien & Jennifer Winter. 2020. "Forks in the Road: Energy Policies in Canada and the US since the Shale Revolution." *The American Review of Canadian Studies* 50(1): 66-85.  
<https://doi.org/10.1080/02722011.2020.1743015>.
- Tombe, Trevor & Jennifer Winter. 2015. "Environmental Policy and Misallocation: The Productivity Effect of Intensity Standards," *Journal of Environmental Economics and Management* 72: 137-163, July. doi: <https://doi.org/10.1016/j.jeem.2015.06.002>.

### Non-refereed Journal Articles

- Winter, Jennifer. 2020. "Carbon Pricing in a Federal State: The Case of Canada." *ifo DICE Report - Journal for Institutional Comparisons* 18(1), 13-19. <https://www.ifo.de/en/publikationen/2020/article-journal/carbon-pricing-federal-state-case-canada>.

### Peer-Reviewed Policy Articles

- Fellows, G. Kent, Victoria Goodday & Jennifer Winter. 2021. "A Review of Barriers to Full-Scale Deployment of Emissions-Reduction Technologies." *The School of Public Policy Publications* 14 (April). <http://dx.doi.org/10.11575/sppp.v14i.70772>.
- Winter, Jennifer, Victoria Goodday & G. Kent Fellows. 2019. "Enabling Partial Upgrading in Alberta: A Review of the Regulatory Framework and Opportunities for Improvement," *The School of Public Policy Publications* 12 (December). <https://doi.org/10.11575/sppp.v12i0.68199>.
- Dobson, Sarah, Jennifer Winter & Brendan Boyd. 2019. "The Greenhouse Gas Emissions Coverage of Carbon Pricing Instruments for Canadian Provinces." *The School of Public Policy Publications* 12 (February). <https://doi.org/10.11575/sppp.v12i0.53155>.
- Dobson, Sarah & Jennifer Winter. 2018. "Assessing Policy Support for Emissions Intensive and Trade Exposed Industries." *The School of Public Policy Publications* 11 (October). <https://doi.org/10.11575/sppp.v11i0.43673>.
- Winter, Jennifer, Sarah Dobson, G. Kent Fellows, Dexter Lam & Paul Craig. 2018. "The Potential for Canadian LNG Exports to Europe." *The School of Public Policy Publications* 11 (July). <https://doi.org/10.11575/sppp.v11i0.53162>.
- Dobson, Sarah, G. Kent Fellows, Trevor Tombe & Jennifer Winter. 2017. "The Ground Rules for Effective OBAs: Principles for Addressing Carbon-Pricing Competitiveness Concerns through the Use of Output-Based Allocations." *The School of Public Policy Publications* 10 (June). doi: <http://dx.doi.org/10.11575/sppp.v10i0.42633>.
- Fellows, G. Kent, Robert Mansell, Ronald Schlenker & Jennifer Winter. 2017. "Public-Interest Benefit Evaluation of Partial-Upgrading Technology." *The School of Public Policy Publications* 10 (January). doi: <http://dx.doi.org/10.11575/sppp.v10i0.42615>.

- Colton, John, Kenneth Corscadden, Stewart Fast, Monica Gattinger, Joel Gehman, Martha Hall Findlay, Dylan Morgan, Judith Sayers, Jennifer Winter, & Adonis Yatchew. 2016. "Energy Projects, Social Licence, Public Acceptance and Regulatory Systems in Canada: A White Paper." *The School of Public Policy Publications* 9 (May). doi: <http://dx.doi.org/10.11575/sppp.v9i0.42589>.
- Dobson, Sarah & Jennifer Winter. 2015. "The Case for a Carbon Tax in Alberta." *The School of Public Policy Publications* 8 (November). doi: <http://dx.doi.org/10.11575/sppp.v8i0.42549>.
- Moore, Michal C., David Hackett, Leigh Noda, Jennifer Winter, Roman Karski, & Mark Pilcher. 2014. "Risky Business: The Issue of Timing, Entry and Performance in the Asia-Pacific LNG Market." *The School of Public Policy Publications* 7 (July). doi: <http://dx.doi.org/10.11575/sppp.v7i0.42470>.
- Moore, Michal C., André Turcotte, & Jennifer Winter. 2014. "Aboriginal-Canadians and Energy Literacy: A Survey of Opinions and Thoughts on Energy." *The School of Public Policy Publications* 7 (February). doi: <http://dx.doi.org/10.11575/sppp.v7i0.42458>.
- Winter, Jennifer & Michal C. Moore. 2013. "The 'Green Jobs' Fantasy: Why the Economic and Environmental Reality Can Never Live Up to the Political Promise." *The School of Public Policy Publications* 6 (October). doi: <http://dx.doi.org/10.11575/sppp.v6i0.42444>.
- Tombe, Trevor & Jennifer Winter. 2013. "The Importance of Policy Neutrality for Lowering Greenhouse Gas Emissions." *The School of Public Policy Publications* 6 (March). doi: <http://dx.doi.org/10.11575/sppp.v6i0.42427>.
- Moore, Michal C., André Turcotte, Jennifer Winter & P. Bernard Walp. "Energy and Energy Literacy in Canada: A Survey of Business and Policy Leadership." *The School of Public Policy Publications* 6 (February). doi: <http://dx.doi.org/10.11575/sppp.v6i0.42421>.
- Hackett, David, Leigh Noda, Susan W. Grissom, Michal C. Moore & Jennifer Winter. 2013. "Pacific Basin Heavy Oil Refining Capacity." *The School of Public Policy Publications* 6 (February). doi: <http://dx.doi.org/10.11575/sppp.v6i0.42417>.
- Turcotte, André, Michal C. Moore & Jennifer Winter. 2012. "Energy Literacy in Canada." *The School of Public Policy Publications* 5 (October). doi: <http://dx.doi.org/10.11575/sppp.v5i0.42402>.
- Mansell, Robert, Jennifer Winter, Matt Krzepkowski & Michal C. Moore. 2012. "Size, Role and Performance in the Oil and Gas Sector." *The School of Public Policy Publications* 6 (February). doi: <http://dx.doi.org/10.11575/sppp.v5i0.42395>.

### **Book Chapters and Monographs**

- Bataille, Chris, Sarah Dobson, Anna Kanduth & Jennifer Winter. 2021 (forthcoming). "Alberta in Canada's Net Zero Future: Seizing Opportunities While Adapting to Change." Invited chapter in *Alberta's Economic Future*, Robert Mansell and Ken McKenzie, eds. The School of Public Policy, University of Calgary.
- Winter, Jennifer. 2019. "Environmental Policy Transformations." Invited chapter in *Policy Transformation in Canada: Is Past Prologue?*, Peter John Loewen, Carolyn Hughes Tuohy, Andrew Potter and Sophie Borwein, eds. University of Toronto Press.
- Winter, Jennifer. 2019. "Canada's Role in Global Energy Markets." 2019. Invited chapter in *Energy and Geostrategy*, 6<sup>th</sup> Edition. Ministerio De Defensa Press, Spain.

Winter, Jennifer. In press. "Making Energy Policy: The Canadian Experience." Invited chapter in *Meeting the Paris Mandate: A Cross-national Comparison of Energy Policy-making*, Patrice Geoffron, Lorna A. Greening, and Raphael Heffron, eds. Springer.

Boyd, Brendan & Jennifer Winter. *Protest and Partnership: Indigenous Peoples, Consultation and Engagement, and Resource Development in Canada* (co-edited book). Revise and resubmit, University of Calgary Press.

## Technical Reports

Fellows, G. Kent, Jennifer Winter & Alaz Munzur. 2021. "An Analysis of Industrial Policy Mechanisms to Support Commercial Deployment of Bitumen Partial Upgrading in Alberta." Report prepared for Alberta Innovates.

Goodday, Victoria, Jennifer Winter & Alana Westwood. 2020. "Public-Interest Determination for Infrastructure Development: A Review of Guidance and Practice in Canada." Knowledge Synthesis Report prepared for the Social Sciences and Humanities Research Council.

Shaffer, Blake & Jennifer Winter. 2020. "Defining and Describing Energy Poverty in British Columbia: The Distribution of Households' Energy Expenditure." Report prepared for the BC Basic Income Panel.

Fellows, G. Kent, Victoria Goodday & Jennifer Winter. 2019. "A Review of Barriers to Full-Scale Deployment of Emissions-Reduction Technologies." Report prepared for Emissions Reduction Alberta. (*Subsequently published.*)

Winter, Jennifer & Akash Asif. 2018. "Comprehensive Assessment of Regulatory Programs." Report to the Treasury Board of Canada Secretariat. June.

Boyd, Brendan, Jessie Arthur & Jennifer Winter. 2018. "Meaningful Engagement of Indigenous Peoples and Local Communities in Marine Activities: Phase 2 Analysis." Report to the PAME Working Group of the Arctic Council. March.

Boyd, Brendan, Sophie Lorefice & Jennifer Winter. 2017. "Indigenous, Industry and Government Perspectives on Consultation in Resource Development," Knowledge Synthesis Report prepared for the Social Sciences and Humanities Research Council.

Winter, Jennifer. 2017. "The Effect of Carbon Pricing on Canadian Households." Briefing Note to the Senate of Canada, Standing Committee on Energy, the Environment and Natural Resources.

Winter, Jennifer, Sarah Dobson & Sophie Lorefice. 2016. "Hydraulic Fracturing and Public Policy." Knowledge Synthesis Report prepared for the Social Sciences and Humanities Research Council.

## Working Papers

Dobson, Sarah, Victoria Goodday & Jennifer Winter. "If It Matters, Measure It: A Review of Methane Sources and Mitigation Policy in Canada." *Submitted.*

Schaufele, Brandon & Jennifer Winter. "Production Controls in North American Heavy Oil and Bitumen Markets." *Submitted.*

Winter, Jennifer, Brett Dolter & G. Kent Fellows. "Carbon Pricing Costs for Households and Revenue Recycling Options in Canada."

## Research in Progress

Dobson, Sarah & Jennifer Winter. "EITE Definitions and Policy Coverage."

Fellows, G. Kent & Jennifer Winter. "Economic Impact Assessments: Comparing CGE to IO Models." Chapter in *Measuring the Contribution of Energy Infrastructure: A Practical Guide*, Jennifer Winter and Trevor Tombe, eds.

Fosu, Felix, Blake Shaffer & Jennifer Winter. "Carbon pricing and energy poverty: The effect of environmental policy on households' ability to afford energy services."

Shaffer, Marvin, Blake Shaffer & Jennifer Winter. "A Multiple-Account Approach to Benefit-Cost Analysis." Chapter in *Measuring the Contribution of Energy Infrastructure: A Practical Guide*, Jennifer Winter and Trevor Tombe, eds.

Stewart, Fenner, Andrew Leach & Jennifer Winter. "A Federal Backstop to Provincial Carbon Pricing: Decarbonization in an Age of Uncooperative Federalism."

Winter, Jennifer & Akash Asif. "Comprehensive Assessment of Regulatory Programs."

Winter, Jennifer, Sefik Bagdadioglu, Sarah Dobson, Kent Fellows, Sophie Lorefice & Sean Keown. "Market Opportunities for Canadian Oil."

Winter, Jennifer & Trevor Tombe. *Measuring the Contribution of Energy Infrastructure: A Practical Guide* (co-edited book).

Winter, Jennifer. "History of Energy Taxes in Canada"

## Retired Working Papers

Johnson, David & Jennifer Winter. "Alberta Oil and Gas Leases: Testing Competing Institutions."

Winter, Jennifer. "Buying Anonymity: An Investigation of Petroleum and Natural Gas Lease Auctions"

Winter, Jennifer & J. C. Herb Emery. "Estimating the Credibility of the Co-operative Commonwealth Federation's Threat to Nationalize Oil Resources in Saskatchewan."

## Other Policy Papers

Schaufele, Brandon & Jennifer Winter. 2021. "Measuring the Economic Impact of Alberta's Crude Oil Curtailment Policy." Policy Brief, Ivey Energy Policy and Management Centre.  
[https://www.ivey.uwo.ca/media/3793185/iveyenergycentre\\_policybrief\\_dec2020\\_measuringeconimpactalbertacrudeoil\\_curtailment\\_2-9.pdf](https://www.ivey.uwo.ca/media/3793185/iveyenergycentre_policybrief_dec2020_measuringeconimpactalbertacrudeoil_curtailment_2-9.pdf).

Goodday, Victoria, Jennifer Winter & Nicholas Schumacher. 2020. "Energy & Environmental Policy Trends: The Hidden Costs of a Single-Use Plastics Ban." *The School of Public Policy Publications* (Policy Trends) 13 (November). <https://doi.org/10.11575/sppp.v13i0.71433>.

Schumacher, Nick, Victoria Goodday, Blake Shaffer & Jennifer Winter. 2020. "Energy and Environmental Policy Trends: Cheap Renewables Have Arrived." *The School of Public Policy Publications* (Policy Trends) 13 (November). <https://doi.org/10.11575/sppp.v13i0.71383>.

Masson, Richard & Jennifer Winter. 2020. "Energy and Environmental Policy Trends: Addressing the Threat of COVID-19 and the Oil Price War in the Petroleum Sector." *The School of Public Policy Publications* (Policy Trends) 13 (March).

- Fellows, G. Kent, Victoria Goodday, Rabia Ladha & Jennifer Winter. 2019. "Energy and Environmental Policy Trends: Our Planet in 2040 – Comparing World Energy Outlooks." *The School of Public Policy Publications* (Policy Trends) 12 (July). <https://doi.org/10.11575/sppp.v12i0.68679>.
- Tombe, Trevor & Jennifer Winter. 2019. "Energy and Environmental Policy Trends: Carbon Tax Costs Vary Widely Across Households." *The School of Public Policy Publications* (Policy Trends) 12 (March).
- Winter, Jennifer, Sarah Dobson, G. Kent Fellows, Dexter Lam & Paul Craig. 2018. "An Overview of Global Liquefied Natural Gas Markets and Implications for Canada." *The School of Public Policy Publications* (Briefing Paper) 11 (July). <https://doi.org/10.11575/sppp.v11i0.53162>.
- Winter, Jennifer & Sam Green. 2018. "Energy and Environmental Policy Trends: The Growing Opportunity for LNG in China." *The School of Public Policy Publications* (Policy Trends) 11 (June). <https://doi.org/10.11575/sppp.v11i0.53017>.
- Winter, Jennifer & Sarah Dobson. 2016. "Who is Getting a Carbon-Tax Rebate?" *The School of Public Policy Publications* (Communique) 9 (June). doi: <http://dx.doi.org/10.11575/sppp.v9i0.42595>.
- Beach, Shantel, Andrew Wilkins & Jennifer Winter. 2014. "The Future of Energy Regulation and Policy Development: A Summary Paper." *The School of Public Policy Publications* (Summary Paper) 7 (July). doi: <http://dx.doi.org/10.11575/sppp.v7i0.42472>.
- Jennifer Winter. 2014. "Safety in Numbers: Evaluating Canadian Rail Safety Data," *The School of Public Policy Publications* (Communique) 7 (April). doi: <http://dx.doi.org/10.11575/sppp.v7i0.42913>.
- Mintz, Jack, Ronald D. Kneebone, F. L. Ted Morton & Jennifer Winter. 2014. "Policy Advice to Alberta's New Premier," *The School of Public Policy Publications* (Communique) 7 (September). doi: <https://doi.org/10.11575/sppp.v7i0.42482>.
- Jennifer Winter. 2013. "Grasping at Straws: Comments on the Alberta Pipeline Safety Review." *The School of Public Policy Publications* (Communique) 6 (October). doi: <http://dx.doi.org/10.11575/sppp.v6i0.42442>.
- Tombe, Trevor & Jennifer Winter. 2013. "Shouldn't all policy be science-based?" *Policy Options*, June (invited contribution).
- Holburn, Guy, Patrick McNaught, M. C. Moore & Jennifer Winter. 2013. "Wind Energy in Canada: A Survey of the Policy Environment," Ivey Business School Policy Brief (June).

#### RESEARCH GRANTS AND CONTRACTS

- Calgary Foundation (\$20,000). Principal Investigator for *Multiple Account Benefit-Cost Analysis of Coal Mining in Alberta*: 2021.
- Alberta Innovates (\$71,875). Principal Investigator for *An Analysis of Policy Mechanisms to Support Commercial Deployment of Bitumen Partial Upgrading in Alberta*: 2020-2021.
- Emissions Reduction Alberta (\$15,500). Principal Investigator for *A Review of Barriers to Full-Scale Deployment of Emissions-Reduction Technologies*: 2019.
- SSHRC Knowledge Synthesis Grant (\$30,000). Principal Investigator for *Public interest determination in environmental decision-making*: 2019-2020.

University of Calgary Global Research Initiative in Sustainable Low Carbon Unconventional Resources (\$181,000), Principal Investigator for *Methane Emissions Policy and Regulation in Canada: Assessing Options and Effectiveness*: 2019-2023.

Smart Prosperity Institute (\$10,000), Principal Investigator for *Canadian Resource and Environmental Economics Association (CREEA) PhD and ECR Workshop*: 2019.

University of Calgary Faculty of Arts Scholarly Activity Grant (\$1,000), Principal Investigator for *Canadian Resource and Environmental Economics Association (CREEA) PhD and ECR Workshop*: 2019.

Government of British Columbia (\$35,000), Principal Investigator for *Basic Income, Basic Services and Energy Transition*: 2018-2020 (project grant).

SSHRC Partnership Grant (\$2,500,000), Co-Investigator for *Greening Growth Partnership*: 2018-2022. PI: Stewart Elgie, University of Ottawa.

Smart Prosperity Institute (\$48,000), Principal Investigator for *Carbon Pricing Costs for Households and Revenue Recycling Options in Canada*: 2018-2020 (project grant).

Alberta Innovates (\$74,000), Principal Investigator for *Regulation of Partial Upgrading in Alberta*: 2018-2019

Government of Canada (\$10,000), Principal Investigator for *Best practices in Regulation Development & Management*: 2018

SSHRC Partnership Development Grant (\$200,000), Principal Investigator for *Canadian Northern Corridor*: 2018-2020.

University of Calgary Vice President of Research Office (\$10,000), Principal Investigator for *Canadian Northern Corridor*: 2018-2020.

School of Public Policy, University of Calgary: Strategic Research Initiative (\$30,000), Principal Investigator for *Canadian Northern Corridor*: 2018-2019.

School of Public Policy, University of Calgary: Strategic Research Initiative (\$5,000), Principal Investigator for *End of Life for Oil and Gas Wells*: 2018-2019.

University of Calgary Faculty Seed Grant (\$15,000), Principal Investigator for *Canadian Methane Policy and Regulation*: 2018-2019.

Protection of the Arctic Marine Environment (\$15,000), Principal Investigator for *Meaningful Engagement of Indigenous Peoples and Local Communities in Marine Activities*: 2018.

School of Public Policy, University of Calgary: Strategic Research Initiative (\$40,000), Principal Investigator for *Canadian Methane Policy and Regulation*: 2017-2018.

School of Public Policy, University of Calgary: Strategic Research Initiative (\$45,000), Principal Investigator for *Canadian Northern Corridor*: 2017-2018.

School of Public Policy, University of Calgary: Strategic Research Initiative (\$50,000), Principal Investigator for *Canadian Emissions Policy*: 2017-2018.

NSERC CREATE (\$1,650,000), Co-Investigator for *Responsible Development of Low-Permeability Hydrocarbon Resources (the ReDeveLoP Challenge)*: 2017-2022. PI: David Eaton, University of Calgary.

Alberta Innovates (\$50,000), Principal Investigator for *Partial Upgrading Impact Study*: 2016.

SSHRC Knowledge Synthesis Grant (\$25,000), Principal Investigator for *Indigenous, Industry and Government Perspectives on Consultation in Resource Development*: 2016-2017.

SSHRC Knowledge Synthesis Grant (\$25,000), Principal Investigator for *Hydraulic Fracturing and Public Policy*: 2015-2016.



SSHRC Insight Development Grant (\$40,810), Collaborator for *Internal Trade and Aggregate Productivity*: 2012-2015. PI: Trevor Tombe, University of Calgary.

#### **FUNDS SECURED FOR THE SCHOOL OF PUBLIC POLICY**

Government of Alberta (\$1,665,000), *Canadian Northern Corridor*: 2019-2022.

Alberta Real Estate Foundation (\$120,000), *Airbnb and the Secondhand Economy and Managing the End of Life of Oil and Gas Wells in Alberta*: 2019-2021.

Canadian Association of Petroleum Producers (\$50,000), *Energy for Life Program*: 2018.

Canadian Energy Pipeline Association (\$50,000), *Student Research Fellowships*: 2017-2021.

Alberta Innovates (\$40,000), *Alternative Emissions-Accounting Project*: 2016-2017.

Government of Alberta (\$30,000), Advisory services to the Energy Diversification Advisory Committee, 2017.

#### **HONOURS AND AWARDS**

Canada's Top 40 Under 40, 2020 (nominated)

Canada Clean50 and Canada Clean16, 2019

Avenue Magazine, Calgary Top 40 Under 40, 2017

Alberta Oil Magazine, Top 35 under 35 in the Energy Sector, 2016

Young Women in Energy Award, 2014

#### **PROFESSIONAL AND COMMUNITY SERVICE**

##### **Service**

Treasurer, Canadian Resource and Environmental Economics Association, 2016 – present

Section Editor (Energy and Environmental Policy), *The School of Public Policy Publications*, 2015 – present

Advisory Committee, Alberta Narratives Project, 2018

##### **Policy Advising**

Prepared report (with G. Kent Fellows and Alaz Munzur) *An Analysis of Industrial Policy Mechanisms to Support Commercial Deployment of Bitumen Partial Upgrading in Alberta*, for Alberta Innovates, 2021.

Prepared report (with Blake Shaffer) *Defining and Describing Energy Poverty in British Columbia: The Distribution of Households' Energy Expenditure*, for the BC Basic Income Panel, 2020.

Prepared report (with G. Kent Fellows and Victoria Goodday) *A Review of Barriers to Full-Scale Deployment of Emissions-Reduction Technologies*, for Emissions Reduction Alberta, 2019. (Subsequently published.)

Prepared report (with Akash Asif) *Comprehensive Assessment of Regulatory Programs*, for Treasury Board of Canada Secretariat, Government of Canada, 2018.

Prepared report (with Brendan Boyd and Jessie Arthur) *Meaningful Engagement of Indigenous Peoples and Local Communities in Marine Activities: Phase 2 Analysis*, for the PAME Working Group of the Arctic Council, 2018.

Advisor, Federal Initiatives on Indigenous Relations, Government of Alberta, 2018.



Advisor to the Energy Diversification Advisory Committee, Government of Alberta, 2017.

Expert Testimony, appearance before the Senate of Canada, Standing Committee on Energy, the Environment and Natural Resources, 2017.

Expert Testimony, briefing note (“The Effect of Carbon Pricing on Canadian Households”) for the Senate of Canada, Standing Committee on Energy, the Environment and Natural Resources, 2017.

Member, Oil Sands and Crude Oil and Liquids working groups, Alberta Royalty Review, 2015-2016.

## **Refereeing**

I have refereed 32 items in the period 2015-2021. The following is a list of journals and organizations I have assisted.

*Alberta Law Review; The B. E. Journal of Macroeconomics; Canadian Institute for Climate Choices; Canadian Journal of Economics; Canadian Public Policy; C. D. Howe Institute; Contemporary Economic Policy; Energy Policy; Energy Research & Social Science; Environment, Development and Sustainability; The Extractive Industries and Society; Frontier Centre for Public Policy; Government of Alberta; Hong Kong Research Grants Council; IQ Carbone; Journal of Environmental Economics and Management; Journal of Economic Dynamics and Control; Mitacs (Accelerate Program); Natural Resources Canada; Routledge Press; Regulation & Governance; Review of Policy Research; Social Sciences and Humanities Research Council (Insight Grants); The School of Public Policy Publications (University of Calgary); Taylor and Francis Press.*

## **Conference Selection Committees**

CREEA 2019; CREEA 2018; CEA 2018; CEA 2017; CEA 2016; CREEA 2016.

## **DEPARTMENT/SCHOOL AND UNIVERSITY SERVICE**

2021 – Member, General Faculties Council, University of Calgary  
2017 – Member, Policy & Planning Committee, Department of Economics, University of Calgary  
2016 – Member, Engagement Committee, School of Public Policy, University of Calgary  
2015 – Member, Executive Committee, School of Public Policy, University of Calgary  
2015 – Member, Research Planning Committee, School of Public Policy, University of Calgary  
2015 – Member, Admissions Committee, School of Public Policy, University of Calgary  
2017-19 Graduate Program Committee, School of Public Policy, University of Calgary

## **INVITED CONFERENCE PRESENTATIONS, SEMINARS AND PANELS**

2021 GeoConvention 2021 (scheduled); Society of Petroleum Engineers, SPE Workshop: CCUS in Canada – Opportunities for a Net-Zero Future (webinar); World Petroleum Council, Virtual Expert Workshop: Sustainable Strategies for HSE in the Oil, Gas & Petrochemical Industries (webinar); Johnson Shoyama Graduate School of Public Policy, Budget Day 2021: COVID-19, Deficits and the Impacts on Western Canada (webinar); Canadian Heavy Oil Association, Leading Toward Net Zero in Heavy Oil (webinar); Women of #ABpoli Podcast; Alberta Electric System Operator, Economic Efficiency Forum; University of Alberta China Institute, Impacts of

- Biden's Climate Change Policy on China and Canada (webinar); Parliamentary Internship Program, Climate and Energy Policy in Canada and the United States (webinar).
- 2020 CBC, West of Centre Podcast; Online Agricultural and Resource Economics Seminar (webinar); Canadian Resource and Environmental Economics Association 30th Annual Conference (webinar); International Association of Energy Economics Webinar Series (webinar); GeoConvention 2020 (webinar); YPAC x Avatar Program (webinar); C. D. Howe Institute, COVID-19 Working Group on Business Continuity and Trade (online); Emissions Reduction Alberta, Alberta's Energy Future (webinar); European Association of Environmental and Resource Economists 25<sup>th</sup> Annual Conference (webinar).
- 2019 CBS Inequality Platform's 1st Workshop on Climate Change and Inequality, Copenhagen (withdrew); Atlantic Canada Economics Association, Annual Conference, Moncton; energy3 – Canada's Energy Conference, Halifax; Environment and Climate Change Canada, Carbon Pricing Workshop; Canadian Resource and Environmental Economics Association 29<sup>th</sup> Annual Conference, Charlottetown; World Petroleum Council 6<sup>th</sup> Future Leaders Forum, St. Petersburg, Russia; Congress of the Humanities and Social Sciences and Canadian Political Science Association, Annual Conference, Vancouver; Canadian Economics Association, Annual Conference, Banff; Environment and Climate Change Canada, Canada-France Seminar on Carbon Pricing, Paris; Instituto Español de Estudios Estratégicos and Repsol, Energy and Geostrategy 2019, Madrid; McGill Institute for the Study of Canada Annual Conference, Montreal; Global Affairs Canada Minneapolis Consulate, Energy Network Meeting; The Canadian Institute, 19<sup>th</sup> Annual Arctic Oil & Gas Symposium, Calgary; Calgary Association of Lifelong Learners, Science and Environment Speaker Series, Calgary; Canadian Society of Exploration Geophysicists, Technical Luncheon, Calgary.
- 2018 School of Public Policy, Measuring the Impacts of Energy Infrastructure, Ottawa; Haskayne School of Business, Haskayne Hour, Opportunities Down the Pipe: Influences on successful Indigenous and industry relationships, Calgary; Council for Clean and Reliable Energy, Energy Leaders Roundtable, Kananaskis; University of Calgary, Sustainable Development Goals Summit: Local Action, Global Impact (keynote), Calgary; Yukon First Nations Chamber of Commerce, Arctic Indigenous Investment Conference, Yellowknife; Global Petroleum Show 2018, Calgary; Ecofiscal Commission, School of Public Policy and the Max Bell School of Public Policy, Bridging Divides: In Search of Sound Public Policies for Energy and Environment in Canada, Calgary; Canadian Society for Unconventional Resources, Fractured Ground: Hydraulic Fracturing and Public Policy, Calgary; Treasury Board Secretariat of Canada; Regulatory Review Knowledge Synthesis Roundtable, Ottawa; University of Calgary, Calgary and Beyond: Sustainability Next 20 Years speaker series, Calgary; University of Calgary, Department of Geoscience, Friday Afternoon Talk Series, Calgary; Thompson Rivers University, School of Business and Economics Seminar Series, Kamloops.
- 2017 Mowat Centre, Confederation of Tomorrow 2.0, Toronto; Delphi Group, Energy Sector Sustainability Leadership Initiative workshop, Calgary; University of Toronto School of Public Policy and Governance, Canada's Policy Transformations: The Last 50 Years and the Next 50,

- Toronto; Energy *In Society*, Global Energy Transition Workshop, Calgary; SSHRC, Forum on Indigenous, Industry and Government Perspectives on Consultation in Resource Development, Ottawa; Global Petroleum Show, Low Carbon Innovation Forum, Calgary; Atlantic Canada Economics Association Annual Meeting, Antigonish; APEGA Calgary Branch Luncheon, Calgary; CAMPUT: Canada's Energy and Utility Regulators, CAMPUT Annual Conference, Vancouver; Canadian Heavy Oil Association, Technical Panel Presentation, Calgary; Webber Academy, The President's Breakfast Club ATB Financial Speaker Series, Calgary; Alberta Beef Industry Conference, Red Deer; Senate of Canada, testimony to Standing Committee on Energy, the Environment and Natural Resources (webcast), Calgary; University of Calgary, Faculty of Arts Speakeasy, Calgary; University of Calgary, Department of Geoscience, Friday Afternoon Talk Series, Calgary.
- 2016 Canadian Society of Petroleum Geologists Environment Division, lunch and learn series, Calgary; The Energy Roundtable, 2016 Calgary Energy Roundtable, Calgary; International Right of Way Association Chapter 48, IRWA Chapter 48 Education Symposium, Calgary; The Canadian Institute, Environmental Law and Regulation conference, Calgary; Canadian Independent Petroleum Marketers Association, Western Members Meeting (keynote), Calgary; Arctic Energy and Emerging Technologies Conference and Tradeshow, Inuvik; Energy and Mines Ministers' Conference, National Workshop on Public Confidence in Energy and Mining Development, Winnipeg; Alberta Utilities Commission, Energy Regulatory Forum, Calgary; CAMPUT: Canada's Energy and Utility Regulators, CAMPUT Annual Conference, Montreal; Canadian Prairie & Northern Section Air & Waste Management Association, CPANS Annual Conference, Calgary; Runnymede Society, Keystone XL: Pipelines, Policy & Politics, Calgary; Ecofiscal Commission, Federal Provincial Carbon Coordination webinar.
- 2015 SSHRC and Natural Resources Canada, Knowledge Symposium on Energy & Natural Resources, Ottawa; Calgary Chamber of Commerce, How will global markets and FX rates affect your business in 2016?, Calgary; Energy Council of Canada, Energy Summit, Toronto; Biorefining Conversions Network, Green Chemistry Workshop, Edmonton; Canada Science and Technology Museums Corporation, Let's Talk Energy webinar; Chartered Professional Accountants, Canada Tax Symposium West (keynote), Calgary; National Public Relations LNG Forum, Ottawa; Canadian Political Science Students' Association National Conference, Calgary.
- 2014 Israel Defense: Energy 2015, Tel Aviv; 2<sup>nd</sup> Annual Canadian NGL Markets, Infrastructure & LPG Exports, Calgary; Petroleum Acquisition and Divestitures Association, Calgary; Alberta GHG Summit, Calgary; Canadian Resource and Environmental Economics Study Group Annual Conference, Saskatoon; Brookings Institution Natural Gas Task Force, Washington D.C.; BP Canada Energy Group Customer Forum, Banff; Alberta's Energy Future (panel organized by the Liberal Party of Canada), Calgary; University of Calgary, Department of Economics Alumni Conference; Canadian Economics Association Annual Meeting, Vancouver.
- 2013 Energy Literacy Directions, Kananaskis Village; Canadian Economics Association Annual Meeting, Montreal; World Petroleum Council Youth Forum, Calgary.

- 2011 Sonoma State University, Department of Economics Seminar, Sonoma; Missouri University of Science and Technology, Rolla; Department of Economics Seminar; Oklahoma State University, Spears School of Business Seminar, Stillwater; University of Alberta, School of Business Seminar, Edmonton; Canadian Economics Association Annual Meeting, Ottawa.
- 2010 University of Calgary, Department of Economics Seminar; Canadian Resource and Environmental Economics Study Group Annual Meeting, Guelph; University of Calgary, Department of Economics Workshop.
- 2009 University of Calgary, Department of Economics Summer Seminar Series; Petroleum History Society of Calgary June Meeting; University of Calgary, Department of Economics Graduate Students Mini-Conference; Canadian Economics Association Annual Meeting, Toronto.
- 2008 Canadian Economics Association Annual Meeting, Vancouver.
- 2007 Queen's University Economic History Workshop, Kingston; University of Calgary Department of Economics Workshop.

#### **CONFERENCE ORGANIZATION**

Canadian Resource and Environmental Economics Association 30th Annual Conference (online), 2020  
 Canadian Resource and Environmental Economics Association 6th Canadian PhD and Early Career Workshop, Calgary (online), 2020  
 Canadian Resource and Environmental Economics Association 5th Canadian PhD and Early Career Workshop, Calgary, 2019  
 The School of Public Policy, Measuring the Impacts of Energy Infrastructure, Ottawa, 2018  
 The School of Public Policy, Indigenous Policy Conference: Beyond Reconciliation, Calgary, 2016  
 Canadian Resource and Environmental Economics Study Group Annual Conference, Banff, 2016  
 The School of Public Policy, Canadian Network for Energy Policy Research and Analysis Conference on Public Acceptance of Energy Projects, Ottawa, 2015  
 The School of Public Policy, Canadian Network for Energy Policy Research and Analysis Workshop, Calgary, 2015  
 The School of Public Policy, Labour Markets Roundtable, Calgary, 2014  
 The School of Public Policy, Social Licence Symposium, Calgary, 2014  
 The School of Public Policy, Regulatory Roundtable: Social Licence, Denver, 2014  
 The School of Public Policy, Risk and Its Influence on Public Policy Symposium, Calgary, 2014  
 The School of Public Policy, Asian Market Diversification Symposium, November 2013  
 The School of Public Policy, Energy Regulation Symposium, Calgary, 2013  
 The School of Public Policy, Regulatory Roundtable: Regulatory Hurdles, Denver, 2013  
 The School of Public Policy, Dutch Disease Symposium, Toronto, 2013

#### **CONFERENCE ATTENDANCE**

Canadian Resource and Environmental Economics Association Annual Conference, 2018; Canadian Economics Association Annual Meeting, 2018; Canadian Resource and Environmental Economics Study Group Annual Conference, 2017; Canadian Economics Association Annual Meeting, 2017; American Economics Association Annual Meeting, 2016; Canadian Resource and Environmental Economics Study

Group Annual Conference, 2016; Canadian Resource and Environmental Economics Study Group Annual Conference, 2015; Canadian Economics Association Annual Meeting, 2015; Positive Energy Conference, 2015; American Economics Association Annual Meeting, 2015; Canadian Resource and Environmental Economics Study Group Annual Conference, 2014; RBN School of Energy, 2014; Canadian Resource and Environmental Economics Study Group Annual Conference, 2013; Rocky Mountain Empirical Trade Conference, 2013; Canadian Energy Research Institute Natural Gas Conference, 2013; American Economics Association Annual Meeting, 2013; Canadian Resource and Environmental Economics Study Group Annual Conference, 2012; Canadian Economics Association Annual Meeting, 2012; Canadian Resource and Environmental Economics Study Group Annual Conference, 2009; University of Calgary School of Public Policy Inaugural Conference, 2009; University of Calgary Institute for United States Policy Research Transboundary Water Policy Issues: The Western North American Region, 2008; University of British Columbia Summer Conference on Industrial Organization, 2006.

### **TEACHING EXPERIENCE**

University of Calgary, Responsible Development of Hydrocarbons and Policy (PPOL 611.23/699.02) – Spring 2021 (online); Spring 2020, Spring 2019

University of Calgary, Foundations I: Analytical Foundations (PPOL 601) – Fall 2020 (co-taught with Dr. Lindsay Tedds)

University of Calgary, The Multi-Faces of Israel (PPOL 611.07) - Winter 2020 (instructor of record); Winter 2019, Winter 2018 (on-location faculty supervisor for study abroad course)

University of Calgary, Energy and Environmental Policy (PPOL 611.02) - Winter 2015, Fall 2016, Fall 2017, Fall 2018

University of Calgary, Decision Analysis (PPOL 609) - Winter 2016, Winter 2017, Winter 2018

University of Calgary, Intermediate Macroeconomics (ECON 303) - Spring 2010

University of Calgary, Introductory Microeconomics (ECON 201) - Summer 2009

Teaching Assistant, University of Calgary, 2005 – 2011

### **Guest Lectures**

University of Calgary, The Study of Public Policy (PPOL 600) – Fall 2020 (online)

University of Calgary and Laval University, Summer School on the Geopolitics of Natural Resources (PPOL 611.21) - Spring 2014, Spring 2015, Spring 2016, Spring 2019

University of Calgary, Dentons' International Energy Law Study Tour (Law 693) - Winter 2017, Winter 2018, Winter 2019, Fall 2019

### **ACADEMIC SUPERVISION**

#### **Postdoctoral Scholars**

Evgeniia (Jen) Sidorova, 2021 – present

Katharina Koch, 2020 – present

Brendan Boyd, 2016 – 2017; placement: MacEwan University

E. Dylan Morgan, 2015; placement: Environment and Climate Change Canada

## PhD Students

Adegboyega During, PhD – University of Calgary, *Essays in Energy and Policy Analysis*, 2019 (PhD Defence Internal Examiner)  
Zainab Dadashi Forshomi, University of Calgary, *Evaluating Oil Sands Technologies Using Life Cycle Assessment and Mathematical Optimization*, 2017 (PhD Candidacy Committee)  
Julie Williams, PhD – University of Victoria, *Environmental Leadership and Regulation: Policy Implications for Provincial Governments in Canada*, 2015 (PhD Defence External Examiner)

## Master's Students

Amelia Harman, MPP/JD Candidate, expected graduation Fall 2021  
Keshia Holloman-Dawson, MPP/JD Candidate, expected graduation Fall 2021  
Kimberly Markvoort, MSc SEDV Candidate, expected graduation Fall 2021  
Andreas Murphy, MPP Candidate, expected graduation Fall 2021  
Emma Dizon, MPP, *The Impact of the Regulatory Environment on the Ease of Doing Business: How Calgary Measures Up*, 2019-2020  
Laura Flinkfelt, MPP, *Evaluating Toronto's Waste Diversion and Generation Performance 2006–2019*, 2019-2021  
Christian Loudon, MPP, *Measuring and Mitigating CleanBC's Impact on Energy Affordability*, 2018-2020  
Marcus Threndyle, MPP/JD, *Developing renewable electricity generation with feed-in tariff policy*, 2019-2020  
Alyssa Anderson, MPP, *Alberta in the Age of Renewable Power: Policy Lessons from Germany and Sweden*, 2018-2019  
Mitchell Boyne, MPP, *Oil Change: How the Global Oil and Gas Downturn Transformed Canada's Energy Industry*, 2018-2019  
M. Shae Doyle, MPP, *Microgeneration and Smart Grids: The Alberta Context*, 2017-2019  
Ryan Green, MPP, *Bending the Curve: Reducing Alberta's Oil & Gas Liabilities via Timelines on Well Abandonments*, 2018-2019  
April Kargard, MPP, *Investigation into the Effects of Resource Development Projects on Rural and Indigenous Communities*, 2018-2019  
Braeden Edwards, MPP, *Pipelines, Public Interest, and Regulatory Change: The Public Interest Implications of Including Indirect Greenhouse Gas Emissions in Federal Environmental Assessments*, 2017-2018  
Neuczki Mathurin, MPP, *Drilling into Policy Effectiveness: An Evaluation of Carbon Pricing Policies in Oil and Gas Jurisdictions*, 2017-2018  
Jade McLean, MPP, *Public Perceptions of Pipeline Development in Canada*, 2017-2018  
Graeme Davidson, MPP candidate, 2017  
Jessie Arthur, MPP, *Carbon Capture in Alberta: Costs, Benefits, and Policy*, 2016-2017  
Kiran Gurm, MPP, *The feasibility of reducing Nunavut's diesel reliance with a transition to renewable energy technologies, primarily solar and wind energy*, 2016-2017  
Karen Spencer, MPP, *Four Easy Ways to Reduce Canada's GHG Emissions*, 2016-2017  
Austin Thompson, MPP, *Evaluating For-Profit Ridesharing Regulations in Canada*, 2016-2017  
Zach Biggs, MPP, *How to Protect Lower-Income Albertans from a Carbon Tax*, 2015-2016

Brendan Frank, MPP, *Keeping the Lights On: Renewable Power in Alberta's Post-Coal Era*, 2015-2016  
Beth McDonald, MPP, *Examining the Role of Electoral Systems in the Policy Influence of Aboriginal Populations: A Comparative Analysis of the Canadian, Australian, and New Zealand Cases*, 2015-2016  
Laura Johnson, MPP, *Regulation of small modular nuclear reactors in Canada*, 2015

#### **EMPLOYEE SUPERVISION**

(Excludes part-time research assistants)

Kayla Arcand, Summer Research Assistant, School of Public Policy, 2021  
Kalab Begna, Summer Research Assistant, School of Public Policy, 2018  
Sarah Dobson, Research Associate, School of Public Policy, 2015 – present  
G. Kent Fellows, Research Associate, School of Public Policy, 2015 – present  
Emily Galley, Research Coordinator, School of Public Policy, 2020 – present  
Victoria Goodday, Research Associate, School of Public Policy, 2018 – 2021  
Andrea Jaros, Program Coordinator, School of Public Policy, 2021 – present  
Shantel Jordison, Manager, School of Public Policy, 2015 – 2016  
Hannah Lederman, Program Coordinator, 2019 – 2020  
Sophie Lorefice, Research Associate, School of Public Policy, 2014 – 2017  
Kathleen Mullrooney, Research Assistant, School of Public Policy, 2019 – 2020  
Alaz Munzur, Research Associate, School of Public Policy, 2020 – present  
Evelyn Taylor-McGregor, Summer Research Assistant, School of Public Policy, 2012

#### **PROFESSIONAL AFFILIATIONS**

American Economics Association (2011, 2013; 2015-2016); Canadian Economics Association (2010 – present); Canadian Resource and Environmental Economics Association (2010 – present); Smart Prosperity Institute Economics and Environmental Policy Research Network (2018 – present); Young Women in Energy (2014 – present).

#### **OTHER**

Regularly provide solicited information, advice, and guidance to governments and public servants in Canada.

Regularly appear on television, radio, podcasts, print media, and other forums, providing economic and policy commentary on current events. This is typically 20-30 appearances in a given year, and higher in election years.

Various general-interest articles and op-eds in *Alberta Views*, *Calgary Herald*, *CBC Opinion*, *CBC News*, *Edmonton Journal*, *The Globe and Mail*, *The Hill Times*, *JWN News*, *Vancouver Sun*.

Blog posts on via the Canadian Institute for Climate Choices and the School of Public Policy, University of Calgary.