

# 4<sup>th</sup> Annual Workshop on the Economics of Electricity Policy and Markets



October 6, 2020 – October 28, 2020

## ABOUT THE WORKSHOP

The Ivey Energy Policy and Management Centre hosts a one-day workshop every October on the Economics of Electricity Policy and Markets. The workshop brings together prominent scholars, practitioners and industry to share ideas and research on contemporary issues related to electricity policy, regulation and electricity markets, with the goal of:

- Fostering independent academic research that contributes to effective electricity policies and competitive electricity market design;
- Expanding the network of researchers in Canada with an interest in electricity markets and electricity policies and regulation; and,
- Building a community of academics and practitioners in Canada who are active in electricity policy.

## 2020 VIRTUAL WORKSHOP

This year, the Ivey Energy Centre will host the workshop virtually in the month of October as a series of webinars. The webinar series will follow the normal workshop format with three panel sessions and a keynote address. The panel sessions will involve a moderator and three invited speakers with representation from academia, industry and government institutions. Brian Rivard from Ivey will host each of the sessions. Each webinar will run for approximately 1 hour and 20 minutes (30 to 40 minutes for speakers and 30 to 40 minutes for moderator and audience questions).

## **Workshop Theme: Mega Projects, Distributed Energy and the Modern Grid**

### **Synopsis**

The North American electric grid is undergoing a modernization. There is continued growth in the deployment of renewable energy resources as societies look to reduce their carbon emissions. The cost of scalable distributed energy resources continues to decline. End-use consumers are poised to play a more active role in the electric system with advances in new technologies such as smart home appliances, electric vehicles, energy storage and advanced metering infrastructure. What does this mean for the optimal generation mix of the future? This Workshop will explore the economic and policy factors influencing investment in centralized mega energy projects and decentralized consumer-controlled distributed energy resource, with insights from academics, industry and institutional practitioners.

## **WORKSHOP AGENDA**

### **Tuesday, October 6, 2020**

11:00 am EST

#### **Session 1: Is There a Future for Mega Energy Projects?**

##### *Topics of exploration:*

- As the cost of scalable distributed energy resources continues to decline, is there a business case for investment in traditional large-scale generation facilities?
- Are mega projects doomed to overrun on cost budgets and construction schedules?
- Will the pursuit of a net zero economy lead to greater demand for Canada's hydroelectric resources and increased market integration with the United States?

Moderator: Kevin Dawson (AESO)

##### Speakers:

- Guy Holburn (Ivey Business School)
- John Mikkelsen (TC Energy)
- AJ Goulding (London Economics)

### **Tuesday, October 13, 2020**

11:00 am EST

#### **Session 2: Are Decentralized Energy Resources the Future of Electricity?**

##### *Topics of exploration:*

- What are the costs, environmental and reliability benefits of self-supply through distributed generation?
- What are the barriers to efficient investment in distributed energy resources?
- Are net metering rules ever optimal?

Moderator: Nicole LeBlanc (AESO)

##### Speakers:

- David Brown (University of Alberta)
- Patrick Lo (IESO)
- Paul Grod (CEO Rodan Energy)

**Tuesday, October 20, 2020**

11:00 am EST

### **Session 3: Regulators Roundtable: Modernizing regulatory and institutional frameworks**

*Topics of exploration:*

- What are the strengths and weaknesses of the current approaches to governing electricity supply?
- Will the modern grid be governed by imperfect markets or imperfect regulation?
- Is there a need for more harmonization or consolidation of regulatory institutions in Canada?
- What does the utility regulator of the modern grid look like?
- What are the biggest challenges of the regulator of the future?

Moderator: Adam Fremeth (Ivey Business School)

Speakers:

- Dave Morton (Chair of the BCUC)
- Paula Conboy (Former Chair of the Australian Energy Regulator)
- George Vegh (McCarthy Tétrault)

**Wednesday, October 28, 2020**

11:00 am EST

### **Session 4: Keynote Addresses – Future Developments in Electricity Market Design and Organization**

*Topics of exploration:*

Two thought leaders, one academic and one industry, will share their vision on the policy changes needed for the modern grid.

Moderator: Brandon Schaufele (Ivey Business School)

Speakers:

- William Hogan (Harvard)
- Kathleen Spees (The Brattle Group)

## **SPEAKERS AND MODERATORS**



### **David Brown**

David Brown is an Associate Professor at the University of Alberta's Department of Economics. He holds a Canada Research Chair in Energy Economics and Policy and is the President of the Canadian Association for Energy Economics. His research lies at the intersection of energy economics, industrial organization, and regulatory policy. This includes research that measures market power execution in electricity markets, analyzes the impacts of mergers and market structure changes, designing regulations to motivate utilities to invest in cost-effective distributed energy resources, and analyzing the impacts of compensation policies on renewable investment.



### **Paula Conboy**

Paula Conboy is a veteran energy expert and regulator who is currently Senior Counsel at Sussex Strategy Group. Most recently, Paula was Chair of the Australian Energy Regulator and she presently serves as a Board Member of the Energy Market Authority in Singapore. She has also served as a Board Member of the Ontario Energy Board, and is recognized internationally as an expert in related energy market and regulatory affairs. Paula has over 25 years of experience as an executive in organizations or as regulatory Chair and board member. She is often called on to consult and advise executives and directors on leadership, corporate governance, political engagement and leading transformational change.



### **Kevin Dawson**

Kevin Dawson is Director, Forecasting and Analytics at the Alberta Electric System Operator (AESO) and has been with the organization since 2010. In this role he is responsible for overseeing the development and use of forecasts and data analysis to provide insights used within the AESO and by industry stakeholders to make informed decisions. Prior to joining the AESO, Mr. Dawson spent 12 years at TransAlta, holding progressively senior roles in the areas of market analysis, risk management, commercial and portfolio management and commodity hedging. Kevin holds a Bachelor of Arts Honours degree in Economics and a Master of Arts degree in Economics, both from the University of Calgary. In addition, he is a Chartered Financial Analyst charterholder.



### **Adam Fremeth**

Adam Fremeth is the E.J. Kernaghan Professor in Energy Policy and Associate Professor of Business, Economics, and Public Policy at the Ivey Business School. His research focus is on how firms engage and respond to public policy, with particular attention to regulated utilities and the upstream oil and gas sector. Ongoing research projects include how firms engage with First Nations communities through the application of Impact and Benefit Agreements, the role of activist groups on regulatory rulings in the electric utility sector, and the patterns of personal campaign contributions by Chief Executive Officers. His work has been published in top tier economics and management journals. This research agenda has been awarded numerous national grants from the Social Sciences and Humanities Research Council and he was named a Fulbright Scholar for 2018/19. He received his HBA from the Ivey Business School, his MA from Carleton University and his Ph.D from the University of Minnesota.



### **A.J. Goulding**

In his role as president of London Economics International LLC, A.J. Goulding manages a growing international consulting firm focused on finance, economic, and strategic consulting to the energy and infrastructure industries. In addition to serving as a sector expert in electricity and gas markets, his responsibilities include project management, marketing, budget and financial control, and recruiting. A.J. also serves as an Adjunct Associate Professor at Columbia University, where he teaches a course on electricity market design and regulatory economics. In addition, he is a member of the Ontario Energy Board's Advisory Committee on Innovation.



### **Paul Grod**

Paul Grod is President and Chief Executive Officer at Rodan Energy. Prior to co-founding Rodan Energy in 2003, Paul was a corporate and investment banker with CIBC World Markets and later practiced corporate finance and M&A law with Gowling Lafleur Henderson LLP, one of Canada's largest national law firms. Paul is a member of the Law Society of Ontario and holds a Bachelor of Political Science degree, a Bachelor of Laws degree, and a Master of Business Administration degree.



### **William Hogan**

William W. Hogan is the Raymond Plank Research Professor of Global Energy Policy at the John F. Kennedy School of Government, Harvard University. He is research director of the Harvard Electricity Policy Group (HEPG), which examines alternative strategies for a more competitive electricity market. Hogan has been a member of the faculty of Stanford University where he founded the Energy Modeling Forum (EMF), and he is a past president of the International Association for Energy Economics (IAEE). Current research focuses on major energy industry restructuring, network pricing and access issues, market design, and energy policy in nations worldwide. Hogan received his undergraduate degree from the U.S. Air Force Academy and his MBA and PhD from UCLA.



### **Guy Holburn**

Guy Holburn is Professor of Business, Economics and Public Policy, and Suncor Chair in Energy Policy at the Ivey Business School. His areas of expertise are regulation, governance, and business strategy, with a focus on the energy and utilities sectors. Dr. Holburn is the founder and Director of the Ivey Energy Policy and Management Centre, which conducts applied research on energy sector policy in Canada. He is also a director of London Hydro, an advisory board member of the Canadian Network for Energy Policy Research and Analysis, and a member of the Council for Clean and Reliable Energy. Dr. Holburn has served as consultant to corporations and governments in Canada and the U.S., and has testified as an expert witness on regulation and corporate governance at the Muskrat Falls Inquiry and on business strategy in commercial litigation. He holds a Ph.D. and M.A. from the University of California, Berkeley, and a B.A. Hons. (First Class) from Cambridge University. Previously he worked for several years as a management consultant for Bain and Company in the U.K. and in South Africa.



### **Nicole LeBlanc**

Nicole LeBlanc is Director, Markets & Tariff with the AESO. With the electricity industry on the cusp of transformational change, Nicole is accountable for leading a team of experts at the AESO responsible for market design and the ISO Tariff who are focused on shaping the Alberta electricity framework for the transformation of Alberta's electricity future to deliver reliability and enhance the quality of life for Albertans. Nicole has nearly two decades of experience evaluating and designing various aspects of Alberta's power industry, including policy development, technology evaluation, system modelling, market design, demand-side and supply-side forecasting as well as strategic planning. Nicole is routinely asked to sit as AUC witness for the AESO and is a frequent presenter and panelist on Alberta's electricity market. Nicole holds a Master's degree in Economics and a Bachelor of Applied Mathematics, both from the University of Calgary.



### **Patrick Lo**

Patrick Lo has over 14 years of experience in the electricity sector and is currently the Senior Manager of Partnerships in Innovation, Research, and Development at the Independent Electricity System Operator (IESO). He oversees the Grid Innovation Fund and its portfolio of projects which serves as a vehicle to provide financial support to innovative projects with significant potential to enable ratepayer cost savings and improved reliability. Prior Patrick held various positions at Hydro One, including leading its 10 year distribution strategy and advising on grid modernization through SCADA technologies to improve system reliability.



### **John Mikkelsen**

John Mikkelsen is Director, Power & Storage for TC Energy. John has worked in power development engineering and power business development for TC Energy out of the Toronto office since 2003. John was the Development Project Manager on the TransCanada Halton Hills Generating Station, and Napanee Generating Station and Development Engineering Manager on Coolidge Generating Station. Since 2016 John has been leading development of the Pumped Storage Project at Meaford. Prior to joining TransCanada John held development engineering roles at Calpine, TransAlta and Northland Power. John has over 30 years experience in the development of natural gas fired power generation facilities primarily in Ontario. John holds an M.A.Sc. and a B.A.Sc. in Mechanical Engineering from the University of Waterloo and is a member of the Professional Engineers of Ontario.



### **David Morton**

David Morton was appointed Chair and CEO of the BCUC in December 2015. David's responsibility is to deliver on the Vision of the BCUC—to be a trusted and respected regulator that contributes to the well-being and long-term interests of British Columbians. In addition, to being the Chair and CEO, he is also a Commissioner—a role he has had since 2010. He considers this to be a key part of his leadership role. As a result, he continues to participate, usually as the Panel Chair, in a number of key proceedings. A significant proceeding that he recently led is the Site C Inquiry—the largest proceeding ever undertaken by the BCUC. David also has over 25 years of experience as a consultant in the information technology sector. He is a Professional Engineer in British Columbia, has a Licentiate in Accounting from the Society of Management Accountants Canada, is certified with the ICD.D designation in 2013 by the Institute of Corporate Directors and holds a Bachelor of Applied Science from the University of Toronto. David also serves as director for the Arts Club Theatre Company, and as President of the West Vancouver Community Arts Council.



### **Brian Rivard**

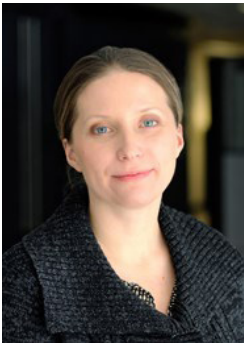
Brian Rivard is an Adjunct Professor at the Ivey Business School and Director of Research for the Ivey Energy Policy and Management Centre. His area of expertise and study is electricity market design and regulation. Brian has experience as an energy consultant, most recently as a Principal at Charles River Associates. He also worked for the Independent Electricity System Operator (IESO) as Director of Markets. For almost 15 years at IESO, he helped support the development of market-based approaches to managing Ontario's electricity system needs. In addition, Brian spent six years as a senior economist with the Canadian Competition Bureau. He has written articles for various publications such as the Energy Journal, Canadian Competition Record, Antitrust Law Journal, and the Journal of Economic Theory as well as chapters included in Competition Policy and Intellectual Property Rights in the Knowledge-Based Economy and Payments Systems in the Global Economy: Risks and Opportunities. He has also provided expert testimony

before the US Federal Energy Regulatory Commission and the Ontario Energy Board. He received his MA and PhD in Economics from the University of Western Ontario.



### **Brandon Schaufele**

Brandon Schaufele was awarded a three-year Ivey Energy Consortium Fellowship in 2015. He is an Assistant Professor of Business, Economics, and Public Policy at the Ivey Business School. Prior to coming to Ivey in 2014, Schaufele was an Assistant Professor in the Department of Economics at the University of Ottawa, as well as Research Director of the university's Institute of the Environment. Having also served as the Research Director of Sustainable Prosperity, a leading Canadian think-tank on environment-economy issues, his research focuses on the links between firms, governments and civil society, with special emphasis on energy and environmental policy. Recent research has concentrated on how consumers and firms respond to major Canadian greenhouse gas emission reduction initiatives.



### **Kathleen Spees**

Dr. Kathleen Spees is a Principal at The Brattle Group with expertise in wholesale electricity and environmental policy design and analysis. Her work for market operators, regulators, regulated utilities, and market participants focuses on: energy, capacity, and ancillary service market design; the design of carbon and environmental policies; valuation of traditional and emerging technology assets; and strategic planning in the face of industry disruption. Dr. Spees has worked in more than a dozen international jurisdictions supporting the design and enhancement of environmental policies and wholesale power markets in decarbonizing electricity systems. Dr. Spees has supported the IESO since 2014 in a number of market design efforts and modeling analyses of the Ontario electricity system. Dr. Spees earned her PhD in Engineering and Public Policy within the Carnegie Mellon Electricity Industry Center in 2008 and her MS in Electrical and Computer Engineering from Carnegie Mellon University in 2007. She earned her BS in Physics and Mechanical Engineering from Iowa State University in 2005.



### **George Vegh**

George Vegh is the head of McCarthy Tétrault's Toronto energy regulation practice, where he provides advocacy and advisory services to private and public sector clients. George's main focus is on public utility and wholesale market regulation in the energy sector. Prior to joining McCarthy Tétrault, George was General Counsel of the Ontario Energy Board. George is an Adjunct Professor of Energy Law and Regulatory Governance at the University of Toronto Law School, the Munk School of Global Affairs and Public Policy, University of Calgary Law School and at Osgoode Hall Law School, where he is also the Program Director for the Masters' Program in Energy and Infrastructure Law.

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*Innovation at work*



*Mr. Ted Kernaghan  
HBA '65*



The Centre also thanks the following organizations for their financial support of this particular event:

