WORKSHOP

ENERGY DATA IN CANADA

WHAT OPTIONS TO IMPROVE DATA ACCESS AND AVAILABILITY TO SUPPORT THE ENERGY TRANSITION?

Chair in Energy Sector Management
HEC MONTRÉAL

PREPARED FOR
Québec

WITH THE COLLABORATION OF
Statistique Canada | Statistics Canada

PROGRAMME

September 28, 29 and 30, 2021
Virtual workshop and round tables (via Zoom)

OBJECTIVE

The workshop, organized by the Chair in Energy Sector Management at HEC Montréal, in collaboration with Statistics Canada and Quebec's ministère de l'Énergie et des Ressources naturelles (MERN), aims to initiate a dialogue on actions to be taken to improve the transparency, accessibility and availability of energy data in Canada with respect to the energy transition and decarbonizing the economy.

The workshop consists of two parts: first, a scoping conference to lay out the state of Energy Data in Canada, followed by round tables to discuss key issues and define courses of action. The event will focus on two issues: (1) the availability and the coverage of energy data and (2) data access and suppression. The following section briefly defines each of these topics.

BACKGROUND AND ISSUES

Achieving the net-zero emission target by 2050 requires profound changes to energy systems and production and consumption patterns (e.g., transport, buildings, industries and agriculture). Designing and implementing actions to achieve this goal will require that the various players have objective, detailed and transparent information on these energy systems. However, it is sometimes difficult for several actors (researchers, consultants, municipal, provincial and federal decision makers, NFPs, businesses) to access several key statistics needed to carry out analyses that support decision making. This lack of data access is a barrier to innovation and effective coordination of actions to accelerate the energy transition.

Two main challenges are emerging with respect to energy data in Canada:

1) **Availability:** The purpose of data availability is to ensure that the data are available to end users for utilization when and where they need them.[1] It defines the extent to which data are easily usable, as well as the necessary procedures and computer tools needed to manage, update and make that data available. In Canada, some energy data exist, but they are dispersed or difficult to use. Availability issues affect both the scope of the subjects covered by the data and their temporal and geographic granularity. For example, some energy sectors have little or no coverage, such as biomass, renewable energy and hydrogen. Several data are available only on an annual or monthly basis and sometimes only at the national or provincial level. More frequent and detailed data at the regional level are regularly requested.

2) **Limited access and suppression:** Data access refers to a user's ability to access or find data in a database or other structured format to retrieve and manipulate them for analysis.[2] Some data, collected by Statistics Canada and other government agencies, are suppressed for confidentiality reasons. This often has to do with the competitive sensitivities of the responding industries, or the absence of a confidentiality waiver obtained from a data provider under the *Statistics Act*. This suppression limits sector monitoring, market understanding and, therefore, the ability to make informed decisions related to the energy transition.

Tuesday, September 28, 2021 [9 a.m. – noon]

CONFERENCE *(Zoom)*

The purpose of the conference is to prepare participants for the round tables. Presentations are intended to provide an overview of energy data issues and practices in Canada and elsewhere, as well as tools for improving transparency, accessibility and key data sharing to better inform decisions on the energy transition and decarbonizing the economy.

9:00

Opening remarks (5 min)
Johanne Whitmore, Senior Researcher, Chair in Energy Sector Management, HEC Montréal

Welcoming remarks (5 min)
Mathieu Payeur, Director, Energy Strategies, MERN's Secteur de l'innovation et de la transition énergétiques

[1] Techopedia, 2021. *Data Availability*, website (May 10, 2021), http://www.techopedia.com/definition/14678/data-availability
[2] Techopedia, 2021. *Data Access*, website (May 10, 2021), http://www.techopedia.com/definition/26929/data-access

9:10 ## Part 1. Overview of energy data (1h20)

Canadian approach to data suppression and sharing (20 min)

- **Carolyn Cahill**, Director, Environment and Energy Statistics, Statistics Canada
- **Angelo Elias**, Chief, Portal, Data and Analyses, Canadian Centre for Energy Information (CCEI), Statistics Canada

Perspectives and issues for provincial governments — Quebec case (15 min)

- **Ismaël Cissé**, Economist, Strategic Affairs Branch, Quebec's ministère de l'Énergie et des Ressources naturelles

Industry perspectives and confidentiality issues (25 min)

- **Christophe Bélanger**, Hydro-Québec
- **Ann Hagedorn**, Industry Coordonator, Petrinex

Question period (15 min)

10:25 15-minute break

10:40 ## Part 2. Benchmarking of energy data access and availability practices (1h15)

Energy Data Availability: Needs and Markup (10 min)

- **Pierre-Olivier Pineau**, Full Professor, Chair in Energy Sector Management, HEC Montréal

Balancing Statistical Principles—the U.S. System (20 min)

- **Thomas Leckey**, Assistant Administrator for Energy Statistics, U.S. Energy Information Administration

Energy Data Access and confidentiality—legal perspectives (20 min)

- **Alexia Argiolas**, PhD Student, Faculty of Law, Université de Montréal

Research perspectives on Industrial Energy Data (15 min)

- **Bradford Griffin**, Director General, The Canadian Energy and Emissions Data Centre, Simon Fraser University

Question period (15 min)

12:05 End of conference

Wednesday, September 29 (table **#1**, 9:00 to 11:00 a.m. / *table **#2**, 1:00 to 3:00 p.m.*)
Thursday, September 30 (table **#3**, 9:00 to 11:00 a.m. / *table **#4**, 1:00 to 3:00 p.m.*)

ROUND TABLES *(Zoom)*

Given the uncertainty about health rules, the round table will be conducted by videoconference on invitation. Confirmed participants will be assigned to **one** of the tables, and a Zoom link will be sent to them to join their table. The workshop will bring together stakeholders from various decision-making levels from academia, the government, the private sector and the community. Each table will be composed of 10 participants who will have 15 to 20 minutes per question to discuss their recommendations. The answers that will be noted will aim to represent **points shared by the group**. Discussions will follow the Chatham House rules[3] and will be highlighted in a workshop report.

9:00 a.m. **Facilitator's opening remarks**
[1:00 p.m.] Operating guidelines for the round tables; round table

9:15 a.m. **Round tables**
[1:15 p.m.]

1) How do you rate the importance of having access to reliable, transparent and relevant energy data at the provincial and sectoral levels to accelerate the implementation of actions and improve decision making related to the energy transition?

2) Are you satisfied with the current state of energy data at the Canadian and provincial levels? What are the key issues that explain your responses (e.g., reliability, transparency and relevance, or other issues)?

3) What are the needs you see in terms of data, unavailable or suppressed, that are a priority in supporting the energy transition and decarbonization of the economy (e.g., freight transportation, industrial subsectors, energy sources or other needs)?

4) What actions should the federal and provincial governments prioritize to limit suppression and promote the disclosure of key data at regional and sectoral levels to support the energy transition (e.g., methodological, political, legislative, regulatory, financial, governance)? Do you have examples of best practices?

5) What types of collaboration would you consider to improve the energy data availability in Canada (e.g., expert committees, sectoral committees, networks, forums, annual meeting, platform)?

6) With the *Canadian Centre for Energy Information* (CCEI), the government is working to improve the accessibility and quality of energy data in Canada. In your opinion, are

[3] Chatham House Rule: Participants are free to use the information received, but neither the identity nor the affiliation of the speakers, nor that of any other participant, may be revealed.

the activities being undertaken by the CCEI contributing to meeting this objective? If not, how can we continue to improve the accessibility and quality of energy data?

10:50 a.m Conclusion and next steps
[2:50 p.m.]

11:00 a.m End
[3:00 p.m.]

Recommended readings

Statistics Act, R.S.C. 1985, c. S-19 (updated as of May 19, 2021), Government of Canada, https://laws.justice.gc.ca/eng/acts/s-19/FullText.html

Stout, M., Kaddoura, S. 2021. *Using data to reduce urban freight emissions – Recommendations for data-driven climate solutions in Canada*, Pembina Institute, http://www.pembina.org/pub/using-data-reduce-urban-freight-emissions

Whitmore, J., Pineau, P.-O., 2019. *Modélisation énergie-environnement-économie (E3) : quelles options pour améliorer les pratiques au Québec*, workshop for Energy Transition Québec, Chair of Energy Sector Management, https://energie.hec.ca/modelisatione3/

ANNEX 1 | Speaker biographies

Opening remarks

Mathieu Payeur is the Director of Energy Strategies for MERN's Secteur de l'innovation et de la transition énergétiques. For more than a decade, Mr. Payeur has held various positions in the Government of Quebec in the field of energy efficiency. An engineer by profession, he leads activities related to the place of hydrogen in Quebec's energy transition and is interested in issues related to energy systems as a whole, and normative and regulatory approaches.

Johanne Whitmore is a senior researcher with the HEC Montréal Chair in Energy Sector Management. Her research focuses on the effectiveness of measures implemented to achieve energy transition and the decarbonization of economies. She was vice-chair of the TEQ stakeholder panel. She currently sits on the Comité scientifique de la première étude sur la circularité de l'économie québécoise, on the Comité consultatif en innovation d'Investissement Québec-CRIQ, and Fondaction's Comité stratégique du Fonds d'économie. She is a member of CIRANO and the FCCQ Round Table on Green Economy. She has co-authored many reviews, including the Report on Energy in Quebec. In 2020, she received the distinction of "Inspiring Woman" in energy from the AIEQ.

Panel 1. Overview of energy data

Carolyn Cahill is Director of Statistics Canada's Environment and Energy Statistics Division. Her team develops environmental statistics and accounts, energy statistics and makes important contributions to the Canadian Centre for Energy Information. Prior to joining Statistics Canada in 2006, she was Senior Policy Advisor at the National Round Table on the Environment and the Economy.

Angelo Elias works for the Canadian Center for Energy Information (CCIE) at Statistics Canada, where he is notably responsible for the administration and development of the portal, the integration of data, and the production of horizontal analyzes. For the past ten years, he has held the positions of Manager of the Research Division at Elections Canada, and Manager at the Center for Education Statistics and at the Health Statistics Division at Statistics Canada. He holds degrees in Political Science and Communication from the University of Sherbrooke and the University of Montreal.

Ismaël Cissé is an economist with MERN's sous-ministériat associé à l'innovation et la transition énergétiques, where he is responsible for compiling energy statistics related to the production, consumption, prices and trade balance of different forms of energy. He also oversees the modelling of the building sector (residential, commercial and institutional) from the forecast model for energy demand and greenhouse gas emissions. He holds a master's degree in economics from the Université de Montréal.

Christophe Bélanger is a Strategic Advisor at Hydro-Québec's Customer Intelligence Division. His entrepreneurial profile coupled with a strong interest in innovation and data for the benefit of users has led him to participate in various committees and organizations aimed at democratizing technologies, reducing the digital divide and promoting open standards. Accessibility and availability of data and information have been at the heart of his professional role for nearly 20 years. Within the new Customer Intelligence department, Christophe is involved in data enhancement activities to accelerate the energy transition and the decarbonization of the economy. He holds a bachelor's degree in business administration in information technology from HEC Montréal.

Ann Hagedorn has worked in the Oil & Gas Industry as a production accountant and consultant for approximately 40 years. As an Industry Coordinator at Petrinex, Ann has provided subject matter expertise and industry user support at Petrinex, a collaborative government-industry organization that facilitates efficient, standardized, safe and accurate management of information essential to the operation of the royalty, regulatory and commercial needs of the petroleum sector. Petrinex went live in Alberta in 2002 but has since been extended to manage information on behalf of governments, regulators and industry in Saskatchewan, British Columbia and Manitoba. Petrinex also manages data on behalf of federal organizations, specifically Indian Oil and Gas Canada and Statistics Canada.

Panel 2. Benchmarking of energy data access and availability practices

Pierre-Olivier Pineau is a full professor at the department of decision sciences at HEC Montréal and holds the title of Chair in Energy Sector Management. He is a specialist in energy policy, particularly in the field of electricity. He has published numerous articles on the energy sector that explore the links between energy and certain aspects of sustainable development. He regularly makes appearances in the media to analyze energy news. He has produced various reports for the government or public bodies. In 2021, he was appointed a member of the Government of Quebec's Advisory Committee on Climate Change. He is a CIRANO Fellow and a member of CAEE and CIRODD.

Tom Leckey is the assistant administrator for energy statistics at the US EIA. He directs information programs covering energy consumption and efficiency; electricity; nuclear and renewable energy; oil, natural gas, and coal supply; and petroleum and biofuels production and marketing. Tom also manages the EIA data collection program, statistical methods and quality control for weekly, monthly, quarterly, annual and quadrennial statistical reports. From 2010 to 2016, he was the director of EIA's Office of Energy Consumption and Efficiency Statistics, where he was responsible for EIA's national field surveys on energy demand in residential units, commercial buildings and manufacturing establishments.

Alexia Argiolas is a doctoral student in law at the Université de Montréal. Her interest in the energy resources led her to conduct research on data access, availability and confidentiality of energy data in Canada and the United States. Aware of the major issues of the energy transition, she is also interested in other future fields such as artificial intelligence. She is a member of various research chairs such as Hub Health: Politics, Organizations, and Law as well as the Canada Research Chair on Collaborative Culture in Health Law and Policy.

Bradford Griffin is Director General of the Canadian Energy and Emissions Data Centre at Simon Fraser University. His research focuses on resource management issues, both at the project and government level. He aims to provide the public with data on energy and GHGs on many economic sectors. His work also includes developing quantitative models to evaluate public policies to reduce energy consumption and GHG emissions. Previously, he was a consultant at Enterdata, located in Grenoble, where he conducted analyses of European energy policies. Brad holds a bachelor's degree in engineering from the University of British Columbia and a master's degree in resources and environmental management from Simon Fraser University.