

Fifth Annual National Energy Roundtable Conference

Tuesday, June 4th

The Design Exchange, 234 Bay Street, Toronto

- 8:00 am Registration opens. Light breakfast served
- 8:30 am Welcome remarks
- 8:40 am **Session 1: Accelerating energy transition**
The conflicting nature between a continued increase in demand for energy and the global anticipation of a carbon constrained future requires that stakeholders in the energy sector revise their strategies for long-term growth and development. Natural gas is expanding to replace coal and diesel, as it serves as a reliable partner for renewable energy sources and for electrifying industrial processes and freight transport. As provinces push clean energy policies, they are also investigating how they can adapt heating, power generation, utility grids and business models for emerging resources. Nearly every province is taking regulatory or legislative action on grid modernization or utility business model reform, including on questions of advanced metering infrastructure, storage deployment, data access and revenue reforms. The panel will explore how regulatory approaches and business strategies are evolving as we seek to balance affordable energy security and sustainability.
- 9:25 am Ministers discussion
- 10:00 am Networking break
- 10:25 am Morning keynote
- 10:50 am **Session 2: Energy Storage: The Holy Grail of sustainable energy systems?**
As energy systems decarbonize, many see the current boom in natural gas generation as a "bridge" to a low-carbon future — providing dispatchable power to balance out intermittent renewables on their systems. Advancements in battery technology, however, could make that bridge shorter than anticipated. California recently approved four battery projects that will mark the first time that multiple major power plants will be replaced with battery storage. While smaller in scale, the recent growth in utility-size batteries has been outpaced by behind-the-meter installations, which grew more than 300% in 2018 alone. Electric vehicles could provide an important source of power demand growth for generators and utilities, as well as opportunities to use the vehicles' batteries to meet grid needs. Utilities are pushing for approval to own EV charging stations, studying new rate designs to incentivize charging, and finding new ways to aggregate fleets of vehicles to modulate their charging for grid needs. The panel will examine the advances that are crucial if we are to meet our ambition for energy storage.
- 11:40 am **Session 3: DERs and grid optimization – where are we?**
Historically, we've had a pretty one-sided relationship with energy. We use energy from the grid, we pay the bill, and the cycle continues. We live in an age of disruption where the evolution and integration of high tech solutions is creating rapidly growing markets for new products. As renewable energy and storage technologies become cheaper, increasing numbers of utility customers are installing them at their homes and businesses to cut power costs and meet environmental goals. When applied to the energy sector, Blockchain can further enable DERs that allow people trade energy among themselves, seamlessly connecting producers with investors who are willing to pay upfront for the right to consume energy. Panelists will discuss the technical advances, business models and policy frameworks needed to contribute to a lasting transformation of the energy sector.
- 12:30 pm Luncheon
- 1:45 pm **Session 4: Investment trends in power and utilities**
Evolving business models, portfolio rationalization and growth opportunities are driving competition in the North American power and utilities industry. Buyers are pursuing deals to bolt on growth opportunities and enhance their business models, while sellers are attracted to deals to shore up balance sheets, rationalize portfolios and monetize investments at attractive valuations. Within the sector, many component parts need investment ranging from upgrading legacy systems to building new capabilities. Investment in renewable, clean energy is increasing. Furthermore, new transmission lines are needed to connect areas rich in renewable energy resources to major load sites. There is also the infrastructure aspect behind the power, such as a natural gas fuel supply delivered through pipelines or liquefied natural gas terminals. The panel will examine future trends in financing and M&A in the power and utilities sector.

2:30 pm Discussion on commercialisation of energy technologies

3:00 pm Networking break

3:20 pm **Session 5: Is data the new oil?**

Digital technologies are making energy systems more transparent and intelligent, triggering new business models and regulatory frameworks. Data collection and exchange are growing exponentially and competition for customers is shifting to the online channel where the Internet of Things promises new product and management options. Utilities now have competition from Tesla, Google and telecom companies. The pace of this change is partly due to rapid digitization and intelligent machines in our homes and buildings means there is more two-way flow of information. If energy systems are digitalizing, the evidence of this is even more apparent in how quickly our homes are going through rapid digitalization, playing out in the form of the connected home and removing the need for utility services. The panel will examine the convergence of data from electrification, transport and telecoms and discuss what it means for infrastructure planning.

4:00 pm **Session 6: Electrification of oil and gas**

The electrification of the upstream oil and natural gas sector could significant help provinces meet their carbon reduction targets in the next decade and potentially allow for industry expansion. As BC, in particular, develops a LNG export sector, the province, industry and possibly the federal government, are going to have to invest more in electrification. But it's not an easy path — the challenges to electrification include the need for costly transmission lines, where it may simply be too expensive to reach some regions; the cost of hooking up to those lines; and the higher price of electricity versus natural gas, used now to power compressors in natural gas processing plants and valves in producing wells. Environmentalists warn that electrification alone can't help B.C. reach its carbon targets: that also includes a 60-per-cent reduction by 2040 and 80 per cent by 2050. The panel will examine the prospects for electrification in the upstream fossil industry going forward.

4:45 pm Close

5:00 pm Networking cocktail reception