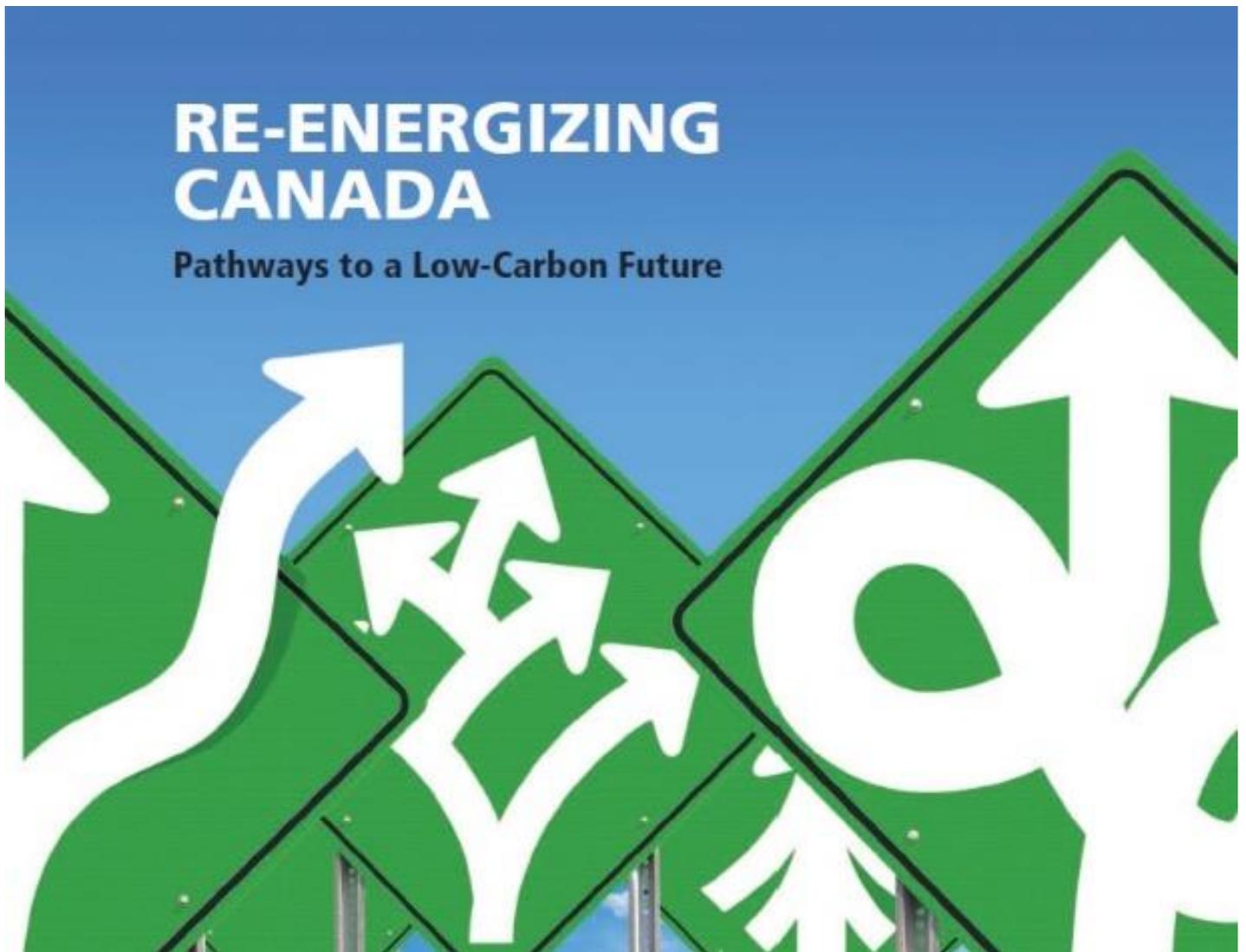


Generation Energy Workshop Report

Ottawa – May 26, 2017



Executive Summary

On May 26, Natural Resources Canada (NRCan) and the Sustainable Canada Dialogues (SCD) academic network brought together 60 Canadian leaders from government, civil society, and the private sector to discuss Canada's energy future. The conversation focused on the publication of SCD's report: *Re-energizing Canada: Pathways to a Low Carbon Future*. Natural Resources Canada's Deputy Minister Christyne Tremblay provided opening remarks. The workshop was facilitated by Shauna Sylvester, Director, Centre for Dialogue, Simon Fraser University.

WORKSHOP OVERVIEW

In late 2016, NRCan invited SCD, a network of over 70 interdisciplinary academics from across Canada, to develop a report as an independent academic contribution to Generation Energy. The report, which reflects the consensus views of the network, reviews 389 documents and analyzes secondary data to explore opportunities and challenges in achieving a low-carbon energy transition.

The workshop allowed participants to discuss and challenge this research. Authors of the academic report disseminated report findings and responded to questions. The session ended with a request for participants to provide their best long-term advice to government, business, and civil society. Ideas were synthesized and organized into themes by Natural Resources Canada.

KEY INSIGHTS

- Future challenges in Canada's energy sector are not just technical, but social and political. We need to build off of the Canadian Energy Strategy and Pan-Canadian Framework on Clean Growth and Climate Change to identify a future vision for energy in Canada. From there, we can develop concrete objectives and goals based on regional differences to help achieve this vision.
- Achieving a future energy vision will require breaking down silos between governments (federal, provincial, territorial, municipal, Indigenous), industry, and civil society and increasing citizen and community participation in energy decisions.
- Canada should restructure resource development to support a low carbon economy. This could include exploiting resources in a different way and promoting carbon neutral materials across different sectors of the economy. One recommendation is to support a Centre for Low Carbon Materials to promote research, innovation, and commercialization.
- Canada should look to improve markets for clean technology and to support innovative energy policies. For example, public procurement could be leveraged to support low carbon solutions, including energy efficiency in low-income housing projects.
- Issues of affordability and cost will significantly influence the energy transition in Canada. In Germany, energy cooperatives have improved citizen engagement and fostered community economic participation in renewable energy opportunities. The focus of these cooperatives has not been to address climate change, but rather on giving back to the community.
- Dialogue should focus on how to build a better society overall. This will require a concrete effort to identify and push for the integration of social, environmental, and economic benefits in energy decisions.

POINTS TO REGISTER

Theme: Economic Opportunities

- Canada's fossil fuel industry will face long-term challenges related to declining global demand. Canada should identify the short-term decisions to make this transition easier and reduce the potential for stranded assets. This could include supporting skills retraining, tax modernization, and considering value-add alternatives (e.g., petrochemicals, polymers).
- As highlighted in the recent Abacus Poll from May 2017, a large number of Canadians (67%) think that Canada should prioritize diversifying our economy, beyond oil and gas sectors. For energy, economic opportunities include improving energy efficiency for buildings and industry, expansion of clean transportation infrastructure, and clean energy development in the North. Canada can learn lessons from other countries. For example, Norway has used fossil fuel revenue to build up domestic renewable energy supply.
- Canada should be smart about where to focus its efforts. Competing against global suppliers of solar panels or wind turbines may not be feasible. Canada should look to leverage a clean power sector, strong education system, trained workforce, and resource industry to identify niche opportunities to develop clean products and services for diverse global markets (e.g., cold-weather wind turbines, smart grid systems, biomass products). The low-carbon economy is also not just about industry – it is important to consider the future impacts and potential benefits to the service sector and ancillary industries.
- Reducing emissions in heavy industry could support a competitive advantage for Canada. A huge amount of thinking and action is going on around decarbonising oil and gas industries, with the goal of zero-carbon fossil fuel production.

Theme: Citizen Engagement

- Cities can play a role and be a major ally in Canada's energy transition. We need to make sure that communities and people have the opportunity to participate at national, regional, and local government levels to help inform future energy policy and planning. The public also has a role to play as the business leaders and energy consumers of tomorrow.
- Canadians need to be a part of the conversation and participate in energy decision-making. We need to identify changes in labour markets and find ways to help Canadians participate and prosper in the future energy economy, potentially through new business models.
- Energy issues in Canada's North require a high degree of citizen participation. We need to reduce the reliance on high-cost diesel and reinvest savings in other priorities.

Theme: Technology and Innovation

- Governments should avoid picking technology winners. We do not know which game-changing technologies will make a difference in the long-term (e.g., nuclear fusion, small module reactors, smart grids). Government and the private sector should work together to support research and development costs for energy technologies and innovation.
- Clean technology is often viewed as an expensive alternative. We need to think about access to, and equality of, energy technologies. Solutions should be popular and affordable. Energy efficiency and alternative fuels are two cost-effective solutions.

- Canada should prioritize trading in clean energy technologies and services. The Government of Canada should look to do more – potentially ramping up high-level diplomatic missions to improve trade relations. One priority area for trade could be technologies to decarbonise fossil fuel production (e.g., biomethane, hydrogen steams).
- Canada should look at the feasibility of integrating renewable energy (e.g., wind and solar) with hydro systems to support greater capacity for energy storage. Nuclear should also be identified as an important long-term source of clean, baseload electricity supply.
- More emphasis should be placed on utilization of carbon, rather than storage. Finding ways to utilize carbon (e.g., in concrete, mining) will improve the viability of the technology and increase demand for carbon in the long-term.

Theme: Labour Markets

- One major challenge for Canada’s energy future is changing labour markets. People working in energy are not bystanders; they need to be present in these discussions. We have the tools to act on climate change and support clean job growth but we need to bring employers, workers, and government together to think about labour policies. We should look to help those that will be negatively impacted by the energy transition.
- In addition to advances in technology, social ingenuity and business innovation can help to create job equality and improve access to labour markets. We need to make balanced choices that support existing industries and new market opportunities.
- Traditional energy sectors are not labour intensive compared to other parts of the economy. We need to better understand the different job opportunities in Canada’s energy future, including the potential for less skilled job creation.
- Canada can be a global player when it comes to the import and export of skills and technology required for low-carbon economic development.

Theme: Planning and Governance

- There are some strong emerging mechanisms to promote shared energy priorities (e.g., Canadian Energy Strategy, Pan-Canadian Framework on Clean Growth and Climate Change). We need to foster and build-off of this work, collaborating between federal, provincial, territorial, municipal, and Indigenous governments.
- Canadians should strive to agree on a common vision for our energy future, then work backwards from shared goals and objectives to achieve this long-term energy vision.
- Imbedded narratives exist in communities across Canada, with different opinions and ideals across regions. We need to be aware of these existing perceptions, be open and transparent, and support greater availability and use of energy data. There is also an opportunity to reframe discussions around Canada’s energy future to align with other policy priorities – around Indigenous reconciliation, health, education, the environment, economic development, and equality.
- Planning for the future will require managing short issues, while driving towards long-term objectives. By focusing on the short-term, we may cut off long-term pathways. While we need to build public trust and confidence in energy decision-making, governments also need to be willing to experiment with policy and embrace failure. One low hanging fruit is community energy planning – identifying energy opportunities at the local level.

- Early government efforts to support a clean energy transition in Canada could include a focus on low-carbon procurement and alternate institutional structures. For example, some American and Canadian gas and electricity utilities are combining their operations to improve efficiencies. In addition, an independent commissioner could consider the impacts of different policies and offer advice and recommendations to Canadian governments.

Theme: Regional Diversity

- Across Canada, provinces and territories will follow different pathways to a low-carbon energy future based off regional differences. Canada should therefore embrace a flexible approach to the transition.
- Provinces and territories should look to take advantage of their resource endowments and available energy sources. Many provinces may be able to take advantage of wind and solar potential. Some provinces have significant hydro potential, while others have existing capacity in nuclear or growing capacity in clean fossil fuel production.
- Communities will need to adapt to different circumstances. For example, Canada's North is facing a number of long-term challenges related to energy security and the continued use of fossil fuels for heating, electricity, and transportation.

Advice to Government

- Exploit our existing energy advantages
- Identify long-term energy goals
- Don't pick policies based on popularity, but on analysis, evidence and data
- Develop a labour market strategy
- Keep all technologies on the table for as long as possible
- Don't be afraid to reform regulators
- Help energy intense industries

Advice to Civil Society

- Looks for opportunities to build trust and engage with government and business
- Understand how low-carbon transitions create other benefits (health, etc.)
- Don't let perfect be the enemy of good

Advice to Private Sector

- Adapt and be leaders, while staying open to collaboration
- Create and support popular solutions
- Bring global best practices to Canada
- Regulatory certainty; overhaul currently ongoing, and this matters to producers
- Convert industrial parks into energy hubs