Talking Transition

Appendix 3

Clean Power PATHWAYS

DAVID SUZUKI FOUNDATION

A. REVIEW OF PUBLIC POLLING

ABACUS POLL (2019)

The polling shows Canadians overwhelming see climate change as a serious problem, with 42 per cent agreeing that it is now an emergency, and support the transition to renewable energy. Forty-four per cent agreed that in the future, we should produce energy and electricity using 100 per cent clean and renewable sources.

The polling indicates that social equity values will likely be important for Canadians across regions when developing energy-transition plans. Transitioning the economy and society away from fossil fuels received more support when social equity issues were addressed. Governments providing financial support to low- and modest-income households to help them transition away from fossil fuels and requiring wealthy people and large corporations to contribute more in taxes to help pay for this plan were widely supported.

Source:
https://abacusdata.ca/wp-content/uploads/2019/08/Climate-Emergency-Polling-July-2019-RELEASE.pdf

NANOS RESEARCH POLL (2015)

Canadians' Views on Canada's Energy Future, University of Ottawa Positive Energy Summary. Submitted by Nanos to the University of Ottawa, October 2015 (Submission 2015-691)

Nanos Research's 2015 polling of 1,000 people in an omnibus survey found that Canadians believe it is possible to develop resources and protect the environment. There was high support for investments in the renewable energy sector and strong expectations that the federal government take the lead in energy development. Seventy-eight per cent wanted federal leadership in reducing greenhouse gas emissions. The strongest level of support (71 per cent support and 22 per cent somewhat support) was for growth in the renewable energy sector.

A majority of Canadians (54 per cent) think we should have a long-term transition away from fossil fuels to cleaner fuels rather than an aggressive transition (39 per cent).

A majority of Canadians also supported having new taxes on fossil fuels (28 per cent support and 27 per cent somewhat support) but also supported growth in the oil and gas sector (28 per cent support and 31 per cent somewhat support).

Source:
https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/energy-resources/Positive_Energy-Survey_Research_on_Canadas_Energy_Future_Oct_2015.pdf

B. CLIMATE POLLING MAPS, UNIVERSITY OF MONTREAL

A geographic and statistical model to downscale national public opinion results to the province and riding level. Maps estimate differences in opinion and the diversity of climate perceptions across the country on questions such as: Is the Earth getting warmer? Has your province already felt the negative effects of climate change?

Source:
https://www.umontreal.ca/climat/engl/index.html

C. DIALOGUES

CITIZEN DIALOGUES ON CANADA'S ENERGY FUTURE (2017)

The 2017 Citizen Dialogues on Canada's Energy Future held by SFU's Morris J. Wosk Centre for Dialogue tested public across the country on:

- perceived financial impacts of emissions reductions
- energy trade-offs: economy and environment balance and prioritization

The dialogues identified the top five criteria citizens believed were needed to shape decisions on Canada's energy future:

1. Sustainable and clean environment
2. Effective and transparent government
3. Innovation
4. Jobs
5. Affordability

Citizens agreed on shared principles to guide Canada's energy future:

- An energy future by 2050 that achieves a sustainable and cleaner environment while continuing to provide employment and affordable energy. (Values: protect environment, support jobs, equity in affordable energy, leadership, innovation.)
- Accept the risks of taking measured (incremental) steps to reduce greenhouse gases. (Values: economically competitive, risk accepting, incremental change.)
- The urgency to transition our energy economy is paired with desire to mitigate impacts on those most affected. (Values: support for those most affected by energy transition, quick response.)
- The federal government should play a leadership role to advance a shared Canadian vision for energy. (Values: agreement, independent oversight.)
- We need immediate action using available technologies and research and development to reduce long-term costs and impacts. (Values: courage to transition quickly, support for research and evaluation, practical.)

Source:
https://www.sfu.ca/dialogue/watch-read-discover/citizen-dialogues.html

NRCAN GENERATION ENERGY SUBMISSIONS

Natural Resources Canada — Generation Energy dialogues (2017)

In 2017, the Generation Energy dialogues gathered the ideas of more than 380,000 Canadians about Canada's energy future. Throughout the Generation Energy process, the principal question asked was: What were the values and principles that Canadians cherished most and should guide their energy future? The dialogues found general agreement on the following:

- Canadians want a clear energy vision for the future.
- The path forward must be informed by collaboration with partners, Indigenous Peoples, industry and Canadians.
- The energy transition provides an opportunity for reconciliation with Indigenous Peoples.
- Canada's diversity is a source of strength, bringing a broad range of skills, knowledge and expertise.
- Gender equality in Canada's energy future is an important issue that deserves attention and action.
- It is important to continue to foster an inclusive dialogue on our energy future.

Public engagement recommendations include:

- Engage Canadians in the energy transition conversation with a clear vision of Canada's competitive, low-carbon economy, enabled by clean, efficient and affordable energy systems and ensure the co-benefits of a low-carbon economy are broadly understood.
- Engage Canadians in a new Canadian energy narrative framed on our policy leadership and our progress on our energy-transition plan.

Suggested ways to change public behaviour around energy include:

- Improve public access to information regarding energy sources, costs and options to allow public to engage more effectively in broader decision-making processes on energy issues.
- Implement financial signals such as rebates to help Canadians embrace change and take greater personal responsibility for how they use energy.

Energy transition plans must incorporate:

- New energy opportunities
- Long-term economic opportunities (compared to boom and bust cycles)
- Job retraining
- Community self-sufficiency
- Affordability/accessibility

The dialogues tested energy trade-offs such as creating certainty versus taking risks and the viability of technology solutions. Takeaways include:

- Showing the benefits of modelling can help build public support and a more realistic view of trade-offs and test depth of support for positions.
- Combining science with engagement is more likely to get policy outcomes you want.
- Engaged modelling can help people shift perspectives, adjust values, de-polarize.
- Listen to people. (Sometimes the public has moved beyond where we thought.)
- Alberta narratives project highlighted need to use frames that resonate/address key concerns/build on core values.

Indigenous community values on Canada's energy future were also sought by Natural Resources Canada. Officials attended the Indigenous Renewable Energy Symposium on September 18, 2017, where 80 to 90 Indigenous representatives from Alberta communities shared ideas.

There was general support for the following:

- Renewable energy projects in Indigenous communities should be developed and implemented entirely by Indigenous groups and communities.
- A more holistic approach to Canada's future is needed, one that focuses on more than just economic benefits. Future energy decisions should be made based on community values.
- Federal, provincial and municipal governments must align their priorities and work together toward common goals. Information regarding project development needs to be more streamlined, easily accessible and, most importantly, written in an understandable manner.
- Education, both within communities and external to them, is an important component in preparing for a successful transition to a low-carbon future.

Participants expressed their understanding that communities currently do not feel like they are as much a part of Canada's move toward renewable energy as they want to be. Indigenous communities were perceived to be the most affected by energy exploitation, globalization and market fluctuations.

Sources:

https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/pdf/FINAL_English_GenEn_Dialogue_Summary_mar20.pdf

https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/pdf/GenEnergy/Indigenous%20Renewable%20Energy%20Symposium_Report%20.pdf

GENERATION ENERGY COUNCIL

In 2017, the Government of Canada launched Generation Energy, a nationwide dialogue to envision what a low-carbon energy future would look like for Canada over the course of a generation. The Generation Energy Council was formed answer important questions. More than 380,000 Canadians were asked their ideas about Canada's energy future. They said they wanted to see the economic prosperity, diverse social fabric, environmental quality and high international regard that define our country sustained. And they shared a collective vision of our energy future built on three pillars: it must be affordable, reliable and clean.

The council identified the following milestones on energy efficiency and clean power.

- Energy efficiency
  Overarching milestone: Canada's rate of economy-wide energy efficiency improvement grows from one per cent per year today to two per cent per year by 2025 and three per cent per year by 2030, bringing our energy productivity in line with leading jurisdictions in Europe and the United States.
- Clean power milestones
  Overarching milestone: By 2050, clean electricity is the single largest source of energy supply in Canada. (Electricity today generates 20 per cent of total energy supplies.)

Source:
https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/CoucilReport_july4_EN_Web.pdf

D. MODELLING STUDIES/ RECOMMENDATIONS

NRCan led and funded two Regional Electricity Cooperation and Strategic Infrastructure modelling and dialogue studies, one for the Atlantic provinces and the other for Western provinces. These studies explored how investments in grid infrastructure between provinces might offer opportunities to cost-effectively lower emissions.

The Atlantic RECSI, through modelling and dialogue, found that investments in regional electricity transmission infrastructure could enable more renewables on the grid: "Upon examining various regional generation solutions, utility planners collectively recognized the value of increased inter-provincial transmission to enable a future with more renewable sources of energy. A need for transmission reinforcement was also identified in the Pan-Canadian Wind Integration Study. In particular, increasing the transmission interconnection

between Nova Scotia and New Brunswick could enable greater renewable energy generation and use in the region."

Likewise, the Western Region RECSI found:

- There are several transmission projects in western Canada that can both reduce GHG emissions and lead to overall electricity production cost savings.
- Such projects effectively reduce carbon while also reducing costs for the utilities.
- Interprovincial action can achieve deep GHG emissions reductions. The interprovincial transmission projects examined could offer GHG emissions reductions in the range of 0.5 megatonnes to 1.2 Mt per year.
- Electrification of LNG and upstream natural gas production is a particularly compelling GHG reduction opportunity.
- Alberta and Saskatchewan have a number of options to pursue to reduce their respective electricity sector GHG emissions.

Four key shifts in the energy system:

1. Total energy use declines: Compared to 2017 levels, total Canadian energy consumption is over 15 per cent lower in 2040 despite similar total GDP and population trends.
2. The share of renewable and non-emitting energy increases: Fossil fuel use falls faster than total energy demand, and by 2040 fossil fuel demand is 30 per cent lower than 2017 levels. More efficient processes and technologies, as well as switching to renewable energy, cause this trend.
3. By 2040, energy use per capita is reduced by one third, energy use per $ of GDP is nearly cut in half: Economic and population growth become further decoupled from energy use, as Canadian homes and businesses use energy more efficiently.
4. Prices and technologies will shape Canada's role in supplying oil and gas in a transitioning world: Canadian oil and gas production will be influenced by their ability to reduce costs and emissions. Technologies such as solvent-based injection for oilsands production provide an opportunity to maintain production, while market prices are a key uncertainty.

Source:
https://www.neb-one.gc.ca/nrg/ntgrtd/ftr/2018/xctvsmmr-eng.html

E. INPUTS FOR THE DAVID SUZUKI FOUNDATION CLIMATE AMBITION SCENARIO

Based on the research summarized in this report and other inputs, in the fall of 2020 the David Suzuki Foundation will set out assumptions for our Climate Ambition Scenario to be modeled by the modelling team. Assumptions and other inputs will describe the level of ambition to be met and the role, if any, of new nuclear generation capacity, as one example. This scenario will not include cost assumptions regarding generation technologies as these will be determined by the modelling team based on the available literature and data.