

Factors Affecting SOCIAL ACCEPTANCE OF RENEWABLE ENERGY AND TRANSMISSION PROJECTS

Addressing the root causes of climate change requires social acceptance of solutions. One solution to climate change is to transform the electricity system to non-polluting sources and to use electricity to power more of our daily lives.

Survey research consistently shows Canadians strongly support renewable energy technologies that generate electricity using wind, sun and water. This generalized support, however, does not always hold at the community level where Canadians often oppose renewable energy projects. To better understand the factors affecting social acceptance of renewable energy and transmission projects, the Conservation Council of New Brunswick (CCNB) undertook a mixed-method study in spring 2022.

Through national focus groups and a survey, CCNB explored opportunities to limit the barriers to renewable energy and transmission projects from pace, proportion, people:

- **Pace:** Climate policies to reach **zero emitting** electricity systems in Canada in less than 15 years (2035);
- **Proportion:** Electrification modelling suggesting the electricity system will at least **double in size** to power transportation, homes and businesses; and

- **People:** Canadians' favour renewable energy (wind, sun, water) but also oppose new renewable energy and transmission developments causing delays or project cancellation.

For this research, **community** is defined as relating to renewable energy and transmission projects in, on the edge of or near communities; in other words, within regular view.

Social acceptance is “a favourable or positive response (including intention, behavior and where appropriate use) relating to a proposed or in situ technology or socio-technical system, by members of a given social unit (country or region, community or town and household, organization)”¹.

We completed Phase 1 of this research with seven focus groups in March 2022. Social science **research** on social acceptance of energy projects assisted with evaluation of the focus group results. In Phase 2, we executed a survey of 1,800 Canadians in April 2022.

¹ J. Gaede and I. H. Rowlands; Visualizing Social Acceptance Research a Bibliometric Review of the Social Acceptance Literature for Energy Technology and Fuels. *Energy Research & Social Science*, Volume 40 (p.142-158)

Topline results

Focus group research shows social acceptance of renewable energy and transmission projects is based on fairness evaluations, particularly as it relates to the distribution of social and financial costs and benefits (e.g., distributive justice), as well as access to and influence over decisions.



Survey research confirms that fairness evaluations influence acceptability of a federal regulation to generate a non-polluting electricity system by 2035. We also find that interpersonal fairness evaluations (affecting me relative to others or affecting others), rather than intrapersonal (affecting me) are important drivers of electricity policy evaluation. Our testing of electricity narratives also shows that collective framing increases fairness perceptions and acceptability of electricity policy.

Fairness

There are at least six ways people evaluate fairness:

- **Intrapersonal:** my financial situation will get worse
- **Interpersonal:** I will be worse off compared to others; Everybody will be affected to the same extent; People with low incomes will be affected more than people with high incomes; and People who consume the most electricity will be affected most strongly
- **Intergenerational:** nature, the environment and future generations will be protected²

These fairness evaluations are evident in focus group discussions of community benefits that should derive from renewable energy and transmission projects, including:

- Education (so they can participate effectively) and personal and social financial benefits are important (jobs, economic partnerships, incentives/rebates, tax breaks, community sponsorships), as well as environmental benefits.
- Concerns about living with community impact without gaining a community benefit.

Community benefits ranged from community sponsorships, lower property, sales taxes or power rates, and knowing the power generated is power the community relies on. Others indicated that they would feel community pride from projects in their community.

² Schuitema, G., Steg, L., & Kruijning, M. v. (2011). When are transport policies fair and acceptable? Soc Just Res, 24, 66-84.



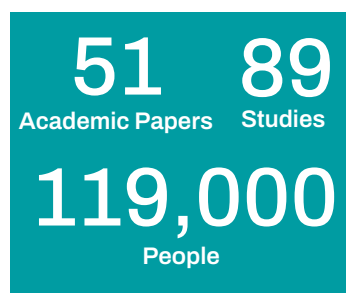
Access and standing in decision-making processes (e.g., recognition justice), and opportunities to influence decision-making (e.g., participatory justice) also are important to increasing social acceptance of renewable energy and transmission projects. Focus group discussions on how much influence communities or citizens should have over where projects are located, identified a strong desire for democratic process, including:

- Access and standing to be able to participate, and for communities to have a choice. Some focus group participants want to vote on a set of options; others want to be consulted and accept that others make the final decision. Participants also shared concerns about power imbalance from vested interests, about bias, and believe neutral experts should advise citizens.

Focus group participants also describe important considerations for transmission projects, including sharing some concern about energy security and sovereignty if provinces become too reliant on electricity imports.

The potential for greater inter-provincial electricity trade is an important consideration as some provinces seek access to hydro power to help phase out coal from their electricity systems. We see this consideration in the Atlantic with active discussions underway on options for building an Atlantic transmission loop to bring hydro power from Newfoundland and Labrador and Quebec to New Brunswick and Nova Scotia. Focus group participants say they are open to transmission within limits. Participants are:

- Open to sharing (“we do it now for gas”), and see transmission as a “necessary evil”;
- Concerned about view and health effects;
- Want alternatives considered and lines buried;
- Worry about transmission lines being used just for exports; and
- Wonder about the risk to sovereignty and energy security if a province is too reliant on electricity from out of province.



How does CCNB analysis fit with other social science research? Very well. *Nature Climate Change* meta-analysis of 51 academic papers covering 89 studies

and over 119,000 people found that fairness and effectiveness evaluations most influence public opinion on climate change solutions like regulations and taxes. Institutional trust matters too, ranking third most important factor in evaluations of climate change policy³.

³ Bergquist, M., Nilsson, A., Harring, N. et al. Meta-analyses of fifteen determinants of public opinion about climate change taxes and laws. *Nat. Clim. Chang.* 12, 235–240 (2022). <https://doi.org/10.1038/s41558-022-01297-6>

Narrative framing

Focus group participants reacted to a series of narrative arguments focused on electricity transformation. Based on participant feedback, two narratives were developed for experimental testing in the survey. The goal of the experiment was to determine whether different narrative frames differentially influenced fairness evaluations and policy acceptability. The two narratives varied primarily around self-referencing and collective referencing perspectives.

The self-referencing narrative highlights intrapersonal effects, including cost of living and affordability. The collective referencing narrative highlights interpersonal effects, including social and personal benefits. Both narratives were of equal length and spoke to fairness in similar ways. Each narrative treated climate change differently, with the self-referencing narrative saying little and the collective narrative highlighting the cause and effects and need for action. Each narrative varied only slightly in the use of absolutes (words or numbers).

To test the influence of the narratives, the 1,800-person sample was divided into three equal groups: a control group and two test groups, with

each reading one narrative. The control group was not exposed to a narrative. All participants answered three questions measuring perceptions of fairness and acceptability of a federal electricity policy (“As part of its climate action plan, the federal government plans to regulate electricity suppliers so that by 2035 they produce little to no greenhouse gas emissions. The policy will also increase the size of the overall electricity system in Canada to supply the power needed for electric vehicles, trucks and transit systems. Investments could increase power rates, but household power bills will not increase if homes have energy efficiency upgrades, and vehicles shift from gasoline to electricity. How fair (acceptable) is this policy measure to you?”)

Both narratives increase fairness perceptions, but the self-referencing narrative also increases unfairness perceptions, (personally and relative to the others), compared to the collective narrative. The collective narrative also had statistically significant lower scores for unfairness. The self-referencing narrative also generated a statistically significant higher unacceptable score, compared to the collective narrative. Both narratives, however, increased acceptability scores, relative to the control group.



Both narratives also significantly improved perceptions of intergenerational fairness (to nature and people), compared to the control group. Almost half of the participants strongly agreed or agreed that people with low incomes will be affected more than people with high incomes. Neither narrative had a statistically significant influence on this result.

Based on the CCNB mixed-method research, we believe the following narrative is a good starting point for framing electricity focused communications and engagement efforts.

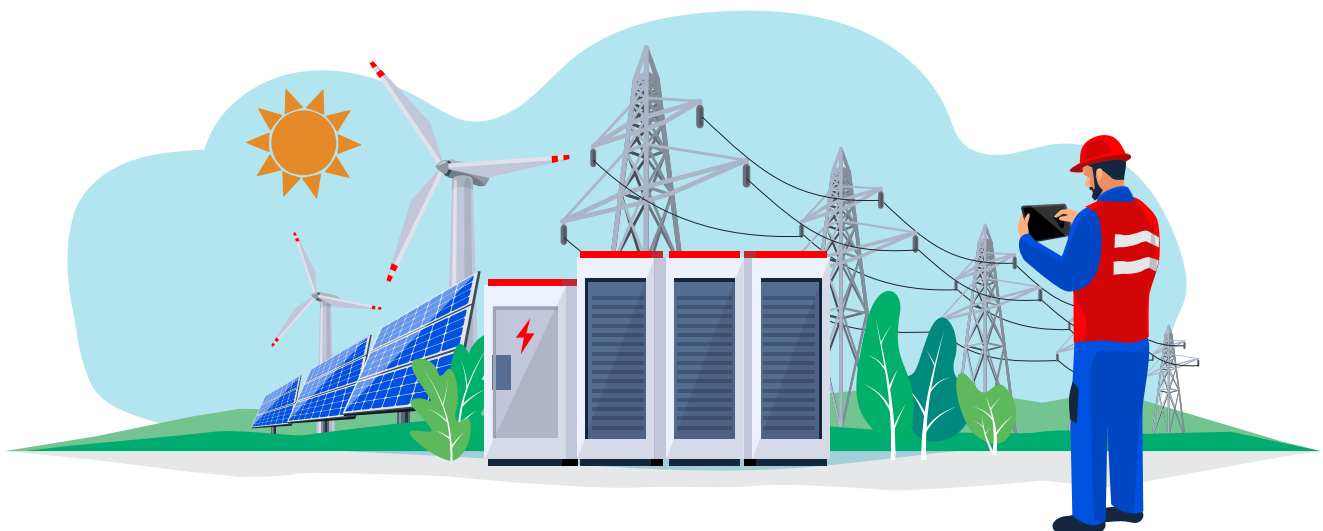
Electricity made by burning coal, oil, and gas pollutes the air and makes weather extreme. We see how floods, heatwaves, and forest fires harm the health and safety of Canadians. Scientists tell us the world has to change how we use energy now if we are to keep people and nature safe. One way to solve climate change, is to build non-polluting sources of electricity to power electric vehicles and transit systems, our homes and businesses.

We need billions of dollars of investment to renew Canada's electricity system. Electricity made using wind turbines is cheaper than using coal, oil, gas, and nuclear. When

transmission lines connect provinces, non-polluting power reliably reaches Canadians.

To keep power bills affordable though, we must use electricity efficiently. We can pay less to power an electric vehicle, compared to a gasoline vehicle. Securing these energy savings costs money. Canadians need financial incentives so electric vehicles and retrofitting homes are affordable. We need to train workers so we have the expertise to retrofit homes and businesses. We also need to ensure citizens and communities have a say about where renewable energy projects and transmission go, the size of projects, and have a chance to partner and profit from projects.

Finally, we note that throughout the survey, soft scores (slightly fair/acceptable, neutral, slightly unfair/unacceptable) were high. These soft score results are consistent with previous surveys on energy and electricity issues and suggest an opportunity to influence public opinion through fair engagement and policy design, and effective communications. Such efforts will be essential to securing social acceptance of renewable energy and transmission projects.



Recommendations

To increase social acceptance of renewable energy and transmission projects, communications, policy proposals and campaigns should:

■ Stand for fairness to increase acceptability

- Define fair especially relative to others, future generations, nature;
- Policy and programs should aim to protect low-income households and be progressive (e.g., effects proportional to the contribution to the problem; proportional to income/ability to pay); and
- Defend communities/citizens' rights to access, influence, education and expertise.

■ Build trust

- Demand transparency, public input, open access to information, enforcement to raise government trust;
- Challenge industry/utility players (proportional to contribution to the problem and to income); and
- Address all six fairness evaluations (distributive justice), as well as recognition and procedural justice in policy and program design.

To avoid triggering debate, skepticism through our communications, we recommend:

- **Avoid absolutes** (e.g., say “one solution”, “cleaner”, not “the solution” or “clean”).
- **Minimize debates about numbers or the number of years left** to avoid 1.5 degrees warming (use a range for numbers; emphasize the need for action now).

- **Use comparatives** (“wind and solar are cheaper than coal, oil, gas and nuclear”) to increase confidence in the effectiveness of proposed solutions.

- **Speak to fairness outcomes** in all communications.

- **Practice communicating momentum**, with specific local examples for local/regional communications. The challenge is to not “sound like a politician” when using a national narrative with higher-level references to renewable energy projects being built today.

- Further testing should explore **Sharing, Security and Sovereignty** frames relating to transmission networks.

■ Create smart policy

To ensure successful implementation of the proposed federal clean electricity standard for a net zero grid by 2035:

- **Tie federal investment and program dollars to fairness outcomes**, including minimizing power rate impacts, increasing access to retrofits for households, low-to-moderate income families.
- **Strengthen transparency and effectiveness of equivalency agreements**; require provincial legislative and policy reform (electricity and utility board acts, energy policy updates, electrification strategies).
- **Require community benefits agreements**, including potential for financial partnership, and community/citizen access to information, standing and participation in consultations.

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