

Factors Affecting SOCIAL ACCEPTANCE OF RENEWABLE ENERGY AND TRANSMISSION PROJECTS

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Executive Summary

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 <u>research</u> 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., & Kruining, 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.

51 89
Academic Papers Studies
119,000
People

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.

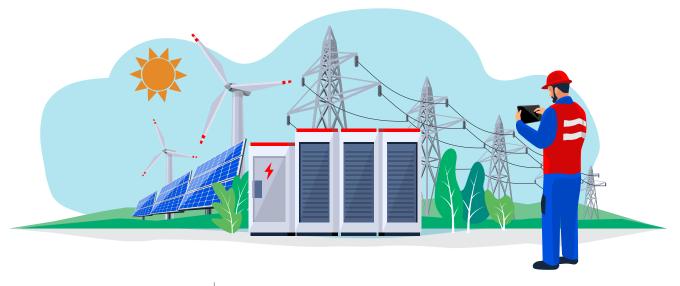
Based on the CCNB mixed-method research, we believe the following narrative is a good starting point for framing electricity focused communications and engagement efforts.

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, nonpolluting 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 lowincome 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.

The remainder of the report describes the focus group process and results and then survey process and results. The Appendices include focus group thematic analysis (Appendix 1), the guiding questions used in the focus groups (Appendix 2), and the survey instrument, including the test survey narratives (Appendix 3).

12 Focus Groups

Recruitment

The marketing research firm, Narrative Research, used two independent recruiting firms to recruit participants for these sessions; Trend Research for the Western sessions and Lana O'Reilly for the Eastern sessions. Participants were selected using panel records and random calling, and recruited using an approved screening questionnaire. Qualified participants then were filtered to generate a balance of participants by demographics (age, gender, income, age and rural/urban community). We also filtered out anyone indicating expertise in electricity/ energy issues. Despite the filtering question, male participants were quite knowledgeable of the issues, compared to women; one participant is an energy efficiency professional at a First Nations reserve in New Brunswick.

Narrative Research recruited 56 participants, with 51 people participating receiving a \$100 incentive. Focus groups were conducted online using Zoom technology, ran 90 minutes in length, and conducted in English. We arranged participants into groups aligned with potential transmissions interties and coal phase-out support: British Columbia/Alberta (BC/B); Saskatchewan/ Manitoba (SK/MN); New Brunswick/Nova Scotia (NB/NS), and Atlantic Canada. The seven focus groups were held March 1 (2 groups), March 2 (2 groups), March 7 (2 groups) and March 8 (1 group). Only the Atlantic focus group included a mix of gender. All other focus groups were male or female to encourage participation as women generally engage less when

focus groups include males, particularly when the subject matter is energy or electricity.

Participants answered a poll (maximum score 10) at the beginning of their focus group asking whether they support or oppose renewable energy. Poll responses consistently exceeded seven or higher; only one participant ranked renewables a five (BC/AB Men). Participants indicated that they did not change their opinion on renewables by the end of the session, compared to the beginning of the focus group.



Community defined as: in, on the edge of or near communities, within regular view.

We begin by summarizing the results, followed by draft narratives and communication tips. Appendix 1 summarizes focus group discussions by theme, with quotes from participants. We list the questions guiding the focus group discussion in Appendix 2. Participant quotes are in italics with quotes; quotes from narrative text are not italicized.

Summary of results

Focus group participants support renewable energy, are hopeful about its potential, and will support projects if there is fairness, honesty, and balance in terms of process and sharing of benefits. Projects, whether renewable or transmission, hinge less on technology factors than on questions of integrity and fair play.

From a social science perspective, participant comments reflect a desire for consultation, engagement and collaboration, concepts defined as procedural and recognition justice (sometimes called participative justice), as well as for distributive justice, a concept involving equitable sharing of costs and benefits.



In terms of technology, solar is considered less disruptive than wind (noisy, lights, occupies space, can harm birds on and offshore) because it can go on buildings, but potentially is more limited in terms of location given meteorological conditions (too little sun; too much snow).

We asked focus group participants at the beginning of each session what factors would encourage or discourage them from supporting renewable energy. In addition to a desire for project proponents to have integrity and exhibit good character (honesty, conscientiousness), focus group participants say projects should generate community and/or household benefits (some payoff over the longer term), and communities should have some say in how projects proceed. We discuss these issues in detail in sections on community influence and community benefits.⁴

We also asked about factors that would discourage participants from supporting renewable energy or transmission projects. Justice issues, expressed as concerns about distributive and recognition and procedural justice, as well as aesthetics, effectiveness, and cost-benefit surface.

Additional factors discouraging support of renewable energy and transmission projects include:

- false or broken promises (an issue with Muskrat Falls for participants in Newfoundland/Labrador and from Pincher Creek, Alberta),
- environmental damage (from clearcutting for projects/transmission or batteries),
- labour not locally sourced,
- projects that are too large or too concentrated taking up too much space, generating too much noise, and light pollution, and
- community disruption.

⁴ Scholarship in this area highlights the need for both recognition justice (individuals must be fairly represented and have the right to participate in decision-making processes free from harm) and procedural justice (individuals must have equitable access to decision-making processes), in addition to the more commonly discussed distributional justice (costs and benefits should be equally shared). Jenkins, K., McCauley, D., Heffron, R., Stephan, H. & Rehner, R. Energy justice: a conceptual review. Energy Res. Soc. Sci. 11, 174–182 (2016), in Boudet, H. S. (2019). Public perceptions of and responses to new energy technologies. *Nature Energy*, 4, 446-455.

Lack of information or conflicting information also undermine confidence in whether renewable energy solutions are realistic.

A participant from Pincher Creek exemplifies concerns about fairness based on lived experience with a high concentration of wind turbines in the community and within their view scape:

I live in Pincher Creek. I don't know if αny of you kind of know anything about Pincher Creek, but it is windy about 99% of the time. It is honestly that windy and we've got the windmills to prove it. So when it comes down to whether or not I support or oppose the development of renewable energy in our community, I'm answering as a question of what does it do to our community? What does it do to the environment around us? What effect does them building those windmills have on the community? And as much as we love to say, yeah, it's positive. We don't use that energy. The energy coming from the windmills has nothing to do with Pincher Creek. They're just they're here. They're in our view to look at them every day. Truth be told, when you get a big wind farm next to the highway, it causes drifting on the highway. It does have an effect on the local community, right? The land gets destroyed. Farmers, yeah, they make deals with these big companies. They get paid to have the windmills on their property, but they can never use that pasture the same way they used to be able to. There are now roads

through it. These wind-farming companies or wind-farming employees have to be able to come on site to maintain the windmills. It just it really changes the way we do things around here, and it does have a positive effect. Don't get me wrong, but it also does have a lot of other unexpected effects on the community as a whole.

If I were to take you out on my back deck, I actually happen to live where you can see them all and in any direction. You look out my house, you can see windmills. They're everywhere. Yeah, they're everywhere. Yeah, it's million dollar views littered with giant windmills that blink red all night long. For every single one of them. All, yeah, all night long. So you got to get used to them. They take a little getting used to and they are actually noisy.

Renewable energy proponents, whether governments, companies, environmental groups, risk undermining social acceptance if the concerns, interests and perspectives of citizens are ignored. Focus group participants exhibit a willingness to be generous, to be inspired and to be hopeful. There is a budding sociological imagination regarding renewable energy that we can nurture or extinguish. Renewable energy enthusiasts need to engage communities and citizens respectfully, with a commitment to justice in the race to solve climate change.

Community influence

Participants spoke of the need for recognition and procedural justice, balance, and concerns about power imbalance and bias when asked how much influence communities and citizens should have in decisions about renewable energy and transmission projects.

In terms of recognition and procedural justice, participants feel that critical to trusting the process is the belief that citizen views are influencing outcomes ("Not just we're going to listen to you, but we're not going to listen to you. We're going to do it anyway."). Community choice is critical to social acceptance of projects.

A project in Shediac, New Brunswick is an example of a project where community members can choose to participate in a sustainable energy pilot project ("So there has been an example of a community that has come together and said, yes, we would like to participate in the process and people can volunteer for it.").

Participant comments strongly reflect academic research characterizing recognition and procedural justice as a desire for consultation, engagement and collaboration in contrast to the "traditional decide–announce–defend' strategy of energy development."⁵

Participants consistently want to be involved in decisions but differ on what the balance should be. Some prefer an approach involving consultation, but accept others need to make decisions ("I think

everyone should be involved in every step of the process...but at the end of the day someone has to make decisions"). Others felt that project proponents should offer a set of options for communities to vote on ("Yeah, I guess I would lean more towards voting for options, because that way we're we still have a say, but it's also being decided by people who in the field who know what they're doing, what they're talking about, right?"). Others want a veto or vote ("Yes... You shouldn't be able to disrupt our daily lives for something like that.").

Some might interpret participant comments as NIMBYISM (not in my backyard). ("I think it's important that we have a say in where it's located unless, you know, I don't necessarily want a big farm in my backyard, either."). This interpretation implies a selfishness, rather than a desire for fairness, ("You'd have a big input, I think we can be the ones living with it."). Another interpretation is focus group participants evaluate objects like a renewable energy project through a fairness filter⁶. We discuss this idea further in the section on community benefits.

One participant from a New Brunswick First Nation spoke of the need for collaboration and engagement involving community leaders, elders, youth and knowledge holders so that the community deliberates to develop a project ("We'll just kind of like work together to come up with a collaborative plan."). The kind of community-engaged process utilized in indigenous communities is a model for recognition and procedural justice that can apply in any community. Involving stakeholders early before plans for projects are developed opens the door to just outcomes.

⁵ Boudet, H. S. (2019). Public perceptions of and responses to new energy technologies. *Nature Energy*, 4, 446-455 (p. 451).

⁶ Schuitema, G., Steg, L., & Kruining, M. v. (2011). When are transport policies fair and acceptable? Soc Just Res, 24, 66-84

Focus group participants raised placed-based concerns through comments about the effects of renewable energy and transmission projects on local natural and cherished spaces ("So if they are taking space off the park or a parking lot or like things like that. So I don't want them around me in my community."). Participants want transparency about local effects before making decisions on projects ("The solar farm or we want the wind farm, whatever you say, OK, do it, but you don't look into it a whole lot. You're going to turn around. You're going to say, Oh, wait a minute. They just tore down an entire provincial park because we said, go ahead, do it, but didn't give any stipulations as to. Yes. Ok, they're going to just do what they want to get it done without saying, Oh, well, you said to do it.").

Power imbalance is another concern of rural participants with large companies overwhelming the interests of small towns ("...just a small, small town or something like that, and some big corporation comes in and throws in a bunch of wind turbines next door kind of thing."). Connected to concerns about power imbalance is the concern that proponents and decision-makers exhibit bias toward projects without having all the facts, ("I'm no expert in this by any means. But then you think of how many other people in the community are not either are not experts? No. But I think that people also can have, you know, one sided views from just little things they hear that might not be scientifically like. Have evidence regarding that? Yes. And I think in the end, you realize how many people are making decisions for the community that really don't know what they're talking about.")

The focus group participant from Pincher Creek describes the value of community engagement and education in making decisions about project location:

Well, the way they actually go about it down here, I mean, the locals get it. It's one of the windiest places in Canada. So of course, they want to capitalize on the natural resource

we've got there. So generally, the way they go about doing it is when companies come in, they take all their measurements, they do all their fancy stuff, figure out where the best locations are. At that point, they do hold big, huge community meetings where these companies with their scientists, with their builders, with their whole team has to come in present. This plan to not only the town committee, the municipal department community, the local town people, plus the municipal people. So there's a difference. There's about 4000 people in Pincher Creek, but there's about 10000 people in the municipal district, all of which this has an effect on right, right. So everybody comes in and they do get to have an opinion. They do get to say yes or no. We support this or we don't. And generally they've presented one, two, three or four different locations for where they want to build this. And usually there has to be a majority consensus on where it's going to go. Obviously, the municipal district does generally kind of get veto say in it just it's like your mayor's office and town, right? They do kind of get the final decision, but they have honestly taken a pretty good time and care to consult the community and see what's best for it as a whole. So I do want to say the way they've done it, and Pincher Creek has, for the most part been very positive, and they have taken into consideration how it will affect people and what areas are best to develop. And that's I think they have the best support from the town that way.

Education and character also important to participatory justice

Focus group participants say that education and information from trusted sources are important to social acceptance and to helping them engage on renewable energy and transmissions discussions ("But what discourages me about this is I don't know enough about it. I don't know the pros, the cons, the benefits".). People are also looking for honest information from neutral experts ("...I always have to think we all need to always look at the source of information."; "To me, it would be scientists. One hundred percent. That's who I was listening to. And people from the financial industry to say, Hey, these numbers make sense and they'd be more cost efficient to do it this way.").

Education is important to help people who "have this fear of the unknown". Failing to provide information would undermine the potential for social acceptance ("So if you don't have the educational component behind it sort of explaining what it is, how it works, the benefits and all that, the people would be quick to say no before they really fully understand."). One result of failing to provide information is that resentment can build toward projects ("They don't give you that detailed information that would sway your opinion one way or the other. They're just kind of here. Green energy. It's good for you. Get on board.").

Questions of character emerge here too as important to trust. One participant wants proponents be "conscientious" raising issues of character, another wants proponents to "be very clear and honest".

With respect to trust, the recent case of Nova Scotia Power attempting to increase the cost of solar is an example of a utility undermining trust ("And I know here in Nova Scotia, if it just came from the government or just from Nova Scotia Power, yes. Ok. All up in arms."). Focus group participants also say they are less trusting of project proponents because they have

a stake in the outcome, ("I'm always a little leery to listen to them [utility] because I feel like they have a personal interest in it. So, I mean, maybe it's always good to get another opinion, but I would definitely listen to people in the energy sector, scientists for sure. The environmentalist? Ok. I think if anybody is benefiting financially, I do think there's a bit of a slant to that information.").

Community benefits

Focus group participants reinforced their interest in just outcomes from renewable energy and transmission projects during the discussion of what benefits, if anything (financial, community investments or any other kind of benefits), should homeowners, communities, indigenous communities expect when renewable projects are proposed. Recognition and procedural justice themes raised during the discussion on community influence are present here (influence decision-making, education, transparency), but expand to cover distributional justice issues (e.g., personal and social financial benefits (jobs, economic partnerships, incentives/rebates, tax breaks, community sponsorships)), as well as environmental benefits. Fairness evaluations are central to distributional justice.

The discussion of community benefits surfaced financial issues and the need for people to see a monetary benefit. Several focus group participants want community benefits like corporate sponsorship of parks or community and school events, and for companies to be "good corporate citizens". ("There's also different agreements that developers have made with, you know, we're putting this in and we'll do this park over there or your community or those types of things which, you know, offer some incentive or to the community, but they're not hugely costly to come to the company that would make the idea viable.").

A financial payback is important to participants' sense of fairness because companies are benefiting from taxpayer-funded support. Examples include a return on investment for taxpayers, ("what happens is they'll use taxpayers money to develop. Ok, so and then just turn around and sell people back; It's like it's if I went out and bought a car and then had to pay to use it every time, I wanted to drive it right?"). Participants envision benefits as either lower tax rates in their community, ("so you may hopefully you can hope to lower the rates of the maybe the electricity we are paying. It's the financial incentive."), or lower power rates ("If you're going to spend a trillion dollars on a project to have renewable energy, is our utility bills going down in cost like if you're not mining coal?... Right now is where the utility companies will charge you an extra 10 to 30 dollars a month so that you can utilize green energy. It doesn't make sense."). Lower municipal or sales taxes or lower electricity costs are important to some participants.

Community benefits also include attracting or creating jobs and lower energy costs for industry, small business, and households ("...one would expect maybe the community would benefit in terms of attracting more jobs, lower costs for industry or that type of thing, maybe also lower cost or just running your own homes..."). The idea of community partnerships where communities jointly own projects is another example of community benefit.

At the household level, participants talked about the need for personal incentives so they could afford to "fully support renewable energy", and receive "a break in the cost of living."

Participants want real environmental benefits associated with projects.



The desire to "help your kids and your grandkids and your great grandkids" is a motivator, but as discussed, misinformation or lack of information on the true environmental effects associated with renewable energy can undermine confidence in the opportunity.

Finally, the idea of renewable energy in a community is also a potential source of pride ("...if they were say, a particular neighborhood where to have its own. Uh, windmill sort of. Or maybe a solar, a small solar farm or something. Yes, I think there would be some sense of pride about that.").

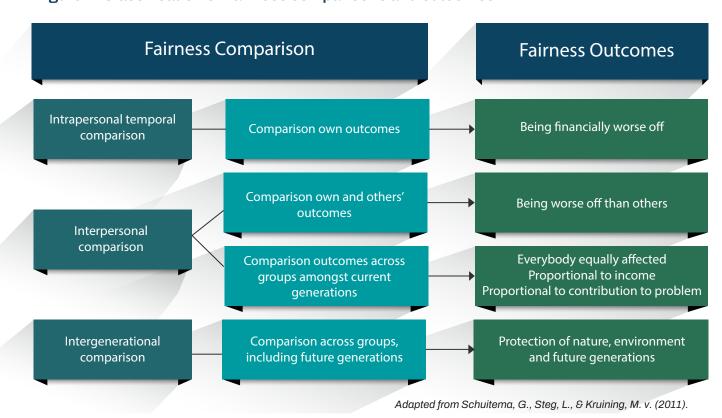
Fairness evaluations

Academics exploring the concept of distributional justice identify the critical role fairness evaluations play in evaluating projects and policies. Researchers assessing how people in the Netherlands evaluate transportation policies⁷, identify three types of fairness comparisons people use. We see these fairness comparisons of istributive effects in the focus group discussion on community influence and benefits, and reflected in the categorization scheme used in Appendix 1.

The first category of fairness comparison is intrapersonal temporal comparison. This comparison category is self-referencing, assessing own

outcomes and suggests egotistic concerns about being financially worse off. The second category of comparison is interpersonal and is self and other referencing, comparing own and others' outcomes across groups and current generations. This comparison category reflects altruistic or enlightened self-interest concerns. The third comparison category, intergenerational comparison, compares across groups, including future generations, and reflects Biocentric and environmental justice concerns. This category reflects a fairness evaluation through the lens of protecting nature, the environment and future generations. Figure 1 summarizes this distributive fairness model.

Figure 1. Classification of Fairness comparisons and outcomes



⁷ Schuitema, G., Steg, L., & Kruining, M. v. (2011). When are transport policies fair and acceptable? Soc Just Res, 24, 66-84.

Focus group participants focused on personal financial benefits like incentives and power and tax breaks fall into the intrapersonal/temporal category because the fairness comparison is self-referencing and focused on whether they are worried about being financially worse off. The majority of comments, however, fall into the interpersonal comparison category, with fairness comparisons focusing on self and others either individually or across groups. Comments regarding corporate citizenship and investment in community benefits, jobs, and long-term payoff in power rates or taxes fall into this category.

Policy and project proponents that give priority to fairness as a critical social determinant of success are more likely, according to social science research⁸, to increase social acceptance of policy and projects. Concepts of procedural and distributive justice need to become as integrated into discussions of a clean electricity standard as energy models, technology, and policy design.

In addition to the discussion of community influence and community benefits, focus group participants reacted to set of rough arguments to explore potential renewable energy and transmission narratives.



⁸ Walker, C., & Baxter, J. (2017). "It's easy to throw rocks at a corporation": Wind energy development and distributive justice in Canada. *Journal of Environmental Policy and Planning.*

03 Narratives

We tested three groups of narratives drafted as sets of arguments. One narrative focused on transmission, the others cover four arguments framed around the social and collective dynamics of electricity solutions and climate change, and a set of three arguments framed around consumer and individual dimensions of electricity as a solution to climate change.

The narrative arguments used in the focus groups reflect recent communications research suggesting Canadians are ready to hear more about what the effective and affordable solutions to climate change are and that they want specifics, rather than generalities. We framed the narratives around a challenge, overcoming barriers and the pathway (e.g., the hero's journey). These arguments are not polished and are written to generate reactions that could help refine narratives and framing within those narratives.

Narrative #1: Transmission argument

Energy experts say we need transmission lines to increase the reliability of renewable energy either to bring in hydropower when the sun is not shining or the wind is not blowing or when other storage technologies are not available.

Narrative #2: Collective/social framing arguments

- 1. 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.
- 2. Scientists tell us the world has about 10 years to change how we use energy if we are to keep people and nature safe. Recycling is not enough. Canada is among the world's top 10 greenhouse gas polluters. There are risks to our economy and jobs as the world uses less of the energy we export.

- 3. Electricity made using wind turbines is cheaper than coal, oil, gas, and nuclear. When transmission lines connect provinces, non-polluting power reliably reaches more Canadians. Non-polluting electricity can power our electric vehicles, homes and businesses.
- 4. Renewing Canada's electricity system will be hard work, but we are on our way. We are building wind and solar projects today. Existing hydro and nuclear can help, but we need to do much more. There will be jobs for workers, and economic and cost of living benefits from being prepared.

Narrative #3: Consumer/individual framing arguments

- 1. To solve climate change, we need non-polluting sources of electricity to power electric vehicles and transit systems, and our homes and businesses. Electricity made in our provinces using wind turbines is cheaper than using coal, oil, gas, and nuclear. Hydro and solar technologies also help. When transmission lines connect provinces, non-polluting power reliably reaches more Canadians.
- 2. We need billions of dollars of investment to renew Canada's electricity system over the next 10 to 15 years. To keep power bills affordable, we must use electricity efficiently. We have the expertise to retrofit homes and businesses so they use half the energy they use today. We can pay up to 80 per cent less to power an electric vehicle, compared to a gasoline vehicle.

3. It costs money to secure energy savings. Canadians need financial incentives so electric vehicles and retrofitting homes are affordable. We need to train and transition workers. Citizens and communities must have a say about project location, the size of projects, and a chance to partner and profit from projects.

Participants considered each set of arguments within the collective-social and consumer-individual themes separately and ranked the preferred arguments from highest to lowest.

Consistently, for all seven focus groups, of the four arguments based on collective and social themes, argument #1 is least preferred and arguments #3, #4, and #2 most preferred (in that order, but very close in total preference scores).

For the three arguments framed around personal and consumer themes, participants respond more positively to the second and third arguments.

The results suggest tensions over framing electricity solutions in the context of climate change and challenges with the use of numbers (whether timeline, dollars or efficiency improvement metrics). There is a mixed reaction to using a range of numbers, rather than specific numbers. We will test in a follow up survey to see how each approach influences different Canadians.

Reactions to the narrative arguments by focus group participants suggest three frames covering social/collective and personal/consumer frames to use discretely or as components of an overarching narrative.

Draft Narratives Based on Focus Group Results

The following emerges from the feedback received from focus group participants.

- 1. One solution to climate change is to use non-polluting electricity to power our vehicles, homes and businesses. Electricity made using wind and solar is cheaper than using coal, oil, gas, and nuclear. To deliver cleaner electricity across Canada, we need to renew Canada's electricity system. Renewing Canada's electricity system will be hard work, but we are already building wind and solar projects today, creating jobs for workers and economic benefits. A federal clean electricity standard will accelerate investment in renewable energy and employ more workers to build and maintain our modernized electricity system by 2035.
- 2. In addition to building out local and regional renewable energy supply, we need to use electricity efficiently to keep the cost of living down. We have the expertise to retrofit homes and businesses so they use 30 to 50 per cent less energy than today. Shifting to an energy-efficient or electric vehicle can save drivers even more, compared to the average gasoline vehicle. It does cost money up front, however, to secure these energy savings. To help Canadians, we need financial incentives so electric vehicles and retrofitting homes are affordable.
- 3. To build the social support needed to modernize Canada's electricity system, we must ensure citizens and communities can contribute to decisions about project location, the size of projects, and have a chance to partner and profit from renewing our electricity system.

Note that the reference to the federal clean electricity standard in the first narrative only applies where the goal is to defend or promote the clean electricity standard.

Communications tips based on focus groups

Overarching advice

Fairness: People exposed to a narrative about renewable energy and transmission are evaluating the story through the lens of fairness. Frame the hero's journey so that it achieves a fair and just outcome.

Advice based on participant reactions to narratives

Climate change references: Participants generally react negatively to mentioning climate change, or to the idea that we can solve climate change: "It will always be with us like homelessness." Men, especially in the West, prefer not to hear about climate change ("sick of hearing about it"; "scare tactics"; "turns me off". Focus group participants also react negatively to referring to climate change in anticipation of resistance from other Canadians. No participants say they do not believe in climate change. Reactions fell into the two categories: "we know" or "Just a lot of people don't believe in climate change remains an important part of the narrative story).

Female participants are more likely to consider future generations, as well as their children in responding to climate change and urgency arguments. BC respondents note their lived experience with climate extremes as factors increasing support for renewable energy ("I think this past year everyone can kind of see just on the news and what's been going around globally like weather patterns have been the most extreme. They've been a record. Okay. So I think just because of that alone, I think a lot of people would be totally more open minded toward renewable energy").

Ground narrative framing within peoples' lived experience: Identify how electricity system changes potentially affect households in terms of benefits and costs. Participants responded well to narrative text referring to the least-cost options (e.g., from the narrative: "Electricity made using wind turbines is cheaper than coal, oil, gas, and nuclear").

Limit the use of absolutes: Situate proposals as "one" solution, "an effective solution", or "an important" solution, rather than "To solve climate change, we need non-polluting sources of electricity..." Focus group participants react negatively to claims of "the solution" framing.

Be factual and concrete, but be cautious about using absolute numbers. Instead limit the use of numbers, until further testing, use a range (e.g., 30 to 50% improvement) and comparators (e.g., and X could exceed). Some prefer no numbers to general statements. For example, from the narrative: "We need to use electricity efficiently". Participants most prefer the narrative focused on keeping costs low and the transition affordable. As noted by one participant, this frame speaks directly to peoples' fears about costs, affordability, access etc. One caution is to be sensitive and aware of low levels of institutional trust and its effects on claims of savings. Some focus group participants feel any savings would accrue to the utility and not to households.

Talk about the need for investment but exercise caution about specific spending amounts (e.g., \$1.7 trillion) given current concerns about inflation and government spending/deficits. "Oh my god, Canada is going to spend crazy." Investment frames should be separate from frames focused on ways to keep bills affordable because it is hard for people to see how both can be true.

Say enough to convince but not enough to spark an argument: Be clear, concrete and credible about any potential personal, community, social and environmental benefits stemming from renewable energy or transmission projects (jobs, incentives, lower bills, community projects). Affordability and efficiency connections make sense to people (e.g. "who can argue with the need to use electricity efficiently"). Specifics like this narrative text, "We can pay up to 80 per cent less to power an electric vehicle, compared to a gasoline vehicle", however, caused participants to react to the number asking how they would know it was true, and whether it reflects lifecycle analysis. If using numbers be specific about what it is based on. In this case, savings at the pump.

Lead with actionable statements about solutions to climate change, rather than focusing on climate change itself. Consistent with survey research, focus group participants did not require reminders of climate risks or the role fossil fuels play. Participants felt they know these facts, and that these facts are depressing. Rather, focus of communications on solutions, and factual, honest details about what those solutions are, how they work, and how we can afford them.

Leading with climate change sparked concerns about "speaking to the choir" or concern that people would dismiss other valid points on solutions. There is a strong sensitivity to any frames/language that sound "preachy" especially to Western males in the focus

groups. Preference is for matter of fact, actionable language and statements.

Language acknowledging there is "hard work ahead, but we are on our way" resonated with some participants but sound "like a politician" to others. Aim for honesty and realism, but not too optimistic, or naively positive. References to "existing hydro and nuclear can help," generate mixed reactions, with some males suggesting it as a solution for coal, while others concerned about cost and waste management issues.

Timelines and transition: Speak to the need for action now, rather than focus on a 10-year timeline for 1.5-degree carbon budget. The years are ticking away and participants split on whether the timeline indicates urgency or not. All agree that action now is required. There also is a risk of inducing helplessness because the "years are ticking away, and it may be too late".

Be matter of fact rather than attempting to convince. Focus group participants generally are there: "we are transitioning", "Like, that's our future, if it doesn't matter if we deny it, because we are transitioning to the electric cars. So it's coming, it's coming that we have to change our electric source as well because consumption is going higher, prices are going higher. So there has to be a way to decrease it if we start like. It will change with the renewable energy. Then we should try."



Lead with actionable statements about **solutions to climate change**, rather than focusing on climate change itself. Contextual statements need to align with the subject of the narrative and frame. For example, Canada is a top 10 global greenhouse gas polluter. This is a true statement and motivates acceptance of the need to act in some focus group participants; but challenged by others who found it hard to believe. This statement is best in narratives on Canada's fossil fuel sector. In the case of electricity, also take care using a national metric on electricity that obscures local/regional differences meaningful to climate action. Focus group participants, particularly in Nova Scotia, for example, were surprised to learn their power system uses coal-fired power. Coupling electricity supply statistics covering BC-AB, MN-SK, NS-NB and the Atlantic did assist participants in discussing the potential value of transmission interties. We also used these differences in electricity supply mix to demonstrate

emissions variations for electric vehicles across Canada (using Canada Energy Regulator mapping tool). Similarly, references to risks should align with risks to the electricity system, risks to not aligning with other jurisdictions on renewable energy, risks to hydro or other electricity related exports such as fossil-fuel generated power.

Some respondents prefer "building from" or "building on" existing non-polluting electricity sources, rather than frames that imply "starting over" because this framing implies a manageable transition. Participants responded well to building a sense of agency through "expertise" framing (e.g., narrative text "We have the expertise to retrofit homes and businesses."…).



04 Survey

Recruitment

We used a survey to further test the focus group results, including testing refined narratives and their influence on fairness and acceptability evaluations. The survey involved a general public online survey with 1,800 respondents across Canada (Atlantic, 300 (Newfoundland and PEI, 75; New Brunswick, 110; and Nova Scotia, 115); Ontario, 600; Quebec, 300; Manitoba/Saskatchewan, 200; Alberta and British Columbia (400, with 200 in each province). Field dates were April 6 to 11, 2022.

This study was conducted with Dynata's (formerly Research Now) online general population panel. This panel consists of nearly one million Canadians. Panel members aged 18 years or older were invited to take part in the survey. Age, gender, and region quotas were applied to the sample to ensure a representative sample of Canadians. The survey was offered in English and French and an oversample in Atlantic Canada and Manitoba/Saskatchewan was included to ensure an adequate number of completed interviews for analysis. The final data set was weighted by age, gender and region.

In recent years, the process of inviting panel members to complete a survey has evolved. Specifically, panels have moved away from sending email invitations to surveys, and instead have panelists login to a community, or receive text or app notifications as reminders to complete surveys.

Measurements

We started the survey measuring general trust and skepticism in the federal government's ability to regulate a non-polluting electricity system. Participants indicated if they agreed or disagreed (strongly agree, agree, slightly agree, neutral, slightly disagree, disagree, strongly disagree, not sure) with the following statements (randomized):

The federal government...

- a. is competent enough to regulate a non-polluting electricity system
- b. has the necessary skilled people to regulate a non-polluting electricity system
- c. distorts facts in its favor regarding regulation of a non-polluting electricity system
- d. changes policies regarding regulation of a nonpolluting electricity system without good reasons
- e. is too influenced by provinces, utilities and industry regarding regulation of a non-polluting electricity system
- f. is acting in the public interest with regard to regulating a non-polluting electricity system
- g. listens to what ordinary people think about regulating a non-polluting electricity system
- h. makes decisions about regulating a non-polluting electricity system in a way that is fair
- i. provides all relevant information about regulating a non-polluting electricity system to the public

We find low levels of general trust (strongly agree, agree), but also skepticism in the federal government's ability to regulate a non-polluting electricity system (Tables 1 and 2). Survey respondents are least likely to say the federal government listens to what

ordinary people think about regulating a non-polluting electricity system (15%), and are mostly likely to agree government has the necessary skilled people to do the job (26%).

Table 1. General trust	General Trust (Strongly agree, agree)
Listens to what ordinary people think about regulating	15%
Provides all relevant information about regulating	20%
Makes decisions about regulatingin a way that is fair	21%
Is acting in the public interest with regard to regulating	23%
Is competent enough to regulate	25%
Has the necessary skilled people to regulate	26%

Table 2. Skepticism	Skepticism (Strongly agree, agree)
Changes policies regarding regulationwithout good reasons	22%
Is too influenced by provinces, utilities and industry regarding regulation	23%
Distorts facts in its favor regarding regulation	27%

Table 3 summarizes the remaining distribution of the results for general trust and skepticism. Survey respondents are not strongly opinionated with high soft scores (slightly agree, neutral, slightly disagree). The results are, on the one hand concerning, and on the other, reassuring. Concerning because research

shows that trust in implementing institutions is important to social acceptability of climate change solutions⁹ (along with fairness and effectiveness beliefs). Reassuring because trust evaluations are not well-developed leaving open the opportunity to enhance trust in implementing institutions.

Table 3. General fairness, skepticism soft scores	Agree/Disagree	Soft score
Provides all relevant information about regulating	3.3 X disagree	57%
Distorts facts in its favor regarding regulation	2.3 X agree	55%
Changes policieswithout good reasons	2.2 X agree	59%
Is too influenced by provinces, utilities and industry	2.1 X agree	59%
Has the necessary skilled people to regulate	2 X agree	54%
Listens to what ordinary people think	1.6 X disagree	55%
Is competent enough to regulate	1.6 X agree	55%
Makes decisions about regulatingin a way that is fair	1.4 agree	58%
Is acting in the public interest with regard to regulating	1.4 agree	56%

Narrative experiment

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. 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).

⁹ 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

Self-referencing narrative

One solution to climate change is to use non-polluting electricity to power vehicles, homes and businesses. Electricity made using wind and solar is cheaper than using coal, oil, gas, and nuclear. To deliver cleaner electricity across Canada, we must renew Canada's electricity system. Renewing Canada's electricity system will be hard work, but we are already building wind and solar projects today, creating jobs for workers and economic benefits.

In addition to building out local and regional renewable energy supply, we need to use electricity efficiently to keep the cost of living down. We have the expertise to retrofit homes and businesses so they use 30 to 50 per cent less energy than today. Shifting to an energy-efficient or electric vehicle can save drivers even more, compared to the average gasoline vehicle. It does cost money up front, however, to secure these energy savings. To help Canadians, we need financial incentives so electric vehicles and retrofitting homes are affordable.

To build the social support needed to modernize Canada's electricity system, we must ensure citizens and communities can contribute to decisions about renewable energy and transmission project location, the size of projects, and have a chance to partner and profit from renewing our electricity system.

Collective referencing narrative

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 less than 10 years to change how we use energy if we are to keep people and nature safe. To solve climate change, we need 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.

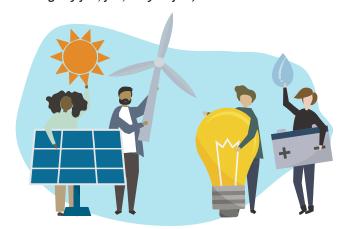
To keep power bills affordable though, we must use electricity efficiently. We can pay less to power an electric vehicle, compared to a gasoline vehicle. Securing these energy savings costs money. Canadians need financial incentives so electric vehicles and retrofitting homes are affordable. We need 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.

Post experimental questions

All participants answered three questions. Variation in responses between the control group participants who did not read a narrative and the two narrative experimental groups can be attributed to the influence of the framing. The three questions measured general fairness, acceptability and also a more nuanced fairness construct covering the six fairness outcomes identified by social scientists.¹⁰

The unidimensional fairness question described a proposed federal clean electricity standard which will be developed in 2022:

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 is this policy measure to you (very unfair, unfair, slightly unfair, neutral, slightly fair, fair, very unfair)?



Survey respondents were then asked:

Still thinking about the federal government's plan to regulate electricity suppliers so that by 2035 they produce little to no greenhouse gas emissions, how acceptable is this policy measure to you (very unacceptable, unacceptable, slightly unacceptable, neutral, slightly acceptable, acceptable, very acceptable)?

Finally, we measured six fairness outcomes associated with the policy (randomized):

Still thinking about the federal government's plan to regulate electricity suppliers so that by 2035 they produce little to no greenhouse gas emissions, how strongly do you disagree or agree with the following statements (strongly disagree, disagree, slightly disagree, neutral, slightly agree, agree, strongly agree).

If this policy is implemented...

- 1. my financial situation will get worse
- 2. I will be worse off compared to others
- everybody will be affected to the same extent
- 4. people with low incomes will be affected more than people with high incomes
- 5. people who consume the most electricity will be affected most strongly
- 6. nature, the environment and future generations will be protected

¹⁰ Schuitema, G., Steg, L., & Kruining, M. v. (2011). When are transport policies fair and acceptable? Soc Just Res, 24, 66-84.

Narrative influence on fairness and acceptability

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 (Table 4). Both narratives increased acceptability scores, relative to the control group, but the self-referencing narrative also generated a statistically significant higher unacceptable score, compared to the collective narrative (Table 5).

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 (Table 6).

Finally, it should be noted 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 effective communications. Such efforts will be essential to securing social acceptance of renewable energy and transmission projects. While both narratives had positive effects, the collective narrative clearly has an advantage in addressing a collective action problem, and in increasing fairness and acceptability perceptions.

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. <i>How</i>
fair is this policy measure to you?

Table 4. Post experimental fairness		Control	Self- referencing	Collective
	Very fair	9%↓	12%	14%
As part of its climate action plan, the	Fair	25%	26%	24%
federal government plans to regulate electricity suppliers so that by 2035	Slightly fair	18%	17%	19%
they produce little to no greenhouse gas emissions. The policy will also	Neutral	21%	16%↓	22%
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 is this policy measure to you?	Slightly unfair	9%	9%	9%
	Unfair	7%	7%	4%↓
	Very unfair	8%	9%	4%↓
	Not sure	3%	4%	4%
	NET: % FAIR (6,7)	34%	39%	38%
	NET: % UNFAIR (1,2)	15%	16% ↑	9%↓
	MEAN	4.5↓	4.6	4.8↑

Table 5. Post experiment acceptability		Control	Self- referencing	Collective
	Very acceptable	14%	15%	16%
	Acceptable	25%	29%	30%
Still thinking about the	Slightly acceptable	20%	18%	18%
federal government's plan to regulate	Neutral	16%	16%	17%
electricity suppliers	Slightly unacceptable	9%	6%	7%
so that by 2035 they produce little	Unacceptable	4%	7%↑	5%
to no greenhouse	Very unacceptable	8%↑	6%	3%↓
gas emissions, how acceptable is this policy measure to you?	Not sure	3%	2%	3%
	NET: % ACCEPTABLE (6,7)	39%↓	44%	46%
	NET: % UNACCEPTABLE (1,2)	12%	14%	8%↓
	MEAN	4.7↓	4.8	5.0↑

Table 6. Post experiment fairness outcome evaluations		Control	Self- referencing	Collective
Still thinking about the federal government's plan to regulate electricity suppliers so that by 2035 they produce little to no greenhouse gas emissions, how strongly do you disagree or agree with the following statements strongly do you disagree or agree with the following statements.	People with low incomes will be affected more than people with high incomes	43%	45%	44%
	People who consume the most electricity will be affected most strongly	39%	38%	40%
	Nature, the environment, and future generations will be protected	31%↓	38%	38%
	My financial situation will get worse	29%	31%	28%
	I will be worse off compared to others	19%	24% ↑	19%
	Everybody will be affected to the same extent	19%	22%	22%

From a demographic perspective, the collective narrative had the most positive cross-party, crosscultural influence, while the self-referencing narrative worsened fairness and acceptability perceptions for

suburban respondents. The self-referencing narrative had a positive effect on New Democratic and Green voters.

15 Appendices

Appendix 1: Thematic breakout of participant comments

What factors would encourage and discourage people in your community to consider a project that was generating renewable energy?

Themes: Willing to accept renewable energy if projects are reasonable in scale and impact (e.g., balanced), there is a future benefit either in cost savings (e.g., rates) or to the environment, people have a choice, and projects kept away from communities (e.g., wind). Participants looking to expert advice to decide if they should endorse a project.

Fairness categories: Interpersonal and intergenerational comparison (distributional justice),

Factors that would encourage support for renewable energy

- Direct experience: Exposure to extreme weather/ Climate concerns a motivation:
 - → BC/AB Women: I think this past year everyone can kind of see just on the news and what's been going around globally like weather patterns have been the most extreme. They've been a record. Okay. So I think just because of that alone, I think a lot of people would be totally more open minded toward renewable energy.

→ BC/AB Women: I think I would agree in the sense that I mean to me, everything, especially with our weather patterns these past few years, it's all about the global warming. And I think now that we're personally going through it, we're seeing the more extreme winters we're seeing, the more extreme summers. I mean, in Edmonton last summer, we hit like 40 degrees really several days. And I mean. I was born and raised in Edmonton. I have never seen that before, so I think that's making people take **notice** more and leaning more towards, yeah, encouraging what's. Let's look at some other options. What can we do because it's really become a serious issue? People have been talking about global warming for years a long time. Yeah, yeah. But now we're starting to see the ramifications of it.

> Future Generations

→ Atlantic Mixed: I think we really need to
be thinking longer term where children or
grandchildren and whatnot and see what can
we do to improve our planet? Yes, sometimes
we do have to make those tough decisions to
rip the Band-Aid off in order to make things
better down the road. Ok, so hopefully people
would see the benefit and make the right
choices.

- Comparison anchors: Take up less space:
 - → BC/AB Women: ...a lot of the green energy, when you talk about developing them, the windmills take up less land space than things like mining do. So that is something that people are very much in favor of. Ok, plus you get a lot more of the land back with the windmills than you do with things such as mining. Yeah, there's a big debate about mining versus energy down here right now, actually, and that's one of the big things is less impact to the environment.
- > Comparison anchors: Visual dynamics:
 - → BC/AB Men: Like there is some of the they're super cool looking, OK, I don't know that they bother my view. 20 minutes the other way down the highway, there's two coal mines in Spar, Wood and Elford and all that kind of thing there, right? And we're sort of right in the middle of we had a there was a coal mine that was going to go ahead here. It kind of got shot down, OK? And in this community, people we're little. Can I say pissed about it?,,, Those coal mines are tough to spot. Oh, I suppose. Yeαh, I don't see it, but you got to go kind of down with a bit of a side highway. OK? Because of course, they're all underground, right? The way? Yeah, you've got to go out of your way to see them and the wind farm. Like I said, I think they're huge now. They're super cool to look at. I don't think I have a preference either way.
- Spatial dynamics: Have lots of space, need not be visible:
 - → Atlantic mixed: For me, I mean, if it's just outside of town, like an industrial park or something like that, I be fine. Ok, so just so long as it's, you know, we've got we live in a large country, we have lots of options there, you know,

- we don't have the density problems that other countries have. So yeah, I think we have lots of space.
- → Solar over wind BC/AB Women: Being in the B.C. like we don't get much rain, don't get much sun. So it's all hydro. But if I have to choose between these two, I think I would go with solar because the same. My point is the same as the other participant, like solar panels like you can set up on the house through like it takes less space, but for the windmills and it's like you need land
- wind over solar BC/AB Women: Well, when you look at a wind farm versus a solar farm, a wind farm, the area around it or under it, I guess, however you want to phrase that can still be used, right? You put them in a field, a farmer's field. The farmer rents the field to them. Yeah, they're there, but you can still farm around them. You can still cattle around them. The land is still usable with a big solar farm. It's just a giant field
- → BC/AB Women: I think if on if we can do it offshore and not affect the animals and the environment, then I think the least we can do that. We have to do on land that takes up space or, like you said, is inconveniencing towns and communities. Ok, then I would be all for that. What's the most viable solution? This is the golden question. But and I would I mean, I would personally maybe go more solar only because I'm more familiar with solar than I am with the wind. But if wind produces more energy than for sure.... Listen to the specialists and see. But if we can go offshore and utilize it where it's not using as much land space, then for sure.

Long-term payoff

--- Atlantic Mixed: Lower energy costs eventually? I think that in the short term, it would lead to higher energy costs for **people** because of the cost of building and implementing the systems, but in the long term, I believe the cost for the general public would come down. That's what I'm hoping anyway.

> Energy security

- --- Atlantic mixed: Well, you know, right now, given what's happening in the world, we've got to be thinking about energy security and self-sustainability as well. So any project that led us to be more self-sufficient in that regard would certainly, I think, be positively thought of, particularly in the face of the increasing cost of oil. Right.
 - Promises unfulfilled: So but just as a side note, it's α very interesting time here in Newfoundland Labrador to be talking about energy projects because we've got this huge white elephant in Labrador right now that was supposed to be this great, environmentally friendly project that turned out to be not environmentally friendly and a huge cost. It's still not supplying us with any electricity, and some of the electricity. as you know, was supposed to be stored in Nova Scotia as well to offset some of their carbon producing production. And that's also not happening so right? Selling a new big project here in the province is going to be a challenge. Yeah. Yeah.

Environmental benefits

→ BC/AB Men: What would it encourage me is if the by-product is clean and you're not going to cut down on old growth forests to do it right, like if this is just spare land, I have no problem driving by a big solar farm.

Factors that would discourage support for renewable energy

Themes: Negative environmental effects, negative community impact, feasibility, spatial effects, cost

Fairness categories: Intrapersonal, interpersonal, intergenerational (distributional justice)

> Negative Environmental effects

- --- Atlantic mixed: What I think would be the obvious things if it was, you know, **unsightly** and people drive by something they didn't like to see every day. They thought it was ugly or was having some sort of other negative environmental impact. Wildlife was dying as a result of it, or there was a huge area need to be deforested in order to put the plant in place. It would be elements like that for sure. It would be the major issue where people would be upset about it and say, sorry, not in my backyard.
- --- Atlantic mixed: And I do know that there is a solar farm that's being well. It has been built in the town of Shediac, which is just a few miles from... And so it' [solar] s it's something that that that's being done and it hasn't. It has led to some deforestation, of course, but I think that in the long run it will do some good inspires. The electric grid and providing clean energy for people great and everything that can be a negative factor is the cost.
- → AB/BC Men: I know in Edmonton, Epcot was looking at putting one down by the River Valley and but they would have to clear out a good portion of our current trees all the way along the River Valley. Oh, OK. Ok. Yeah, I have no problem driving by the ones that are already set up. And if it's set up in one of the many fields in and around the city, that would be great. Ok, another thing would be actually storing the power. Ok. I do α bit of solar projects on my own and a lot of this stuff. I build all stores the power.

- Ok? I have a large lithium batteries that store the power. But a lot of the stuff that's grid tied does not... Yeah, yeah. Yeah. Power that you generate gets to be used. It doesn't just go to waste. Right, right. Unfortunately, lithium batteries aren't really environmentally friendly either, but.
- → **BC/AB Men**: Or being on Vancouver Island. You know, we get in the winters, it's a little gray and cloudy here, so solar may not be the best right. We've they've talked about doing offshore wind farms out here, out in the ocean. You know, probably by two big concerns about that is the birds and things like that. You know, you get my migratory birds and if they're hitting the fan blades and that it's not really a good thing for them. Mm hmm. And then also the other one is the transmission lines, you know, like, what do you do with that? Or they like high powered overhead lines or they bury that underground? And so then that would be my concerns on that. One thing they've talked about doing here is with the under or under the water is the wave power under the water. Mm hmm. And that, as you know, harnessing the energy somehow and doing something like that.
- → BC/AB Men: I think it's α lot easier to do something offshore as far as affecting wildlife because it's. People don't really seem to care much about the ocean compared to like if all the coyotes die in your in your neighborhood, then people are going to notice. But if you if you go, you know, like dump a bunch of crap in the ocean, people don't see it, so they don't really notice as much.

- > Negative community impact; economic development, but not a lot of jobs:
 - → **BC/AB Women**: And probably not as many as you would think and expect? Ok. Definitely not locally sourced because when they're developing the windmills, when they're putting the windmills up, it requires a certain skill set. It requires certain training that ironically, this used to be an oil and gas town because we do have a big, huge gas complex south of town as well. Now that employed the bigger part of the town for a long time when they build these big wind farms? Yes, there's a big influx to the community. It's really great for the community economy. But in the grand scheme of things, once they've got that wind farm built, there's this many jobs because maintaining them, it just falls back to the regular maintenance staff that was already in existence before all these people that came in to build them, they leave again. Right? Ok, gotcha. On that point, actually about 100 hundred kilometers west of Medicine Hat, so between Calgary Medicine Hat, they must have put up about one hundred and a hundred and twenty five windmills. But the way they did it is, they just did it on the edge of a farmer's field. There's no close town attached to it. Ok. So luckily in that area, I think they may have learned from Pincher Creek or some of the complaints there, mostly because I think the big thing is where they're putting them up has a huge impact. So keep it away from the communities, keep it away from busy cities and towns and still get the benefits of having them, right?

- > Technically feasible/Site considerations/ realistic:
 - → BC/AB Men: I had 14 inches of snow overnight on my deck. There's been many days like that kind of thing. I don't know that clouds are one thing, but they'd be paying a lot of people, a lot of money to scrape snow off of solar panels to recharge, right?
 - --- Atlantic mixed: Ok. I was going to add there that here, like in Newfoundland, a place worth a little bit more rural and stuff, not everywhere, but it tends to be at some point, people are sometimes afraid of new ideas and stuff. So to presented in a certain way and also it have to be the right type of renewable energy if you want to do something with wind. Amazing. We're great for it. We have a we have it in abundance. water great. We thought we've got it. We're surrounded by. We've already got Churchill Falls, one of the biggest, biggest powerhouses on the eastern seaboard. Other than that, I mean, if you wanted to do something with the Sun, we're not the place for that. We get sun, rain, wind all in the matter of one day. So you want to probably do that somewhere else. You want to be smart.
 - → BC/AB Women: I think for me, I guess I just wonder you're saying about solar powered and you're saying about wind. Yeah, but I don't know. And it just because I've watched kind of documentaries and things and it just doesn't seem feasible. And I don't mean financially. I mean, it just doesn't seem like the sun doesn't shine all day. Ok. Yeah. Then the wind doesn't blow all the time. And so I guess for me, I think we all believe in renewable energy and what's better for the planet. But I do think, is it really realistic that those two other energy? I don't know what you call them. Right. And happen one hundred percent of the time. Right.

So I guess I kind of wonder, is that actually possible?

- → Atlantic mixed: Well, back to which one you prefer? I think, you know, wind blows at night, too. You know, when you don't have the sun and if you want to, you know, have renewables providing power at night, you know that might be helpful. But right, OK, if offshore is great, I think, you know, for wind, certainly.
- > Spatial: Wind needs lots of space:
 - → Atlantic Mixed: A lot more space is usually taken up by wind. You can be strategic with the solar panels. I mean, you can have them on cars and everything, right? I mean, I guess you can't. I mean, you know, as well. But it seems like, you know, you need a high wind area with a big open space.
- Fairness: Communities host projects but don't receive the electricity:
 - → BC/AB Women: I live in Pincher Creek. I don't know if any of you kind of know anything about Pincher Creek, but it is windy about 99% of the time. It is honestly that windy and we've got the windmills to prove it. So when it comes down to whether or not I support or oppose the development of renewable energy in our community, I'm answering as a question of what does it do to our community? What does it do to the environment around us? What effect does them building those windmills have on the community? And as much as we love to say, yeah, it's positive. We don't use that energy. The energy coming from the windmills has nothing to do with Pincher Creek. They're just they're here. They're in our view to look at them every day. Truth be told, when you get a big wind farm next to the highway, it causes drifting on the highway. It does have an effect on the local community, right? The land gets destroyed. Farmers, yeah,

they make deals with these big companies. They get paid to have the windmills on their property, but they can never use that pasture the same way they used to be able to. There are now roads through it. These wind farming companies or wind farming employees have to be able to come on site to maintain the windmills. It just it really changes the way we do things around here, and it does have a positive effect. Don't get me wrong, but it also does have a lot of other unexpected effects on the community as a whole.

- Ok, yeah, they're everywhere. If I well, if you could see 10 feet outside, where have a snowfall snowstorm going on? If I were to take you out on my back deck, I actually happen to live where you can see them all and in any direction. You look out my house, you can see windmills. They're everywhere. They're everywhere. Yeah, they're everywhere. Yeah, it's million dollar views littered with giant windmills that blink red all night long. For every single one of them. And there are none of the airplanes, I guess. All, yeah, all night long. So you got to get used to them. They take a little getting used to and they are actually noisy.
- --- Atlantic mixed: Well, I guess if it were wind, you know, people do complain about the turbines, you know, making this noise. Ok. I've heard that anyway, I don't know how much noise they actually generate, but right?
- >Cost: Transmission costs (\$1.7 trillion):
 - ---> BC/AB Women: Yeah, wow. It's yeah, that's hard to swallow
- **≻Cost**: Hydro
 - → Mixed Atlantic: So no, we're just going to add there that basically it ties in with his point and the point as a positive for renewable energy

or whatever. If, ah, if our power with this whole Muskrat Falls thing, if our power doubles, as they say, on par with what they're saying is going to happen in other heads, there's a rebate or something, apparently or something they're doing with the government. I don't even know that because the cost rate on the cost of the power, yeah, they're trying to reduce it. Apparently, there's some big deal that's going to reduce if they can borrow at the government's lending abilities. I don't know whatever. Anyway, they're going to reduce it. But if it had to go on power, we will be paying. I worked it out just over the same as you will be paying for power in New York, which is the most densely populated place in North America, and we're living in one of the more rural places in North America. And we also have the Churchill Falls, which powers half of the eastern seaboard, which to me is just as backwards as our oil being transported out. And that's paying \$2. Right, right. Yeah.

>Cost: Offshore versus onshore wind:

- --- Atlantic mixed: Yeah, just maintenance, weather and like you said, more expensive to set up, got to fly in and out and things of that nature or, you know, take a boat. But it's less obtrusive to our lifestyle, but it's more obtrusive to nature. So I guess it depends on what way you want to look at it. Right? Right?
- → BC/AB Men: Yeah. The marine environment is much more harsh. Just think about when you go to repair your car compared to repairing the boat, then that makes the boat mechanic is three times as expensive as the car mechanic
- → BC/AB Women: My question with the offshore versus onshore, it would be the associated cost would operating these types of operations offshore increase the cost to a point that it's no longer affordable?

Factors that would increase social acceptance

Themes: Recognition and procedural justice (e.g., ability to engage and evaluate) and trust

Fairness categories: Procedural justice

>Education/information

- → BC/AB Women: I think the lack of information. I mean, or maybe it's just up to the individual to do more research. But what discourages me about this is I don't know enough about it. I don't know the pros, the cons, the benefits. So I think if they can, I don't know, either have forums or just make it more maybe visible in marketing or in promoting it, I'm not sure, but I think the lack of information is what discourages a lot of people from.
- → Atlantic mixed: With regard to solar, I don't know if they use glycol as a, you know, the heat or depending on or some maybe oil of sort. You know, like in Fredericton, like I live in the downtown and it's a well field. So I mean, there's concerns, you know, depending on what it is, they're running through all the pipes that endanger the, you know, drinking water. Hmm. And Craig, I would add there, too, where people have this fear of the unknown. So if you don't have the educational component behind it sort of explaining what it is, how it works, the benefits and all that, the people would be quick to say no before they really fully understand. Right?

➤Trusted sources:

→ BC/AB Women: And I know for me, I always have to think we all need to always look at the source of information. Mm hmm. And so I think the source and I also think the impact, I think

we all want a better environment and a safer environment and all of that. But I think it's the source and I think it's also to what extent will that make a difference? And I know it will. But I think also putting those numbers in is really important as well. And depending. It's always, you know, who's telling the tale, who is the source of the information, right?

- → BC/AB Women: Politicians need to listen to people in the energy sector. Ok. To me, it would be scientists. One hundred percent. That's who I was listening to. And people from the financial industry to say, Hey, these numbers make sense and they'd be more cost efficient to do it this way. Then that way, like how can we get more bang for our buck, so to speak?
- --- Atlantic Mixed: And I know here in Nova Scotia, if it just came from the government or just from Nova Scotia Power, yes. Ok. All up in arms. So presenting it in a way and having alternate people to present that the community might be a little more open to looking at other, yeah, other options and other possibilities.... Well, I think with scientists, for example, you know, they're the ones that are studying things day after day after day. And we would hope that they have the background knowledge and the the forefront to be able to explain things and have that that deep rooted knowledge. Yeah, as opposed to someone who is just sitting in an office somewhere and not necessarily diving into the background.
- --- Atlantic mixed: Good. I also want to make sure that those scientists had the integrity not to. And be able to be bought by any other entity to sway their opinions and research, right? That they've come up with.

- → BC/AB Women: I'm always a little leery to listen to them [utility] because I feel like they have the best because they have a personal interest in it. So, I mean, maybe it's always good to get another opinion, but I would definitely listen to people in the energy sector, scientists for sure. The environmentalist? Ok. I think if anybody is benefiting financially, I do think there's a bit of a slant to that information. Ok? Because they're running a business where I think scientists are more like more credible in my mind. And I do agree with the other lady like, you know, you also want to know the cost of things, right?
- → BC/AB Women: Who [are the specialists you would listen to], I guess I mean, obviously people from the energy sector, but also the environmentalists, because they want to make sure that it's helping the environment and staying within. Regulations and things like that.
- **NS/NB Women: I feel like it's also very important that we listen to the people who are planning these projects. Ok? Does they generally have a better idea of where these things should go? Not that the people shouldn't like. If it's going somewhere, that's going to be super disruptive, not that the population shouldn't be listened to, but you know, we don't. At the same time, the population doesn't always know everything, right?

Community influence

How much influence should communities or citizens have over where projects are located?

Themes: Involved/transparent/influences decisions, community choice, collaboration, reasonableness, environmental effects, power

Fairness categories: Interpersonal, intrapersonal, intergenerational (distributive justice), procedural justice

➤Involved/transparent/influences decisions:

- Atlantic mixed: That's a really tough one for me, like I think everyone should be involved in every step of the process and be able to see those environmental assessments and everything and make judgments on that. But I think at the end of the day, sometimes there also has to be just someone that makes these decisions or it's not going to get done, but. Ok. But so go ahead.
- ***Atlantic mixed: I think we would want to put the information out. We may want to have some community meetings and things like that so that everybody fully understand. But...someone does eventually have to make the decision that this is what we're going to go forward with. Yes. Not just we're going to listen to you, but we're not going to listen to you. We're doing it anyway. But sort of even though that's what's happening, we might, you know, we do have to have the community involvement, but you're always going to have someone who disagrees. So, yeah, well, if one person disagrees and we're not going to do it right. So yeah.

➤Community choice:

- → Atlantic mixed: Uh, in the town of Shediac, again, they do have whole households and the community is involved in a full research project. And in regards to using solar energy, particularly that solar farm that was built nearby. Also, there are two major office buildings that have been converted to solar energy in the last within the last year or so. So there has been an example of a community that has come together and said, yes, we would like to participate in in in the process and people can volunteer for it and have volunteered for it. And if their home or business is deemed worthy of being part of the process and they get to be a part of it.
- → NS/NB Women: I think it's important that we have a say in where it's located unless, you know, I don't necessarily want a big farm in my backyard, either.
- → NS/NB Women: You'd have a big input, I think we can be the ones living with it.
- → NS/NB Women: [should have a veto?] Yes... You shouldn't be able to disrupt our daily lives for something like that.
- → NS/NB Women: Yeah, I guess I would lean more towards voting for options, because that way we're we still have a say, but it's also being. Decided. By people who in the field who know what they're doing, what they're talking about, right?
- ---> BC/AB Men: Oh, I think the communities affected by any of these type of projects have a huge say in where things are going to be located. I mean, it's where they live. It's their backyard, right? At the same time, I've always had an issue with people not in my backyard mentality either. If it makes sense and if it's. For the greater good. Ok. I think it does. It's a good thing, but you know, having community input in community by

- and always getting all of these projects so much easier to.
- → BC/AB Men: Ok, I would even maybe stronger. I would say they should have all the say...] I mean, if it's their land, yeah

>Collaboration:

→ NS/NB Men: Well, I would say it should be somewhat important. For example, like, let's say you're going to destroy like a certain nature space or something like that, like just something recently happened here where they have to do it for other environmental reasons, where they have to take a part of a really popular nature space away to help with flooding. And no, it's not power or anything like that. So there's a valid reason behind it. But just like it does ruin like a really popular spot where people like to go for walks because there's like trails built up there. So I think it should be like. I mean, you don't want to like you should be polling them. I don't know if you should have to, like, go through a big, crazy vote, an election thing of where it should be like, but it should be **definitely taken** in consideration. I think if you don't take in consideration, you're just failing to miss the point.... Yeah, like a majority...Ok, like maybe you say these are some potential locations. What are you more like? Rank them in ranking order like?... So for me, the community pretty much should always have the say, right? So St Mary's First Nation Yeah. So in my community, we kind of reach out to the whole community in various ways. So we have the newsletter that we'll send out to the whole community in hopes that everybody can see the news that we're putting out. Or we'll have elder sessions where we'll meet with community elders to see what their thoughts on it like, see if there's anything that we might be doing to change traditions or anything like that, OK? We'll also have youth

meetings to see what the youth think, and then they'll also be. We'll have community engagement sessions so where anybody can show up and then we'll tell you and talk to you about what we have planned going on. So that way it's it's a more informed process, right? Recently, they started to take into account the women's vote, while the women's perspective on that as well, because the women are very important in my culture....Like kind of, it's not like a majority thing. It's just kind of like taking all sides into account and just kind of weighing down each like each option and stuff like that. So it's just like. We'll meet with other people, so we'll have consultants as well, scientists and stuff. And then we'll just kind of and as well as like traditional knowledge holders and we'll just kind of like work together to come up with a collaborative plan.

➤ Reasonableness:

→ NS/NB Men: I think there should be less in a way. You know, that's First Nations. That's theirs. You know that they make their own decisions. That's theirs, right? And the idea that unfortunately, in the past, it seemed that when we go for consensus in over here and getting majority decisions, the majority sometimes decides on things that aren't right, that that it's not fair. So I think to approach this, there has to be some community. Yes, absolutely. ...to trust the science, trust the consultants about where things should go and if if this location is the best location, for example, you know, if off the south shore of Nova Scotia is the very best place to put a wind farm. But you have a whole bunch of absentee owners who own all these beautiful big homes ago. Now I don't want to look at windmills, let's put it over there, and they have the political clout. They have the money to be able to talk to councillors and MLAs and

- say, You know, let's back off this. It's bad for the fisheries. Let's put it over there. All right. You know that sort of thing. Mm hmm.
- → **SK/MN Men**: And there should be a discussion. I think that so solar within cities is easier to sell them than a wind farm inside a city. Ok, so there's a very urban friendly type of power source shouldn't take very much to convince people they're starting to go up on apartment blocks here and other places. That's a wind farm within the city is a tough sell...Nobody should have a veto over things. Ok. That often and this is a discussion on cell phone towers. People will complain about cell kind thing and then they don't want to say they don't want to tower in their area and then complain that they have no 9-1-1 service. Right? Right. At some point, a decision is made and... You know, when people have to say, but if they just don't want a cell phone tower in their area or if it's in this case, say that you have a rural area that's got low density and they want to put up a wind farm. You should be able to find some sort of community consensus and you're going to get a majority.... Design is everything. If you can come up with the right set up the design, if you're if people are saying that, that's where I see my sunsets and you're able to go, I don't know, just a kilometer away and still the same way, still do it, energy company. All right. Then you've just won over your space.... It's no different than if you're running a pipeline route. Ok, what do we do for a pipeline? We do. We do consultation with the people that are going to be living there and maybe there is places to avoid and we avoid them, sometimes at significant cost. But that's how you get to a consensus, right?

>Environmental effects

- → BC/AB Women: It's like, it's very important. And there should be like plenty of meetings around the falls. And like it, it does matter. Like we have to live under or near these things. Our children has to grow up in this environment. So if they are taking space off the park or a parking lot or like things like that. So I don't want them around me in my community.
- → SK/MN Women: Well, I mean, if you feel like if you say, OK, we want. The solar farm or we want the wind farm, whatever you say, OK, do it, but you don't look into it a whole lot. You're going to turn around. You're going to say, Oh, wait a minute. They just tore down an entire provincial park because we said, go ahead, do it, but didn't give any stipulations as to. Yes. Ok, they're going to just do what they want to get it done without saying, Oh, well, you said to do it.

≻Power:

- → SK/MN Women: Quite a bit of input influence were from the communities you don't want, just a small, small town or something like that, and some big corporation comes in and throws in a bunch of wind turbines next door kind of thing.
- → SK/MN Women: I was just going to say, you know, you really start to see to like the end of the day. I'm no expert in this by any means.

 But then you think of how many other people in the community are not either are not experts?

 No. But I think that people also can have, you know, one sided views from just little things they hear that might not be scientifically like. Have evidence regarding that? Yes. And I think in the end, you realize how many people are making decisions for the community that really don't know what they're talking about.

Community Benefits

What benefits, if anything (financial, community investments or any other kind of benefits), should homeowners, communities, indigenous communities expect when renewable projects are proposed?

Themes: Participate/Influence decision-making, education, jobs, economic partnerships, incentives/rebates/affordability, financial benefits to the community and to households, environmental benefits, pride.

- > Fairness categories: Interpersonal, intrapersonal (distributive justice), Procedural justice
 - → **SK/MN Men**: If people feel as though they were actually heard and then their words can play some role in the decision-making.
 - BC/AB Women: Well, like I don't know how long this has lived in Pincher Creek, but I think if they were consulted on it beforehand, they would have had a different opinion. And the thing is, I think it's important. I think it's very important to let the community, the local community, because this is where they're living and being active and you want them to support the situation. There's no point in doing something in there and then not have the community support it. I think it'll just cause a whole bunch of other problems. It's like when those cell towers were put up, those 5G towers were put up everywhere and people. There was a huge outcry. People should have a say in what's going on in their community. Yeah, exactly. And I think if we're given the information, like if we're provided the information saying this is how it will benefit, this is the good, the bad and let us have some influence as opposed to completely.

- Well, the way that they the way they actually go about it down here. I mean, the locals get it. It's one of the windiest places in Canada. So of course, they want to capitalize on the natural resource we've got there. So generally, the way they go about doing it is when companies come in, they take all their measurements, they do all their fancy stuff, figure out where the best locations are. At that point, they do hold big, huge community meetings where these companies with their scientists, with their builders, with their whole team has to come in present. This plan to not only the town committee, the municipal department community, the local town people, plus the municipal people. So there's a difference. There's about 4000 people in Pincher Creek, but there's about 10000 people in the municipal district, all of which this has an effect on right, right. So everybody comes in and they do get to have an opinion. They do get to say yes or no. We support this or we don't. And generally they've presented one, two, three or four different locations for where they want to build this. And usually there has to be a majority consensus on where it's going to go. Obviously, the municipal district does generally kind of get veto say in it just it's like your mayor's office and town, right? They do kind of get the final decision, but they have honestly taken a pretty good time and care to consult the community and see what's best for it as a whole. So I do want to say the way they've done it, and Pincher Creek has, for the most part been very positive, and they have taken into consideration how it will affect people and what areas are best to develop. And that's I think they have the best support from the town that way.
- → BC/AB Women: Indigenous communities, for example...Having people from that community specifically involved in the committee and planning stages of that because it will affect those people more so actually having proper representation of what like of, I guess, the logistics and planning of it that represents like the actual community that it will be serving.

≻Education

- → NB/NS Men: I think we have to ask whoever's making the planning to be really conscientious. Where am I going to put it and why is that the best spot? Ok? And then I mean, we should have input, but I think that we really do have to sell a lot of it. A lot of people I know in the wind power that we have don't like it because there was a story I don't know. I don't know if it's true anymore, that it was more expensive than generating it other ways. Of course, now you're telling me at the beginning. No, it's actually four times cheaper. But you know, of course, the rumor that I had heard was every time I see one of these things turning, I think about how much it's costing us compared to...
- → NB/NS Men: I think, is we have zero faith in Nova Scotia power to do the right thing, absolutely less than zero. So they're already starting from a deficit to try to convince us of anything.
- → NB/NS Women: Yeah, like to be very clear and honest about everything that's going on, because not because I find some times I've learned from like experience, from talking to my own father that sometimes things are like sneaky and they don't let us know about the fine print and the certain details or fees or whatever like that other lady talked about, right?

- --- Atlantic Mixed: People have this fear of the unknown. So if you don't have the educational component behind it sort of explaining what it is, how it works, the benefits and all that, the people would be quick to say no before they really fully understand
- → BC/AB Women: I think the lack of information. I mean, or maybe it's just up to the individual to do more research. But what I what discourages me about this is I don't know enough about it. I don't know the pros, the cons, the benefits. So I think if they can, I don't know, either have forums or just make it more maybe visible in marketing or in promoting it, I'm not sure, but I think the lack of **information** is what discourages a lot of people.
- → BC/AB Women: But I mean, you know, you hear rumblings of it, but I don't think they're doing a good job and letting people know how important and experiencing it, right? Yeah. And that's why I live of it and they still write you. You see it, but you still don't know the actual benefits of it. They don't give you that detailed information that would sway your opinion one way or the other. They're just kind of here. Green energy. It's good for you. Get on board.
- → BC/AB Women: I'm always a little leery to listen to them (developer) because I feel like they have the best because they have a personal interest in it. So, I mean, maybe it's always good to get another opinion, but I would definitely listen to people in the energy sector, scientists for sure. The environmentalist? Ok. I think if anybody is benefiting financially, I do think there's a bit of a slant to that information. Ok? Because they're running a business where I think scientists are more like more credible in my mind. And I do agree with the other lady like, you know, you also want to know the cost of things, right?

→ BC/AB Women: I think the lack of information. I mean, or maybe it's just up to the individual to do more research. But what I what discourages me about this is I don't know enough about it. I don't know the pros, the cons, the benefits. So I think if they can, I don't know, either have forums or just make it more maybe visible in marketing or in promoting it, I'm not sure, but I think the lack of information is what discourages a lot of people from.

>Financial benefits: to community, to industry, to households

- → **SK/MN Men**: Financial benefits to bills. And there's also different agreements that developers have made with, you know, we're putting this in and we'll do this park over there or your community or those types of things which, you know, offer some incentive or to the community, but they're not hugely costly to come to the company that would make the idea viable.
- → NB/NS Men: Another thing they could do. like hypothetically, let's say the developer says giving people a discount will cost them Xamount of dollars. What if they took a similar amount of money and develop something in that community to help the community like a community center for something or like a park, or just use a different type of incentive rather than just giving them?
- → SK/MN Men: Good corporate citizens, I guess.
- --> SK/MN Women: Contribute to the community schools is a huge one. There's a lot of school sponsorships, even the oil refinery sponsors. schools. You have. Major corporations, it doesn't matter how big or small that will sponsor things, so some sponsorship of some kind.

- → **SK/MN Men**: There sometimes has to be some return on investment for taxpayers too. I think sometimes what happens is they'll use taxpayers money to develop. Ok, so and then just turn around and sell people back; It's like it's if I went out and bought a car and then had to pay to use it every time, I wanted to drive it right?
- → SK/MN Men: Yeah, there should be some return back. Say, OK, well, we've taken this much money out of the community with taxes to fund this research. And then it's given to a private organization that reaps all of the financial benefits from it. Yes. And then OK. But then, you know, like they'll do a wind farm or solar, but when that thing falls to disrepair, they'll either walk away from it and then leave it. And meanwhile, they've made the money off it the whole time on the taxpayers dime. And or if they do have to redevelop it, they ask the government for another grant and they give it to them again.
- \rightarrow BC/AB Men: It's a return of the investment, and if the benefits will be reduced, so you may hopefully you can hope to lower the rates of the maybe the electricity we are paying. It's the financial incentive.
- → BC/AB Men: If you're going to spend a trillion dollars on a project to have renewable energy. is our utility bills going down in cost like if you're not mining coal?... Right now is where the utility companies will charge you an extra 10 to 30 dollars a month so that you can utilize green energy. It doesn't make sense. Mm hmm. Charging extra to use green energy.
- → NB/NS Men: Well, we always like if you're going to have a renewable energy source, one would expect maybe the community would benefit in terms of attracting more jobs, lower costs for industry or that type of thing, maybe also lower cost or just running your own homes. So it should have some.

- → **SK/MN Men**: I think of how Alberta only has the one tax because they get a lot of they receive a little bit of the benefits of having like the oil in their land. So, you know, like I feel like the local community should also receive a little bit of the benefits because it is part of their community.
- → SK/MN Women: I think that we should also be benefiting from the project itself so like don't have a solar farm in my city and then sell all the power to someone another country and then we get nothing for it. Kind of like it goes with gas.
- → Atlantic Mixed: Well, I would hope that eventually we would see some monetary kickbacks. So like your own personal energy usage, so your monthly bill, for example, might go down.
- → Atlantic Mixed: There is potential for tax revenues to that municipality, depending upon how it was owned and structured. Yeah. And I guess also in other jurisdictions where this type of development has happened, individuals could sell their electricity into the grid if they want to put their own production facility in some property that they own.
- → Atlantic Mixed: I do know that there are indigenous groups that do have sustainable energy projects on the go, and they are selling their energy to the to the power companies. And they are connected to the grid for the most part.
- ---> BC/AB Women: I think incentives in the community, maybe it needs and maybe depending on what that community might need, they may need a new park, they may need a new pool or α senior center. But I meαn, just like anything else, a deal, I guess has to be made. But maybe it'd be financial. Maybe it's a credit towards your energy bill.

> Personal: Incentives/rebates/affordability

- → NB/NS Women: I would like definitely incentives because I fully support renewable energy.
- → NB/NS Women: Thinking about money. Because that's what everybody is going to want. It comes down to the dollar, if they can afford it or not.
- → NB/NS Women: Well, they would make it pretty favorable because they're going to want the majority on their side for that. So they would have to say, like, be on board with this and at tax time, you'll get like 5000 back or like what the other lady said, how they took it away from her when she was looking into it. And that's what stopped her because she was all for it. It is about the dollars at the end of the day because we're all paying either oil or electric, whatever the heck we're paying. We got to have electricity, so.
- → NB/NS Women: Like that tax reduction. A certain fee
- → NB/NS Women: Lower fuel and electricity costs. Okay. So, yeah. Yeah, because nowadays you see the fuel is going up because of the war going in different countries. But yeah, this is one of the reliable things like lower fuel electricity costs. And of course, if we can get some incentive back.
- → SK/MN Women: Lower sales tax
- → SK/MN Women: If there's like you have to invest in this percentage of renewable energy projects in order to get a tax break or in order to be eligible for this grant, and that was the other thing. I think that there should be grants available for small, independently

- owned businesses as well as non-profits and community based organizations. And I wonder if, like when we talk about tax breaks and these like wonderful incentives to take part in renewable energy projects, is there like ridiculous eligibility requirements to be eligible for those tax breaks? Because if a small, independently owned business or α community based organization doesn't meet those requirements, then why would they take part in? They can't renewable energy project, right? So yeah, I think paying attention to those kinds of things is also important.
- → Atlantic Mixed: Uh, perhaps some sort of trickle down effect, you know? You know, technology. Most of the time when it first comes out comes around or you hear about it, it's people that really can't afford it, fact that better able to to. Have it. Or it's a business only thing that. Ok. But you would hope it would trickle down to people like us, everyday people that we would be able to benefit from the technology that's been produced and see the benefit of sustainable energy and lower costs.

> Personal and Social: Jobs/economic partnership

- → SK/MN Men: If you're going to have a solar farm, a wind farm, whatever energy source and it's going to, you know, be on the people's land, so to speak, maybe you have to offer them jobs. There has to be some, you know, that's I don't know if that's a financial impact or not. Sure, I definitely employment in the project is important.
- → BC/AB Men: I would look at more like employment
- → BA/AB Men: Jobs and a break in the cost of living

- **SK/MN Men: Offer locals employment; So if there's you know, as we've mentioned, if there's jobs, if there's benefits to the community that way, I think the community can get behind it. The other thing that I've seen from BHP in particular is a lot of community support very early on before any shovels went in the ground, even supporting, you know, all kinds of building projects and local community initiatives, that type of thing.
- → BC/AB Women: Creating more jobs for that, maybe a year or two?
- → BC/AB Men: Actually let share in the [project].

 Is that what you meant, actually buy in as a shareholder of some sort? Yeah, yeah. Ok.

 People just like, buy into the project, you can just get the return on whatever the project returns.

>Environmental benefits

- → NB/NS Men: This is going to help you in the long run and will help your kids and your grandkids and your great grandkids.
- → NB/NS Men: A cleaner environment is essential.
- → Atlantic Mixed: I think it would, you know, if we could make things better, it would just have a clear conscience of knowing that you weren't damaged... And I mean this we might be older, but our kids or grandkids, sure, they got to live in this world, too.

➤ System reliability

→ NB/NS Men: Improved reliability would be nice

≻Pride

→ Atlantic Mixed: I believe so, if there were a. As, say, a particular neighborhood where to have

its own. Uh, windmill sort of. Or maybe a solar, a small solar farm or something. Yes, I think there would be some sense of pride about that.

Participant comments on draft narratives

Question: There are four possible arguments described on this page. POLL – Which one does the best job to increase your willingness to see renewable energy or transmission in your area?

Four arguments based on collective and social themes

- 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.
 - → MN/SK Women: So almost like I don't want to say a scare tactic, but it's kind of like, this is how it is like everyone's kind of experienced it this past these past few years, like the floods, the fires, everything's kind of just going south now. Yeah. Hey, we're not sugar coating it. This is what's happening. And we need to figure it out.
 - → MN/SK Women: Just a lot of people don't believe in climate change. Is that OK? It's almost redundant. It's like it's very old, right? Coal oil, gas burning. Ok? It just kind of takes you back to like nineteen fifty. It's like we all know those things.
 - → MN/SK Men: That's just something we all already knew, I think.
 - → MN/SK Men: I was going to say, I think it's pretty subjective because if we were out West, we would probably think that the this whole argument makes a hell of a lot more sense

- than maybe us who haven't experienced direct impacts of forest fires. And maybe some people here have for me, I haven't, other than the smoke that rolls in for a couple of days. Unsettling. But I think that depending on how much of an impact you feel from each of these things is going to depend on how important it is to you.
- → MN/SK Men: Just got so much tired of hearing it as, OK, climate change is true. But it's a global issue, and Canada is a tiny percentage of the global impact on climate change. So yeah, it's true. But you could turn Canada off and not make any difference.
- → BC/AB Men: There's no solution, it just seems inflammatory.
- 2. Scientists tell us the world has about 10 years to change how we use energy if we are to keep people and nature safe. Recycling is not enough. Canada is among the world's top 10 greenhouse gas polluters. There are risks to our economy and jobs as the world uses less of the energy we export.
 - → BC/AB Women: Yeah, I just feel like that's the main message, and that's what's going to help people, I think, take more interest in what's going on in the world and let them realize these are the facts. This is what's coming from the scientists. I think we need to hammer that out to everybody and say, Look, we only have 10 years left. This is it, and we're starting to see it. Like I've said before, we're starting to see. Yes, OK. Living the example. So I think, you know, getting that message out and just saying, this is what the scientists are saying and then everything else I just felt kind of fell into place because with three and four, we know that's going on, but it just seems to be a slower process of getting it out there and getting.

- → BC/AB Women: It is because I always think that it is a lot like Switzerland, maybe in a way, maybe I am. But I think we like to think that we're green. We like to think, but to think that we're the top 10.
- → Atlantic mixed: They've always like as far as I can remember, I've always been told we have this many years to change. We have this many years to change. We have this many years to change and it just keeps changing. So what's the difference in doing it now versus like I would rather have the eight to 12 years and then say, oh, 10 years? Because if you say eight to 12 years, OK, you're going to have some people who want to start changing closer to the eight year mark. And you know, some people who are going to wait a little bit. But if you say 10 years, I guarantee about probably 50 percent of the population will say, screw it, I got 10 years. So I don't know. I just I that one pretty low on my score, just due to the fact that everyone has been saying it the whole time, but nothing's ever happened.
- → Atlantic mixed: I didn't like two at all. Oh, OK. Ok. Well, I think we're already at the point where people in nature are unsafe. We keep seeing examples of that. So I think we're already out of time. Oh, OK. It's not scientists. Scientists are some scientists telling us we are at a time. We're at that tipping point. Yes, yes. The throw in their recycling is not enough. I don't know why that would be put in there, but it's like a throwaway comment which really doesn't really deal with energy. Ok. Canada among the world's top 10 greenhouse gas players. Yeah, that is true, mostly because of the oil sands production in Alberta or also one of the largest greenhouse gas sinks in the world, too, because of our forests. Mm hmm. So the only part I liked about it is that there are risks to the economy and jobs if the world uses less. Right, OK. But the reality is right now, that's

- a really tough sell because everyone in the world really wants our energy a oil right now for one hundred and fifty dollars a barrel.
- → NS/NB Women: Um, I'm to or just Canada is among the world's top 10 greenhouse gas polluters. But I don't know if I agree with that one; Yeah, yeah. I could think of a couple of other countries. I would probably be worse; I mean, what the mess that we have and the amount of people as compared to other countries, I find that hard to believe.
- → NS/NB Women: Well, they were younger, you know? Yeah. Well, the way things are going. I would like to say, though, like even because I mean, not to make assumptions, but me being still a student, I assume for this moment in time that I am the youngest in this focus group today, and I still think that 10 years is a very short amount. That's a short time. Yes, it is. It's a short time. So many things can change in 10 years, and they've been saying 10 years for a while. So my question is, is it really? Is it still 10? Yeah.
- → MN/SK Men: Yeah, I kind of see that. The only thing it almost like a scare tactic, a bit like you only have 10 years, like, that's the only thing that would make me not like that statement. Ok. So you're kind of putting a time limit and you're kind of scaring people into doing it. I mean, I think it's something everybody wants to do anyway, but it's just you kind of go, Oh, what? Because, you know, then you have to look at it, think about it realistically. Are we going to have people in place that are going to be able to fix this issue ten years from now? You know, like different governments come into place in that 10 year period, are they going to still have the same like same opinion as the last people? Are they going to continue on? Like, is this actually going to be like, continue on like you need a plan that actually starts from 10 years, like it actually

- is consistent, right? Not changing in between different hands of different people. So, OK.
- → MN/SK Men: Yeah. Last sentence. What does that last sentence have to do with anything to do with renewable energy and transmission lines? The risk to our economy as the world uses less of the energy we export? What are you talking about? That's oil and gas. We're talking about renewable. How is renewable going to? We're not exporting renewable energy, right? So that that to me right away, I read that and go, Oh, this is oil and gas job here, OK? I get it. I get it. All right.
- → BC/AB Men: Two is probably a little more compelling, more of a priority. You know, as just what was previously said, one's more of a statement, no two is more of a something that needs to be actioned.
- 3. Electricity made using wind turbines is cheaper than coal, oil, gas, and nuclear. When transmission lines connect provinces, non-polluting power reliably reaches more Canadians. Non-polluting electricity can power our electric vehicles, homes and businesses.
 - Atlantic Mixed: I think everything in there is accurate. Ok, so it is. And right now ultimately, I mean, not right now, forever speaking to people about costs or something that people really understand. And it can have an impact on them if they know this is actually lower cost and will end up meaning that we're paying less for electricity and possibly other goods and items that are and we rely on electricity. And also, I think it's very easy to build an argument that a robust and redundant transmission network is really important for all the provinces. Yes. Ok. Ok. And anyone who you know is worried about that just realizes if there's just one line and it goes down right, it's going to be a problem.

- → MN/SK Women: It makes sense, right, there's nothing confusing about it. There's nothing conflicting. It just makes sense.
- → **NS/NB Women**: Clearly demonstrates the benefit to me.
- → MN/SK Men: Sorry, if we're not connected to the source itself now. I mean, then I understand why they need a line to make the connection. But it's like it was said earlier, once we're connected, once there is a line that connects to this system, why don't we simply upgrade the transmission lines that we have? Ok, we've already gotten many, many pathways through our forests and rivers and streams right now that require spraying to keep the foliage down, et cetera, et cetera. Let's work on the reliability of the ones that we have once we've attached the new source to the grid. We should be, I guess, unless I don't understand it. Well, it might not. We should be good. Why don't we? Why do we need new, clear cutting areas in order to make this work OK? Existing ones? And I kind of disagree with the premise of that argument that that we need more transmission lines to increase the reliability of renewable energy either bring in hydro when the sun's not shining, the sun doesn't shine all the time or the wind's not blowing. But then there's that line that says when other storage technologies are not available, so we can't. If we're going to go renewable, we can't cheap out on this. We've got to have the batteries, we've got to have the superstructure, the infrastructure, you know what I mean? Like this is sort of that, you know, it's like the comment. I think it was Tim made about how there was that urban legend about how much it costs to run a wind turbine. Yes. Here we're looking at this, and now we're saying. you know, hey, if the sun's not shining solar, you
- know, it's this apocalyptic. A cloud passes over and grandma's heart machine stops because there's no there's no energy. Right, right. Oh my god. You don't get that cloud out of here. So it's kind of this sort of like it's incredibly simplistic thing to say to say when the wind's not blowing and the sun's not shining. Yeah, OK, you know, you're not going to have power.
- → MN/SK Men: I think I liked it in contrast to the others. The first two were kind of doom and gloom, and this one is, Hey, here's what's good about it. So OK, yeah, it's the more positive message.
- → MN/SK Men: Yeah, absolutely. I mean, the other two, I sort of heard that that song and dance before it doesn't mean that it's wrong. It doesn't mean that it's not right. But the thing is, is that, yeah, I know that's true. This compels me because I know that using the non renewable is bad. And this is saying not only is it renewable, it's cheaper and it can supply the electric vehicles, which could be a big draw on our system. So for me, that one drew me and went, well, that just is more compelling for me to head to. Ok.
- → BC/AB Men: That felt least like somebody lecturing me about it? Yeah, yeah. Ok, yeah. I mean, I get it. I just don't need to be barked at every day about it.

- 4. Renewing Canada's electricity system will be hard work, but we are on our way. We are building wind and solar projects today. Existing hydro and nuclear can help, but we need to do much more. There will be jobs for workers, and economic and cost of living benefits from being prepared.
 - → AB/BC Women: Like, that's our future, if it doesn't matter if we deny it, because we are transitioning to the electric cars. So it's coming, it's coming that we have to change our electric source as well because consumption is going higher, prices are going higher. So there has to be a way to decrease it if we start like. It will change with the renewable energy. Then we should try
 - AB/BC Women: Well, I think that there's no doubt about it. We're especially in Alberta. We are transitioning to try to do cleaner energy, even though our energy sector is doing a great job in terms of gas emissions and how to capture those so. But I do think there's no doubt about it. We are transitioning and I don't know how long it'll take, but I do think it's important.
 - → Atlantic Mixed: Almost, yeah, except for that, we're on our way part and that we're building the things that those things are happening. But it's going to take a lot more time and effort on everyone's part, not just the government but private business, chipping in and partnering with governments to make these things happen, right? And that and making it cost efficient for ordinary citizens to get in on achieving these goals.
 - → MN/SK Women: What isn't it really? Stick with me like just hearing it? Yeah, it just sounds like a politician to me. Like renewing Canada's electricity system will be hard work, but we are on our way. It just sounds very like, I don't know, cheesy. Ok. Then you get the words hydro and nuclear together.

- → NS/NB Women: I didn't like [existing hydro and nuclear can help] no for either it to me, it kind of implies that what we're doing already is enough. Oh, OK. It's all systems that we have in place, like the nuclear, you know, is okay for today's society and an environment.
- → MN/SK Men: Well, it just makes you admit that it's going to be hard. It's not easy to make this transition and we are working on it doing the best we can at the moment. Ok? We are always finding ways to do more and that it's going to continue to go that way like everything else.
- ***BC/AB Men: I just I don't know, I think all four of them had valid. Ok. Just that number. Number four just resonated with me more than the other. All right. And kind of like I can who was just talking about number three was the one that was least preachy. I felt almost the same thing about number four. Ok. So, you know, I mean, we understand that this is a future and there's a lot of hard work that needs to be done. And I get that and I just resonated with me, but more so than the other four. But OK, they're all valid points, right?
- → BC/AB Men: Ok? Yeah. Like I understand
 Ontario's with the CANDU reactors and all that
 right? I don't know whether this or this or that
 or not, but you know, Ontario happens to have
 those nuclear plants, power plants and but
 nuclear. I just believe the nuclear is not the way
 of the future.
- what I would expect a politician to be telling people or that statement should be on the brochure [first sentence]. Ok. They're trying to sell it to you; I was thinking the exact same thing the first line of number four. It sounds like someone trying to get elected, and it's just...

→ NS/NB Men: First, it gives a whiff of what's in it to what's in it for me to people who are necessarily on the fence? The fact that it says that there will be jobs, there will be benefits because usually the first thing that people say to go against this is, oh, people are going to lose jobs because all my friends who work in coal are going to lose their jobs. And this helps by immediately responding to that first counterargument and diffusing it.

Three arguments based on individual and consumer themes

- 1. To solve climate change, we need nonpolluting sources of electricity to power electric vehicles and transit systems, and our homes and businesses. Electricity made in our provinces using wind turbines is cheaper than using coal, oil, gas, and nuclear. Hydro and solar technologies also help. When transmission lines connect provinces, non-polluting power reliably reaches more Canadians.
 - → MN/SK Women: Like the last sentence. when transmission lines connect provinces. non-polluting power reliably reaches more Canadians. Okay. You're not putting gas into a pipe into the ground. You're not hauling the fuel. In a road. Ok. Using a resource to bring you a resource.
 - → **NS/NB Women**: I really like the statement from the first statement. The opening line to solve climate change, like just the non-polluting sources of electricity just in itself isn't going to solve climate change. In fact, oh OK
 - → NS/NB Women: Yeah. But otherwise I really like the statement, but I didn't put it first because it's not solely going to solve.

- → MN/SK Men: I did. I think that it's just it states some facts. Ok. And it just it lays out the policy to say, look, you know, in other provinces using this as cheaper when we connect provinces non polluting power reliably. Remember, we talked about that reliability issue reaches more Canadians. Right. So I like that one because it's laying out what we're doing.
- → MN/SK Men: The other point I have with that one is to solve climate change. It's never going to be solved. It's like saying solving homelessness or expensive housing or in you, never going to solve it. One hundred percent. You know, the best thing you could do is try to mitigate it.
- → **SK/MN Men**: You need the electrical grid system if we're to share power with Saskatchewan, that the grid system has to be put into place. Ok. I have no doubt that they can add solar and wind and wind power. But if it's not, connect up, connect it up to a reliable source like hydro, which we could provide both to Saskatchewan as far as Alberta. Mm hmm. I mean, we get our gas all the way from Alberta. Why can't they get our electrical...
- 2. We need billions of dollars of investment to renew Canada's electricity system over the next 10 to 15 years. To keep power bills affordable, we must use electricity efficiently. We have the expertise to retrofit homes and businesses so they use half the energy they use today. We can pay up to 80 per cent less to power an electric vehicle, compared to a gasoline vehicle.
 - → BC/AB Women: Well, the numbers are great, I like seeing the numbers in the comparison, the ranges are really good, mostly because they don't make anybody out to be a liar at the end. Ok, now a good point, actually. Yeah, I'm more

- about precise numbers. I think give me the facts, tell me what it's going to cost and not be so vague.
- → BC/AB Women: Ok. I mean, a lot can happen in 10 to 15. Very big. Yeah, yeah. Ok, great. And, you know, up to 80 percent well, is it 80 percent, is it 50 percent, is it 40 percent? So I think I just find when you're dealing with the topic this serious, it's. I think more the more accurate they can be, the better.
- → Atlantic Mixed: Well, ten to 15 doesn't bother me. The 80 percent. Yeah, that bothers me a bit because you know how to how would anyone know what that would give? I think a range would have been more suitable for that.
- → MN/SK Women: I think you just kind of show is that we do need in order to keep our electricity system right now over the next little while like again, taxes or. Your builds towards it's going to go up, so in order to keep those going up, we're going to have to do other stuff and change the use of energy kind of thing. Ok.
- → NS/NB Men: Yeah, I can. If I can step in there, I did. Please. As the first one, and because you just when you preface this by saying that these are just kind of rough thoughts and whatever. I agree 100 percent with what Justin said originally there. That first sentence is not a good way to lead, and everybody understands building infrastructure costs money, but it's not a good lead off. Yeah. By the way, give me billions of dollars. But what I liked the most about that sentence is when they talk about using the electricity efficiently.
- → NS/NB Men: Yeah, OK. We have the expertise to retrofit homes and businesses so they have less energy. I don't, you know, I don't even know if you need to come out and say that they use

- half the energy, just can't come out and say that they reduce the energy because again, there's nothing to argue about. I don't think anyone can argue and says, OK, we can reduce energy. But as soon as you say 50 percent, we'll say, Well, really? Is it 50 percent?
- 3. It costs money to secure energy savings.
 Canadians need financial incentives so
 electric vehicles and retrofitting homes are
 affordable. We need to train and transition
 workers. Citizens and communities must
 have a say about project location, the size of
 projects, and a chance to partner and profit
 from projects.
 - → BC/AB Women: Essentially, the sentence that says we need to train and transition workers.

 This statement kind of accurately just puts the focus on changing the minds and shift shifting the way the collective thinks towards renewable energy.
 - → MN/SK Women: I just wanted to say that I really like all of these, and I feel like they're all so different that they really touch on, like completely different things and it's I don't know, like I feel like I would put all of them.
 - → MN/SK Women: I like it because it's hopeful; And it's realistic. It starts off by saying it costs money to secure energy savings. We have to make an investment.
 - → NS/NB Women: Because it's true it is going to cost money. Ok. And financial incentives would help it to be affordable. Ok.
 - → NS/NB Men: I picked number three, first and foremost because it creates an appeal and I use the term earlier with them or what's in it for me. And just from a sales perspective, right? It talks about it, gives it, tells people we need

to have a buy in. We need to have a say. And it talks to people's direct fears when they're when these projects are broached, OK? And so because it reaches out and it addresses those fears proactively, it's not asking people to say, Do I agree that climate change is real or do I disagree? Or what do I believe on any of that stuff? It's just OK. It costs money. Yes. Whereas when you look at say no to where it leads, we need billions of dollars right now with the current political discussion in Canada. And you look at you've got the right is basically saying, Oh my God, Canada is going to spend crazy. The left is saying, OK, we still need to spend and you have that diversion of people going one way or the other. So that almost for me, that's why, too is an immediate write off. And then one is not as much of a write off as to write.

Transmission

We tested one narrative on transmission and included questions specifically on transmission. We include these results here.

Transmission narrative:

Energy experts say we need transmission lines to increase the reliability of renewable energy either to bring in hydro power when the sun is not shining or the wind is not blowing or when other storage technologies are not available.

Participant reactions

Some participants are open to sharing ("we do it now for gas") but some participants concerned about sovereignty and energy security if a province is too reliant on electricity from out of province. Sharing, Security and Sovereignty need covering by

- communication narratives and potentially policy prescriptions (e.g., in-province investment as well as interconnections). Framing around "cooperation" "national vision" could be helpful.
- For some participants, transmission is not supported but accepted as necessary:
- → BC/AB Women: Yeah, yeah. Okay. You said. does it make it make sense? Well, yeah, it does make sense, but it doesn't change how I feel about them. It just means yes, it does make sense, right?
- Connect the need for transmission to reliability
- → NS/NS Men: And I kind of disαgree with the premise of that argument that that we need more transmission lines to increase the reliability of renewable energy either bring in hydro when the sun's not shining, the sun doesn't shine all the time or the wind's not blowing. But then there's that line that says when other storage technologies are not available, so we can't. If we're going to go renewable, we can't cheap out on this. We've got to have the batteries. we've got to have the superstructure, the infrastructure, you know what I mean? Like this is sort of that, you know, it's like the comment. I think it was Tim made about how there was that urban legend about how much it costs to run a wind turbine. Yes. Here we're looking at this, and now we're saying, you know, hey, if the sun's not shining solar, you know, it's this apocalyptic. A cloud passes over and grandma's heart machine stops because there's no there's no energy. Right, right. Oh my god. You don't get that cloud out of here. So it's kind of this sort of like it's incredibly simplistic thing to say to say when the wind's not blowing and the sun's not shining. Yeah, OK, you know, you're not going to have power.

- Some wanted a rationale for why existing lines are not sufficient for environmental reasons, why there are no alternatives:
- → NB/NS Men: Ok, we've already gotten many, many pathways through our forests and rivers and streams right now that require spraying to keep the foliage down, et cetera, et cetera. Let's work on the reliability of the ones that we have once we've attached the new source to the grid.
- → NS/NB Women: I just I like to be the person to push back and like, what is the alternative? Are there alternatives? And I hear it's necessary, and I'm not disagreeing that that somebody would say that. But are there alternatives I don't even know. No, the statement doesn't say anything about, yeah, they're even being alternatives.
- → NS/NB Women: Yeah. Ok. I mean, I guess I wonder like our underground cables not feasible here or yes, I know. I know there are other alternatives.
- Concerns and/or not sure about the cost implications, whether consumers will benefit or whether interprovincial electricity trade represents a fair deal:
- → **SK/MN Men**: There's an optimist in me that thinks that there has to be some way to be able to do it without increasing the overall cost. But in reality, if that's done with government grants, it comes from taxpayer dollars. If it comes from taxpayer dollars, we end up paying for it somewhere just by the nature of the sort of society and everything else, there is going to be an increase in cost. But. Hopefully, like the long term benefits bear out.
- → **SK/MN/Men**: Time delays due to consultations and environmental assessment raise costs: So well to take a look at bipolar three, right, which I don't think Manitoba Hydro ever got around to finishing bipolar three. And if I'm wrong, please

- somebody correct me. But you look at the first design process where they went through. They designed it. They came up with an entire system and transit route for where it was going to go. Then there was environmental consultations. They had to go back to the drawing board, completely reroute the entire transmission set of transmission lines. Then there was additional environmental impacts found they had to go back, reroute, redo again. Those are all costs that are in there now. In this case, as Manitoba Hydro customers, we ended up eating those costs anyways.
- → SK/MN/Men: Transmission adds costs but imports could be cheaper than coal: I'm going to say that you're probably going to production costs. Maybe not a reduction in net cost to the consumer, but a net reduction in cost to produce. And I say this because I know this the bid prices in Alberta. So Alberta is α weird bird compared to Alberta. I mean, compared to Saskatchewan and Manitoba, because they have open production anyone can produce on the grain. Ok, so I know that the current pricing for new solar energy and new wind energy is below the current production costs of coal plants. Ok. So the cost to produce may be coming down, whether or not we see that as consumers as a different question.
- Some feel transmission is inevitable due to lower supply costs and/or need:
- → **BC/AB Men**: You want to bring it from B.C. across, like if it's going to be cheaper for everybody to buy? Why wouldn't they?
- → BC/AB Men: I think just going to say, you know, the transmission lines, I think is necessary evil. That's part of the supply chain. You know, you have to get it from point A to point B, whether you like it or not.

Appendix 2: Guiding questions focus group

- How strongly do you support or oppose the development of renewable energy in your community? Rate from 1 – 10 where 10 is completely support and 1 is no support at all.
- What factors would encourage and discourage people in your community to consider a project that was generating renewable energy?
- Do you feel differently about wind or solar? Wind can be on land or offshore. Is it easier to support offshore wind than onshore?
- How much influence should communities or citizens have over where projects are located?
- What benefits, if anything (financial, community investments or any other kind of benefits), should homeowners, communities, indigenous communities expect when renewable projects are proposed?
- If we increase the amount of renewable energy that we produce in the province, do you think the overall cost of electricity will increase, decrease or stay much the same?

- Are there ways to renew the electricity system while keeping power bills affordable?
- If you had access to incentives to help you cut energy use in your home and get into an electric vehicle do you believe it is possible to have lower power bills even if our rates went up?
- Are there any other suggestions you have that could help you to have lower power bills even if the actual rate increased?
- How comfortable are you with building transmission lines to connect your provinces and trade hydro and other renewable electricity to phase out more polluting sources of electricity?
- What are your concerns about transmission lines?
 Which are the key ones? What would help you deal with those concerns?
- There are four (or three) possible arguments described on this page. POLL – Which one does the best job to increase your willingness to see renewable energy or transmission in your area?

Appendix 3: Survey

Region	Sample size	Regions		
NL and PE	75			
NB	110	300		
NS	115			
Ontario	600	600		
Quebec	300	300		
Manitoba/Saskatchewan	200	200		
British Columbia	200	400		
Alberta	200	400		
Total	1800	1800		

Thank you for taking the time to complete this important survey which seeks to explore your thoughts related to electricity. It should take less than 10 minutes of your time to complete.

1. Do you identify as:

- Male
- 2 Female
- 3 Other

2a. In which year were you born? [4 DIGIT NUMERIC]

2b. IF 2004 ASK: Are you 18 years of age or older?

- 1 Yes
- No (TERMINATE IF KNOW)

3. In which province or territory do you live?

Label	Item
British Columbia	ВС
Alberta	AB
Saskatchewan	SK
Manitoba	MB
Ontario	ON
Quebec	QC
New Brunswick	NB
Nova Scotia	NS
Prince Edward Island	PE
Newfoundland and Labrador	NF
Territories (Northwest Territories, Yukon, Nunavut)	NT/YK/NU

Do not currently live in Canada TERMINATE

- 4. To ensure we speak with a range of people from across Canada, please provide the first three digits of your postal code. ___
- 5. In politics, people sometimes talk about 'the Left' and 'the Right'. In general, where would you place yourself on the scale below in terms of your political viewpoint? PROVIDE SLIDING 11-POINT SCALE WITH TEXT MARKERS DO NOT INCLUDE NUMERIC MARKERS

Label					Neutral					Right	Not sure/ Prefer not to say
0	1	2	3	4	5	6	7	8	9	10	98

- 6. How much do you trust or distrust the following as sources of information on electricity issues? [RANDOMIZE]
 - a. Environmental groups
 - Energy industry associations (for example, the Canadian Electricity Association)
 - c. Academics and universities
 - d. Energy regulators
 - e. Government departments (for example, Energy or Environment)
 - f. Electrical utilities and electricity providers
 - g. Retailers of electronics, lighting, and appliances
 - h. Friends and family
 - 1 Strongly distrust
 - 2 Distrust
 - 3 Slightly distrust
 - 4 Neutral
 - 5 Slightly Trust
 - 6 Trust
 - 7 Strongly trust
 - 98 Not sure

- 7. Please indicate if you disagree or agree with the following statements. The federal government [RANDOMIZE]
 - a. is competent enough to regulate a non-polluting electricity system
 - b. has the necessary skilled people to regulate a non-polluting electricity system
 - c. distorts facts in its favor regarding regulation of a non-polluting electricity system
 - d. changes policies regarding regulation of a nonpolluting electricity system without good reasons
 - e. is too influenced by provinces, utilities and industry regarding regulation of a non-polluting electricity system
 - f. is acting in the public interest with regard to regulating a non-polluting electricity system
 - g. listens to what ordinary people think about regulating a non-polluting electricity system
 - h. makes decisions about regulating a non-polluting electricity system in a way that is fair
 - i. provides all relevant information about regulating a non-polluting electricity system to the public
 - 1 Strongly disagree
 - 2 Disagree
 - 3 Slightly disagree
 - 4 Neutral
 - 5. Slightly agree
 - 6. Agree
 - 7. Strongly agree
 - 98 Not sure

Experiment: Sample divided into 3 equal sized groups: control, and 2 experimental groups

Control group: no exposure to narratives

Experimental group #1

One solution to climate change is to use non-polluting electricity to power vehicles, homes and businesses. Electricity made using wind and solar is cheaper than using coal, oil, gas, and nuclear. To deliver cleaner electricity across Canada, we must renew Canada's electricity system. Renewing Canada's electricity system will be hard work, but we are already building wind and solar projects today, creating jobs for workers and economic benefits.

In addition to building out local and regional renewable energy supply, we need to use electricity efficiently to keep the cost of living down. We have the expertise to retrofit homes and businesses so they use 30 to 50 per cent less energy than today. Shifting to an energy-efficient or electric vehicle can save drivers even more, compared to the average gasoline vehicle. It does cost money up front, however, to secure these energy savings. To help Canadians, we need financial incentives so electric vehicles and retrofitting homes are affordable.

To build the social support needed to modernize Canada's electricity system, we must ensure citizens and communities can contribute to decisions about renewable energy and transmission project location, the size of projects, and have a chance to partner and profit from renewing our electricity system.

Experimental group #2

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 less than 10 years to change how we use energy if we are to keep people and nature safe. To solve climate change, we need 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, nonpolluting 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.

- 9. 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 is this policy measure to you?
 - 1 Very unfair
 - 2 Unfair
 - 3 Slightly unfair
 - 4 Neutral
 - 5 Slightly fair
 - 6 Fair
 - 7 Very unfair
 - 98 Not sure
- 10. Still thinking about the federal government's plan to regulate electricity suppliers so that by 2035 they produce little to no greenhouse gas emissions, how acceptable is this policy measure to you?
 - 1 Very unacceptable
 - 2 Unacceptable
 - 3 Slightly unacceptable
 - 4 Neutral
 - 5 Slightly acceptable
 - 6 Acceptable
 - 7 Very acceptable
 - 98 Not sure

11. Still thinking about the federal government's plan to regulate electricity suppliers so that by 2035 they produce little to no greenhouse gas emissions, how strongly do you disagree or agree with the following statements.

RANDOMIZE STATEMENTS

If this policy is implemented...

- 7. my financial situation will get worse
- 8. I will be worse off compared to others
- 9. everybody will be affected to the same extent
- 10. people with low incomes will be affected more than people with high incomes
- people who consume the most electricity will be affected most strongly
- nature, the environment and future generations will be protected
 - 1 Strongly disagree
 - 2 Disagree
 - 3 Slightly disagree
 - 4 Neutral
 - 5 Slightly Agree
 - 6 Agree
 - 7 Strongly agree
 - 98 Not sure

The next questions are to help us analyze the information you have provided.

12. Do you identify as

- a) Francophone
- b) Indigenous (First Nations, Inuit, Métis)
- c) Visible minority
 - 1 Yes
 - 2 No
 - 98 Prefer not to answer

13. In which type of community do you currently live?

- 1 A city (i.e., an urban population centre)
- 2 A suburb of a city
- 3 A small town or rural community
- 4 Other
- 98 Not sure

14. What is the highest level of education you have achieved?

- 1 Some high school
- 2 Graduated high school
- 3 Some college/CEGEP
- 4 College/CEGEP graduate
- 5 Apprenticeship
- 6 Some university
- 7 Undergraduate university degree
- 8 Post-graduate university degree
- 98 Prefer not to say

15. Which of the following best describes your total household income in 2021?

- 1 Under \$20,000
- 2 \$20,000 to \$39,999
- 3 \$40,000 to \$59,999
- 4 \$60,000 to \$79,999
- 5 \$80,000 to \$99,999
- 6 \$100,000 to \$119,999
- 7 \$120,000 to \$159, 999
- 8 \$160,000 to \$199,999
- 9 \$200,000 or more
- 98 Prefer not to say

16. If a federal election were held today, for which party would you vote? [ALLOW ONE RESPONSE ONLY] [RANDOMIZE 1-5]

- 1 Liberal Party of Canada
- 2 Conservative Party of Canada
- 3 People's Party of Canada
- 4 Green Party of Canada
- 5 New Democratic Party
- 6 Bloc Québécois
- 7 Other (please specify: _____)
- 8 Undecided
- 9 I would not vote
- 10 Prefer not to answer

30. Any final comments? [OPEN-ENDED]

98 No comment

Thank you for completing this survey.