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Natural Resource Issues in a Low-Carbon Economy, 2023

Final Report

Prepared for Natural Resources Canada

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Canada

Natural Resource Issues in a Low-Carbon Economy, 2023

Prepared for Natural Resources Canada by Nanos Research

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Executive summary

A. Background and objectives

Natural Resources Canada (NRCan) is prioritizing legislation and action to create sustainable jobs and ensure support for communities to create more economic opportunities for workers and families now and in the future across Canada. The involves working with partners to develop and implement various strategies to decarbonize regional electricity systems, increase the market for clean fuels and to transform Canada's existing building stock. Part of this included the development of a Critical Minerals Strategy, led by NRCan, which looks to ensure Canada's natural resources are developed in a sustainable, competitive and inclusive manner.

NRCan previously conducted opinion research on natural resource issues and the low-carbon economy in the Winter of 2021, which built upon previous waves in 2019 and 2018. The department is seeking a clear and current understanding of Canadian public opinion on a wide range of natural resource issues, including forestry, mining, energy, clean technology, climate change, government science and nuclear energy.

To that end, NRCan conducted another wave of this research to see how Canadians view traditional natural resource sectors, as well as what they understand about the challenges and opportunities for these sectors when moving towards a low-carbon economy.

The results will influence planning and development of departmental planning, policies and communications moving forward.

The specific research objectives are as follows:

- Provide an understanding of how Canadians situate traditional natural resource sectors;
- Determine the understanding Canadians have of the challenges and opportunities for these sectors in moving towards a low-carbon economy, measuring changes from the previous waves (where possible);
- Gauge the views of Canadians on relevant issues, e.g., small modular reactors, nuclear waste management, critical minerals; forest bioeconomy; and,
- Provide fundamental public environment information for program, policy and communications planning across NRCan and the government at large.

B. Methodology

Qualitative phase

Nanos conducted 20 online focus groups between March 1st and 28th, 2023 among 112 Canadians, 18 years of age and older, among residents of eleven communities across Canada as identified by NRCan.

The eleven communities were the following:

- Vancouver, BC (2 groups)
- Calgary, AB (2 groups)
- Toronto, ON (2 groups)
- Regina, AB (2 groups)
- Montréal, QC (2 groups)
- Fredericton, NB (2 groups)
- Rural British Columbia (2 groups)
- The Territories (1 group)
- Rural Québec (2 groups)
- Rural Nova Scotia (2 group)
- Atlantic Canada (1 group)

Sixteen (16) of the online groups were conducted in English and the four (4) online groups with residents of Quebec were conducted in French.

For groups with residents of Vancouver, Calgary, Toronto, Regina, Montreal, Fredericton, Rural British Columbia, Rural Quebec, and Rural Nova Scotia, the groups were split by income, with one group including higher income individuals and one group with lower to middle income individuals. For groups with residents of the Territories and Atlantic Canada, one online group, each, was conducted and included a mix of low, medium, and higher income individuals.

Lower to middle income was defined as households with no more than one person over the age of 18, with a household income of less than $75,000 or households with more than one person over the age of 18, with a household income of less than $100,000, all others fell into the higher income group. Across all groups, 163 participants were recruited and 112 participated. Participants received a $100 honorarium. Focus group sessions were about 90 minutes in duration.

Readers should note that focus group research is qualitative and directional in nature and must not be used to estimate the numeric proportion or number of individuals in the population who hold a particular opinion. The focus group research allowed Natural Resources Canada to gauge the views and gather in-depth insights from their specific communities and profiles of interest.

Please see Appendix A for the detailed methodology.

Quantitative phase

The survey is comprised of 3593 Canadians, 18 years of age and older. The survey was conducted across Canada in each province and territory between March 31st and June 9th, 2023.

The sample was drawn from two sources:

1) The Nanos Probability Panel, which contains about 50,000 Canadians who were randomly recruited to join the panel by land- and cell-lines with live agents.

2) Random recruitment by land-and cell-lines and administered the survey online.

The resulting sample contains Canadians who were all randomly recruited by telephone, thus allowing a margin of error to be associated with the research. 3,518 individuals were recruited from the Nanos Probability Panel, with 75 individuals in the Territories recruited by land- and cell-lines.

The randomly recruited probability sample has a margin of error of +/-1.6% at a 95% confidence interval.

Results are weighted to population proportions for region, age, and gender from the 2021 Census.

All respondents self-administered the survey online.

Please see Appendix B for the detailed methodology.

C. Contract value

The contract value was $175,413.06 (HST included).

Supplier name: Nanos Research
PWGSC contract number: CW2267705
Original contract date: 2023-01-13

D. Political neutrality statement and contact information

This certification is to be submitted with the final report submitted to the Project Authority.

I hereby certify, as a Representative of Nanos Research, that the deliverables fully comply with the Government of Canada political neutrality requirements outlined in the Government of Canada's Policy on Communications and Federal Identity and Directive on the Management of Communications. Specifically, the deliverables do not include information on electoral voting intentions, political party preferences, party standings with the electorate, or ratings of the performance of a political party or its leaders.

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E. Key findings

Qualitative Research

Module A – General Views on Net-zero and Low-carbon Economy

Awareness of low-carbon economy concept

Overall, participants reported low familiarity with the term "low-carbon economy". Indeed, many of them associate it with personal reduction of their production of greenhouse gases or their carbon footprint, while others mentioned supporting industries that have a smaller carbon footprint or having an economy that is based on services and products that have a lower carbon footprint. Positive impacts on the environment are mentioned by most participants as positive things that come to mind related to a "low-carbon economy". In addition, very few participants raised negative aspects linked to this term; those that could, often mentioned increased costs and having to make personal changes to their lifestyle to achieve this goal.

Awareness of net-zero emissions concept

Conversely, a majority of participants were familiar with the term "net-zero" and have some idea of what the concept means, however many remain unsure as to its exact definition. Regarding the goal for Canada to achieve "net-zero emissions" by 2050, participants had mixed reactions with some saying that they don't believe it to be achievable, while others mentioned it wasn't ambitious enough. Lack of infrastructure to support such a transition and increased costs to the average Canadian were the main concerns about this goal.

Module B – Impacts/implications of a low-carbon economy

Impact on health

At the individual level, a heathier environment and better health for current and future generations are seen as personal benefits to shifting to a low-carbon economy. Cost was seen both as the main drawback for this shift, but also as a benefit by some citing personal cost savings coming from shifting to a more minimal lifestyle that includes using public transit instead of driving, and a decrease in overall consumption.

Impact on workplace and local jobs

When it comes to a low-carbon economy impacting workplaces or local jobs, most of the participants mentioned they are expecting to see a change in sectors related to oil and gas (such as oil and gas extraction and gasoline vehicle manufacturing) and mining, but that new jobs could be created in agriculture, forestry, parks and recreation, innovation and renewable energies. Participants who lived in rural areas were more likely to say that they would be seeing job losses in their regions.

Impact on economy

When prompted on the impact of a shift to a low-carbon economy on the Canadian economy overall, most participants agree that the impact will be significant although there are mixed views on the type of impact shifting to a low-carbon economy will have. Some believed the impact would be greater at the beginning of the transition, or that it would be different across Canada, with the impact being bigger in the provinces that have an economy based on the oil and gas sector such as the Prairies. Others mentioned it would be an opportunity for Canada to become a world leader in this sector. To help with the transition, participants suggested the

government should have a clear plan that is cohesive across provinces so that all Canadians understand why this shift is needed and that includes support for businesses and workers to remain strong economically.

Module C: Roles of key industries in the shift to low-carbon economy

Hydroelectricity and natural gas are seen as cleaner

In terms of specific sectors or types of energies being included in the shift to a low-carbon economy, participants showed more positive views for hydroelectricity, especially in Quebec, and natural gas. Hydroelectricity was often viewed as a clean and renewable source of energy and most agree that it should be a part of Canada's shift to a low-carbon economy, while natural gas is seen as a "cleaner" alternative to oil, although there are some environmental concerns related to the extraction process of natural gas, specifically "fracking".

Divergence of views on oil sector

The oil sector was not often viewed as energy that should be included in a shift to a low-carbon economy as many viewed including it in a low-carbon economy as a contradiction given its association with high carbon emissions. However, many said that they think oil will still be a part of our economy in the next 20 to 30 years out of necessity and doubt that Canada will be able to completely stop using it in this timeframe, if at all.

Forest biomass

Most participants did not view forest biomass as a type of energy that should be included in a shift to a low-carbon economy. The main reasons for this were that forests played an important role in the capture and storage of carbon and, when burned for fuel, release that carbon back into the atmosphere. Other concerns related to forest biomass were the destruction of forests and replacing them with monocultures of trees. Some participants did see forest biomass as a better option to energy sources like oil and gas.

Concerns about nuclear energy and hydrogen fuel

When it comes to nuclear energy and hydrogen fuel cells being part of a low-carbon economy, participants showed concern over the safety aspects of these sources of energies but were more likely to agree that hydrogen fuel cells should be part of Canada's shift to a low-carbon economy than they were for nuclear energy. The safety concerns for nuclear energy revolved around the environmental impact of the nuclear waste produced by nuclear plants, whereas safety concerns for hydrogen fuel cells revolved around the flammability, explosiveness and safe usage of hydrogen cells, which many said could be overcome with further research and would likely be resolved in the future.

Carbon capture and storage concept is not a familiar concept

Participants reported a limited understanding of carbon capture and storage, and some participants felt that they didn't know enough and would need more information to be able to decide whether they would support or oppose it. They expressed concern over the potential impacts on the environment of storing carbon underground, with many viewing it as a short-term solution. They would rather focus on reducing carbon emissions rather than storing them.

Mixed views on critical minerals mining

Participants had mixed views about including critical mineral mining in a low-carbon economy, with negative impressions revolving around more generalized concerns about the environmental impact of mining on

communities. Those that agreed that critical mineral mining should be included in a low-carbon economy mentioned that it would be a good source of jobs, that it could help the economy as those minerals will be in demand for newer technologies such as batteries for electric cars, and that it could help Canada avoid becoming reliant on other countries for these minerals.

Module D: Communications

More key messages

Participants most often say the Government of Canada should focus its key messages on educating Canadians on the impacts of climate change, encouraging individuals to take action in the shift to a low-carbon economy, and identifying the kinds of individual actions they can take.

Many participants mentioned key messages that focus on the positives of transitioning to a low-carbon economy and the impact of individual and collective actions to help with this. Some participants also mentioned including key messaging on the emotional piece of the transition, such as taking action for their children, grandchildren and the future generation(s).

A couple of participants mentioned that it would be important for Government of Canada messaging to communicate that 'no one would get left behind' in the transition to a low-carbon economy, including those that work in high emissions sectors such as oil and gas. Some participants suggested messages needed to highlight financial incentives available as a means of motivating Canadians to take action.

Targeting all generations with new and old platforms

When it comes to how or on what platforms messages should be shared, many participants said that information on transitioning to a low-carbon economy and climate change should be part of school curriculums in order to educate children and youth. Social media, TV ads, radio, and newspapers were also mentioned by most participants, with some adding that the mode of sharing the messages should be determined by which demographic the Government is looking to target.

Quantitative Research

Most important natural resource issues for Canadians

When asked to name the single biggest issue facing natural resources, Canadians most often mention making sure Canada has enough resources for future generations/sustainability (11%, 18% in 2021 and 14% in 2019), pollution from extracting and distributing natural resources (9%; 17% in 2021 and 8% in 2019), and government intervention/politics working against the resource development/oil industry (9%).

Federal government's performance

The proportion of positive ratings (scores of 7-10 out of 10) of the federal government's performance on natural resource issues continue to trend down compared to 2021 and 2019 on promoting the economic growth of natural resource industries (2023: 28%; 2021: 30%; 2019: 35%), making sure natural resources are developed in a way that respects the environment (26%; 2021: 29%; 2019: 37%) and striking a balance between environmental and economic considerations (19%; 2021: 24%; 2019: 31%). In all three areas, a greater proportion of Canadians rate the federal government's performance as poor (scores of 1-4 out of 10) as

opposed to good (scores of 7-10), with the largest margin observed for striking a balance between environmental and economic considerations (19% good vs 50% poor).

Most environmentally friendly energy sources

Consistent with findings from 2021, most Canadians agree that solar (90% strongly/somewhat agree), wind (86%), and hydroelectric dams (83%) are environmentally friendly, and a similar proportion of respondents would support energy development projects of that type (solar: 91%; wind: 86%; hydroelectric: 85%). An increasing majority of Canadians agree that nuclear energy (62%; 43% in 2021) and hydrogen fuel (61%; 57% in 2021) are environmentally friendly with less consensus surrounding biodiesel and ethanol fuel (44% strongly/somewhat agree) or firewood and wood pellets (36% strongly/somewhat agree). Around one in four Canadians agree that offshore oil and gas (26%) as well as the oil sands (25%) are environmentally friendly (about one in three would support energy development projects involving oil (offshore oil: 36%; oil sands: 37%).

Climate change impacts

A great majority of Canadians feel a number of potential climate change impacts will have a significant or moderate incidence on their community in the next 30 years, in particular increased energy costs (87%) and increased insurance costs (85%), followed by more extreme or unpredictable weather events (82%), more extreme heat (81%) and more crop failures leading to higher food prices (81%). Also, most of Canadians foresee impacts in their community from more flooding or more severe flooding (75%), increased property damage or loss (75%) and more air pollution or lower air quality (73%).

Importance of oil energy

More than half of Canadians (56%) believe oil will be very or somewhat important as a source of energy for Canadian households and business 30 years from now, while about four in ten think it will be either not very important or not important at all (42%).

Importance of nuclear energy

Seven in ten Canadians agree that nuclear energy should be part of Canada's energy mix (70%; a 15-percentage point increase from 55% in 2019) and three in four feel the same about small nuclear energy reactors (76%; another significant increase from 58% in 2019).

Energy cost

More than eight in ten Canadians are somewhat or very concerned about the price they pay for gasoline and diesel (84%) or electricity (84%), and 79% expect their energy costs will be a larger proportion of their total household budget in 2030 compared to now. When asked what actions they have taken to lessen the impact of energy prices, they most often report having adjusted the thermostat to reduce heating and cooling (68%) or reducing electricity use during peak hours (55%). Four in ten Canadians say the federal government is the most responsible governmental institution for making sure energy is affordable for the average household, one third (34%) say all levels have equal responsibility, and about three in four (73%) think governments are not doing enough to make sure lower income households have access to reliable and affordable energy.

Affordability of energy efficient technologies

Affordability is seen by Canadians as key to increasing their use of energy efficient technologies. They rank increased affordability of energy efficient equipment (23%) and government rebates or grants (20%) first as the most helpful for their household to use more energy efficient technologies. This is followed by increased affordability of zero-emission vehicles (14%), financing programs allowing households to spread costs of these technologies over a longer period of time (8%) and more minimum efficiency standards for products and buildings (8%). Affordability is also the top unprompted barrier to Canadians using more energy efficient technologies in their homes, mentioned by 80%.

Critical minerals mining

Most of Canadians agree that mining/critical minerals have a positive impact on Canadian economy. More than eight in ten strongly or somewhat agree that critical minerals and metals mining are essential to Canada's economy (86%; 78% in 2021) and around three in four agree that the minerals industry can have a positive impact on regional communities in Canada (76%) or that the minerals industry provides good quality jobs to Canadians (75%). Fewer agree that the minerals industry is an important employer of Indigenous peoples (44%) or that Canada uses innovative technology to reduce the impact of mining on the environment (38%; and 11 percentage point decrease from 2021). Canadians are much more likely to say that the environmental footprint from mining activity in Canada is better (43%) than other countries rather than worse (9%) than other countries.

Supporting Canadians in the transition to a low-carbon economy

Canadians increasingly feel it is important for the federal government to support initiatives to ease the transition to a low-carbon economy, such as education and skill development programs to train or re-train workers for emerging job opportunities (91%; 82% in 2021), helping communities that depend on carbon-intensive industries to develop a more diverse economy (90%; 83% in 2021) and ensuring that new jobs created in the low-carbon economy are well-paying, high-quality jobs that can support workers and their families (91%). There is also increasing importance seen in engaging in meaningful consultations with Indigenous communities on natural resource projects that affect them (85%; 77% in 2021).

Agreement scores by sources of energy

In terms of statements about low carbon economies, Canadians have the highest net agreement (strongly agree or somewhat agree) with the statement that 'Canada's forest industry can continue to harvest trees in a low-carbon economy' (65% strongly agree or somewhat agree), followed by 'Canada's transition to a low-carbon economy will provide good quality jobs for Canadians' (60%). The lowest net agreement is given to 'It is possible to develop Canada's oil sands and maintain Canada's commitment to reduce greenhouse gas emissions', with just under four in ten (39%) who strongly or somewhat agree with this statement. These findings are consistent with the benchmark results from 2021.

Shifting commercial and industrial vehicles

Consistent with benchmark results from 2021, Canadians see the biggest net impact on reducing climate change impacts from shifting industrial and commercial vehicles (78% significant or moderate impact) and industrial and commercial heating processes (78% net impact) to electricity or other low-carbon fuels. Around seven in ten say there would be a significant or moderate impact on reducing climate change if the switch was made for personal vehicles (70%) or home heating processes (68%).

Forest industry and forest bioeconomy

Canadians are more than twice as likely to have a positive (scores of 7-10) (50%) rather than a negative (scores of 1-4) (19%) view of Canada's forest industry, and there is strong agreement that it produces high quality products such as lumber, pulp and paper (80%; 86% in 2021) and that it provides economic benefits for local rural, forest-based communities (70%; 75% in 2021), with net agreement with both statements declining since 2021. Six in ten Canadians agree that the forest industry provides a lot of jobs for Canadians (60%), a considerable drop of nearly 20 percentage points from 2021 (79%). In terms of the forest bioeconomy, more than eight in ten Canadians strongly or somewhat agree that this is an area in which Canada should try to be a world leader (83%), while a slight majority also agree the bioeconomy is environmentally friendly (65%), and that Canada's bioeconomy contributes to the transition to a net-zero carbon emissions economy (58%; a slight decline from 66% in 2021).

Role of Government of Canada in forest industry

Overall, Canadians are divided with regards to the Government of Canada's performance when it comes to Canada's forests, which is consistent with findings from 2021. About one in three Canadians each say the Government is doing a good job of promoting the economic growth of Canada's forest industry (33%), using science-based sustainable forest management practices to conserve and protect Canada's forests (31%), working with provinces and territories to make sure Canada's forests are managed in a way that respects the environment (29%) and working with provinces and territories to make sure Canada's forests are managed in a way that respects local rural, forest-based communities (28%).

Awareness of energy concepts

Familiarity with topics related to energy has increased since the 2021 survey. Indeed, around three in four Canadians say they are at least somewhat familiar with the net-zero emissions topic (79%; 61% in 2021), the low-carbon economy topic (72%; 57% in 2021), and the Paris Agreement on Climate Change (70%; 54% in 2021). Moreover, about two in ten Canadians answered being very familiar with these topics compared to one in ten Canadians in 2021. Just over one in three Canadians say they are very or somewhat familiar with a circular economy (38%).

Circular economy

Those who are somewhat familiar with a circular economy say that repurposing, recycling and reusing resources is what comes to mind for them when thinking of the term (35%). Around two in three Canadians each strongly or somewhat agree that a circular economy will enable Canada to tackle climate change while allowing for economic growth and development (69%), a circular economy will transform the natural resources sector (68%), and that a circular economy will transform the Canadian economy (66%).

About this report

This report begins with an executive summary outlining key findings and conclusions, followed by detailed analysis of the qualitative and quantitative results. A detailed set of “banner tables” is provided under separate cover; this presents results for all survey questions by segments such as region, age and gender.

The quantitative results are expressed as percentages unless otherwise noted. Results may not add to 100% due to rounding or multiple responses. Net results cited in the text may not exactly match individual results shown in the charts due to rounding. Base size is the total sample of n=3593 unless otherwise specified.

Readers should note that focus group research is qualitative and directional in nature and must not be used to estimate the numeric proportion or number of individuals in the population who hold a particular opinion.

Details of the qualitative research methodology can be found in Appendix A and the final moderator’s guide can be found in Appendix C. Details of the survey methodology and sample characteristics can be found in Appendix B. The final survey instrument can be found in Appendix D.

Detailed findings – qualitative phase

A. Participant profile

Nanos conducted 20 online focus groups between March 1st and 28th, 2023 among Canadians, 18 years of age and older, who reside in eleven communities across Canada as identified by NRCan.

Two sessions each were conducted with residents of Toronto, Regina, Fredericton, Calgary, Vancouver, Montreal, Rural Nova Scotia, Rural British Columbia, and Rural Quebec. Rural was defined as a population of less than 30,000 people.

For groups consisting of participants from nine of the eleven communities, residents were split into two online groups. One online session was conducted with lower income residents, and one was conducted with higher income residents. Lower to middle income was defined as households with no more than one person over the age of 18, with a household income of less than $75,000 or households with more than one person over the age of 18, with a household income of less than $100,000, while the higher income group contained all those who did not fit the profile of lower to middle income.

One online focus group was conducted with residents of the North (includes Northwest Territories, Yukon, and Nunavut) and another was conducted among residents of Atlantic provinces (with a focus on Newfoundland) which included a mix of lower to middle- and higher-income individuals.

To follow is the composition of the participants' profiles:

Profile	Count
Total	112 participants
Gender	
Men	46 participants
Women	66 participants
Age	
18 to 34 years	15 participants
35 to 54 years	43 participants
55 years and over	54 participants
Ethnicity	
White	82 participants
Black	3 participants
South Asian (e.g., East Indian, Pakistani, Sri Lankan, etc.)	14 participants
Chinese	3 participants
First Nations, Metis or Inuk	5 participants
Arab	1 participant
Filipino	1 participant
Other	2 participants
Prefer not to say	1 participant

Education	
Some high school	2 participants
Completed high school	12 participants
Some college or university	23 participants
Completed college	24 participants
Completed university	35 participants
Completed graduate studies	16 participants
Income	
Under $20,000	12 participants
$20,000 to just under $40,000	11 participants
$40,000 to just under $60,000	20 participants
$60,000 to just under $75,000	11 participants
$75,000 to just under $100,000	16 participants
$100,000 to just under $120,000	18 participants
$120,000 to just under $150,000	9 participants
$150,000 and above	10 participants
Preferred not to answer	5 participants

B. General views on energy and a low-carbon economy

Q - When you think of energy in Canada in the next 20 to 30 years, what sectors/types of energy will play the biggest role? Why do you say that?

Focus group participants were asked the sectors or types of energy they think will play the biggest role in Canada in the next 20 to 30 years. A majority of the participants mentioned that they think renewable energies such as solar, wind and hydroelectricity will play a bigger role in the next 20 to 30 years. A few participants also mentioned other alternatives such as hydrogen, geothermal, natural gas, and nuclear energy.

Solar - Those who mentioned solar energy said that they believe it will play a bigger role because of climate change and the increase in periods of sun they expect to see. Some also mentioned that some areas of Canada that have longer periods of sunlight could be better positioned to have more solar energy such as the Prairies.

Wind – Many participants noted that wind energy has potential to grow, especially when it comes to contributing to a stable input of electricity on the electric grid, but some participants noted concerns related to the safety or efficiency of wind turbines.

Hydro – Most frequently mentioned by Quebec participants, hydroelectricity is seen as a key energy given the abundance of hydro dams that already exist.

Many participants also mentioned they believe electric cars will also play a key role in the next 20 to 30 years, but some highlighted the need for consideration and proper planning to ensure Canada's infrastructure and power system is able to meet the power and charging needs of the batteries for these vehicles.

Additionally, Canadians say that oil and gas will continue to play a role, but likely a smaller role as it is slowly phased out, with some noting that it will be a challenge to fully phase it out in 20 to 30 years because of the country's heavy reliance on it. Finally, some of the participants noted the importance of increasing efficiency and technology as it relates to the storage of electricity from renewable sources.

Q - Have you heard or not heard the term "net-zero"? What do you think this term means? [*IF NEEDED, PROMPT WITH DEFINITION: Achieving net-zero emissions means our economy either emits no greenhouse gas emissions or offsets its emissions, for example, through actions such as tree planting or employing technologies that can capture carbon before it is released into the air.*]

As you may have heard, Canada has set a climate goal of achieving "net-zero emissions" by 2050. What comes to mind when you think about this goal?

Awareness of the term "net-zero" was high overall among focus group participants. However, while some participants understood the term, many others found it difficult to understand or explain. Those who have heard of it define it as a reduction in our emissions, completely stopping our emissions, producing energy in a

way that does not produce emissions, and/or balancing our emissions with actions that offset emissions by way of carbon capture such as planting trees.

When prompted on what comes to mind when they think of the goal for Canada to achieve “net-zero emissions” by 2050, participants had mixed reactions with some saying that they don’t believe it to be achievable, while others mentioned it wasn’t ambitious enough.

Those who say it’s not achievable mention that Canada does not have the infrastructure to support such a transition, especially as it relates to supporting a transition to electric vehicles and having a stable electricity supply to charge vehicles. Some were concerned about increased costs to the average Canadian that might come with setting such a goal or that many won’t want to change their habits to help achieve this goal. Participants from rural communities brought up a concern that it seems unrealistic to them as they rely on fossil fuels for essential transport such as planes and cars to travel long distances that might not be an issue in bigger population centres. A couple mentioned they find it hard to believe that Canada will achieve it as they have either seen similar goals set in the past and they weren’t achieved or gave the example of the COVID-19 pandemic where our travel was greatly reduced but it barely had an impact on the environment.

Those who said that it wasn’t ambitious enough mentioned they would like to see changes now, that individuals have to start taking actions without waiting for industries to do the same, that they are seeing the effects of climate change now and that Canadians need to take action now to protect the future generations.

Q - Have you heard or not heard the term “low-carbon economy”? What do you think this term means? [*IF NEEDED, PROMPT WITH DEFINITION: A low-carbon economy is an economy whose power needs are derived not primarily from carbon-intensive sources such as fossil fuels but from 'cleaner' or less carbon-intensive energy sources, such as wind, solar and hydroelectric power.*]

What positives come to mind, if any, when you hear the term “low-carbon economy”?

What negatives come to mind, if any, when you hear the term “low-carbon economy”?

The term “low-carbon economy” is a term most participants are not familiar with but when asked what they thought it meant, many associate it with personal reduction of our production of greenhouse gases or our carbon footprint, while others mentioned supporting industries that have a smaller carbon footprint or having an economy that is based on services and products that have a lower carbon footprint.

Positive aspects – When asked what positive aspects there are to a low-carbon economy, a positive impact on the environment is mentioned by most such as less pollution and improved air quality while some mentioned a higher quality of life for future generations. Other specific benefits included improvements in public transit available, investment opportunities into Canada as the country shifts to a low-carbon economy, an improved global reputation, and advancements and innovation in “cleaner” technologies.

Negative aspects – While some participants said they could not think of any negative aspects, most participants noted increased costs to the individual and having to make changes to their lifestyles. Some participants also mentioned they would be concerned if other big polluting countries didn’t follow suit and are concerned that the impact Canada would have overall would be minimal. Concerns over loss of jobs was also mentioned as was the thought that it might not be possible for all industries to make that shift. Finally, concerns over the lack of infrastructure (such as a stable supply of electricity to charge car batteries) were brought up as a negative aspect.

C. Implications of transitioning to a low-carbon economy

Individual level implications

Q - What are the benefits of shifting to a low-carbon economy for you? What about for your family and friends?

What are the drawbacks of shifting to a low-carbon economy for you? What about for your family and your friends?

When looking at the benefits to shifting to a low-carbon economy is for them or for their family and friends, most participants mentioned it would lead to a healthier environment with participants from larger cities noting they hope it would lead to having improved air quality. Many also mentioned it would be beneficial for their grand-children or future generations in terms of the health and quality of the natural environment they would be pass on to them. Personal cost savings coming from shifting to a more minimal lifestyle that includes using public transit instead of driving, and a decrease in consumption and an increase in reusing and recycling of material goods were also noted by participants.

Nearly all participants mention cost as the drawback to shifting to a low-carbon economy for them or for their family and friends. This includes costs to the individuals as many believe shifting aways from oil and gas for things such as heating for their house and fuel for transportation would lead to them paying higher prices for alternative sources of energy. Many also mentioned that electric vehicles might not be accessible to all Canadians because of their higher cost. Finally, others mentioned loss of jobs and loss of freedoms and having to change their lifestyles to shift to lower-carbon options in many aspects of their lives.

Community level implications

Q - What impacts, if any, will the shift to a low-carbon economy have on jobs in [CITY/REGION]? How will the industry or job(s) in which you work be impacted?

Asked the impacts of shifting to a low-carbon economy on jobs in their region, most of the participants mention that there will be job lost in certain sectors such as oil and gas, gasoline vehicle manufacturing, and mining but that new jobs could be created in agriculture, forestry, parks and recreation, innovation and renewable energies. Some mentioned that the impact of job loss could be felt more heavily at the beginning at the transition but that it would even out with time.

Participants who lived in rural areas were more likely to say that they would be seeing job losses in their regions, especially in forestry, mining, oil and gas, transportation. Participants from larger cities or those who work white-collar jobs were more likely to say they wouldn't see a big loss in jobs in their region or that they would be more likely to see a transition in the types of jobs or retraining for existing jobs.

Q - Have you heard or not heard about sustainable jobs? What have you heard or what comes to mind when you hear this term? [*SEE DEFINITION IF NEEDED: A 'sustainable job' means any job that is compatible with Canada's path to a net-zero emissions and climate resilient future. The term 'sustainable jobs' also reflects the concept of decent, well-paying, high-quality jobs that can support workers and their families over time and includes such elements as fair income, job security, social protection, and social dialogue.*]

Although awareness of the term "sustainable jobs" was low overall among focus group participants, most were mentioned concepts closely resembling the definition of the term when they were asked what came to mind when they heard this term. Concepts mentioned by participants included jobs that contributed to the transition

to a low-carbon economy, 'green' jobs, and jobs that were able to stand the test of time and could support people employed more long-term.

Q - What impacts, if any, will the shift to a low-carbon economy have on the economy of Canada as a whole?

Although there are mixed views on the type of impact shifting to a low-carbon economy will have on the Canadian economy, and whether it will be positive or negative, most participants agree that the impact will be significant. Some feedback brought up by participants were:

The impact will be bigger earlier in the transition – Some participants believe that the earlier transitionary period where Canada is shifting from relying on carbon-based energy to renewable energy will be harder on the economy, both at the individual level and for companies and sectors, as the country will need to invest money into the infrastructure needed for that transition.

The impact will be different across Canada – Many participants say that the impact will be different across Canada with the Prairies more likely to have a negative impact given their abundance of industries that rely on carbon-based energy, which would in turn impact the communities in those areas.

It's an opportunity – Participants mentioned that they believe the transition is an opportunity for Canada to be a world leader in the shift to a low-carbon economy given our abundance of natural resources, with some saying that Canada could sell the energy it produces to other countries or bring back manufacturing and agriculture to make Canada more self-sustainable.

A clear plan and guidance are needed – Participants mentioned they would like the government to have a clear plan, and a cohesive plan across provinces so that all Canadians understand why this shift is needed but also to have proper planning to help businesses and workers who might be negatively impacted by the shift remain strong economically.

D. Roles of Canada's Resource Industries in a Low-carbon Economy

Oil (from oilsands and offshore)

Q - How can the oil sector contribute, if at all, to the reduction of greenhouse gases?
Is it possible to continue to develop Canada's oil resources and achieve a low-carbon economy/meet our net-zero target? How so?

What are some of the benefits and drawbacks of oil extraction in Canada?

When it comes to the ways the oil sector can contribute to the reduction of greenhouse gases, many participants say they are unsure how that is possible with some viewing it as a contradiction in itself since they believe this sector to be a significant contributor to greenhouse gases. A few said that the sector needs to either be greatly reduced or stopped completely while a few participants suggested that the sector should transition its vehicles and extraction technology to green alternatives, with some saying that efficiencies in the extraction and burning process of oil could be improved.

While many participants do not believe it is possible to continue to develop Canada's oil and achieve a low-carbon economy, some agreed that because of our current reliance on oil resources, they won't have a choice to continue using it for the foreseeable future and Canada could help achieve a low-carbon economy by improving

efficiency in the extraction process, reducing our consumption of oil overall, and making sure companies are responsible for the clean up of operations.

Benefits of oil extraction – Participants noted that the main benefits from oil extraction in Canada are that it allows us to remain independent and not rely on other countries for our oil needs, it provides jobs, especially high paying jobs, it helped the economic growth of the country, it allows us to heat our homes and is used in transportation.

Drawbacks of oil extraction – Most participants agree that the main drawback form oil extraction is its negative impact on the environment, whether it be from the extraction process that they have heard can disrupt the stability of the earth and cause earthquakes and contaminates water supplies, pollution from abandoned wells, or the high usage of water to extract the oil.

Natural gas

Q - How can the natural gas sector contribute, if at all, to the reduction of greenhouse gases?

What are some of the benefits and drawbacks of natural gas development in Canada?

Most participants seem to think that because natural gases are cleaner, less polluting and better for the environment than oil, it could be used as a potential alternative to oil to help with the reduction of greenhouse gases. Some participants mentioned that it could help with the reduction of greenhouse gases if Canada invested in more research and development to have cleaner extraction methods, while others suggested having stronger regulations from the government.

Some participants mentioned they believe it to be similar to oil and that they don't believe it can contribute to the reduction of greenhouse gases because it releases greenhouse gases and it is not renewable, with some noting that particularly are against shale gas and the fracking process used to extract it.

Benefits of natural gas development – Participants mostly agree that natural gas development is better than oil extraction for the environment and that it is also less polluting when it is used as fuel and burned. Some mentioned that it is cheaper to use and that they have heard that the methane emissions from burning oil can be used for heating. Also mentioned by a few participants are the jobs that come with natural gas development which they believe helps the economy.

Drawbacks of natural gas development – Extracting natural gas through fracking is viewed as the main drawback because of its negative impact on the environment. Some participants also mentioned the fact that it is not renewable as a drawback or that it can't be used in vehicles as fuel.

Carbon capture and storage

Q - Have you heard or not heard of carbon capture and storage? [IF HEARD] What do you think carbon capture and storage is? [*DEFINITION: In fact, carbon capture and storage are when you capture carbon dioxide from industrial activities, such as fuel processing and then compress and store it underground.*]

Is it important or not important for Canada to invest in carbon capture and storage? Why or why not?

Participants report a limited awareness of this technology and those who say they have heard of it define it in a number of ways: storing different natural energies to use at a later time, storing batteries, storing carbon into

the ground, the cap-and-trade carbon credits, and planting trees to capture carbon in the atmosphere. Participants frequently mentioned that they were unsure of the exact process used to capture and store carbon.

Regarding how important it is for Canada to invest in carbon capture and storage, participants have mixed views on it with many saying they don't know enough to have an informed opinion on the subject.

Those that support it say it is important to try to see if it is a technology worth developing, that we should try everything we can to help reduce our greenhouse gas emissions, that they are just putting the carbon back to where it came from and they do not see an issue with this, and finally that it has economic potential if we can find uses for the carbon captured as opposed to storing it.

Individuals opposed to it are worried about the environmental impacts and potential dangers if there were leaks or issues with the storage of the carbon. They also question the amount of time carbon can be kept underground and worry that storage just leaves the issue for future generations to have to deal with.

Mining

Q - As you may know, many forms of renewable energy and clean technology require critical minerals such as platinum, nickel, cobalt, and rare earth elements. Do you support or oppose critical minerals mining in Canada? Why or why not?

Participants had varying levels of support for critical mining in Canada. Those that support it do so mostly because they believe it to be necessary but want it to be done in an environmentally friendly way with respect for Indigenous rights. Many mentioned that with the growing popularity of electric cars which require batteries that use these minerals, Canada should take advantage of its resources and benefit economically from it. They also mentioned it could create jobs for Canadians.

Some also prefer to mine these critical minerals in Canada over other countries as they believe our regulations and standards make the mining process safer and allows us to control the environmental impact mining has. Some were also concerned about relying on and becoming dependant on other countries for these minerals and viewed it as a matter of national security.

Participants that oppose critical minerals mining in Canada are concerned about the environmental impact of mining and are unsure of its long-term impact on the environment. Those concerned about the environment also cited mines in Canada that had negatively impacted the environment as examples of their concern. Some mentioned they viewed it as being similar to oil and gas in the sense that they would be concerned if Canada were to only extract and export it whereas they would prefer if Canada was also involved in processing ore and manufacturing of products from it.

Finally, those who are unsure about whether or not they would support mining critical minerals mentioned that they didn't feel like they knew enough about it to make an informed decision and would like to know more about safety and environmental impact.

Hydrogen

Q - Have you heard or not heard about hydrogen as a fuel? [*DEFINITION: Hydrogen is a fuel that, when consumed in a fuel cell, produces only water. Hydrogen can be produced from a variety of domestic resources, such as natural gas, nuclear power, biomass, and renewable power like solar and wind.]*

Do you oppose or support the production of hydrogen fuel in Canada? Why or why not?

What kinds of information would you be interested in learning about hydrogen fuel?

Participants are somewhat familiar with hydrogen as a fuel with many saying they have heard of recent developments or trials in using it as an energy source but only in a research and development phase. They are mainly concerned over its safety with some saying they have heard of hydrogen cells being unstable or even exploding (some referenced the Hindenburg disaster).

Based on the definition provided, most participants support the production of hydrogen fuel in Canada but say they would like to know more about it as well. Many say they support it because they believe it to be a cleaner energy source than oil and gas, and that they would like it to come from renewable or clean energy sources. Other benefits cited include the fact that its use only produces water as a by-product, and that it is widely available across the world.

Participants show a high level of interest in learning about different aspects of hydrogen fuel: how it is produced and used as a fuel, including the associated costs, the impact on the environment, safety issues, and timelines for ramping up the industry.

Forest sector

Q - Have you ever heard of mass timber buildings, wood-based substitutes to plastics or bioenergy from forest biomass? What have you heard about it? [*DEFINITION: Forest biomass includes all parts of the tree, not only the trunk but also the bark, the branches, the needles, or leaves. Biomass can be converted into solid, liquid, or gaseous biofuels that can then be burned for energy or used as fuel substitutes for transportation or industrial processes. Forest biomass is increasingly being used to make a wide variety of bioproducts, including chemicals, textiles, personal care products, and other engineering wood products.*]

How can forest products contribute, if at all, to the reduction of greenhouse gas emissions?

Should this be part of or not be a part of Canada's strategy for a low-carbon economy? Why or why not?

Participants who report having heard of forest biomass mentioned they associate it with replacing plastics with renewable sources such as paper or bamboo, mass timber replacing concrete as building material, or using forest industry waste as fuel to heat homes.

Overall, there is stronger support for using forest products as substitutes to plastics and other polluting products rather than using it as a replacement for fuel in order to reduce greenhouse gas emissions. Many viewed the usage of trees as fuel in a low-carbon economy as a contradiction given that trees capture carbon or are otherwise a natural benefit; some expressed concern about harvesting or even clearcutting to support biomass production. On the flip side, there were positive views on using the whole tree or using leftovers of lumber manufacturing as some mentioned it would help create less waste.

Those that support forest biomass as part of Canada's low-carbon economy say the country should try everything it can to achieve it and though forest biomass is no 'silver bullet', they like it is a renewable resource, with potential for job creation and a positive economic impact.

Nuclear energy

Q - How can nuclear energy contribute, if at all, to the reduction of greenhouse gases?

Nuclear energy does not emit greenhouse gases and accounted for 15% of the country's total electric energy generation in Canada in 2018. Do you think Canada should increase, decrease or keep the use of nuclear energy in Canada at the same level? Why?

Have you heard or not heard of Small Modular Reactors also known as "SMRs"? Small Modular Reactors (SMRs) are an emerging area of nuclear energy innovation, in Canada and around the world. SMRs will have enhanced safety features, a smaller footprint and produce less waste than traditional nuclear energy reactors.

Do you think getting more of our energy from SMRs could be a way to move to a low-carbon economy? Is there a downside to moving to Small Modular Reactors?

Views on how nuclear energy can contribute to the reduction of greenhouse gases were primarily positive with most participants recognizing that there are no emissions produced. However, concerns over safety and nuclear waste were also top of mind for many.

Most participants are split on whether Canada should increase or keep the use of nuclear energy at the same level, while a few think that Canada should not be using nuclear energy at all.

Participants who think that Canada should increase the use of nuclear energy most often said so because it would help Canada transition away from oil and gas and support the transition to a low-carbon economy. Also mentioned was nuclear energy being able to support rural and northern communities that might have less access to reliable energy alternatives.

Participants who think Canada should not be using nuclear energy said so because of safety concerns and concerns about nuclear waste.

A small proportion of participants reported having heard of Small Modular Reactors (SMRs), an emerging area of nuclear energy innovation, in Canada and around the world.

When prompted on if they thought getting more of our energy from SMRs could be a way to move to a low-carbon economy, participants' views were polarized and ranged from extremely negative to extremely positive. Participants who thought that SMRs could be a good way to move to a low-carbon economy most often said so because nuclear energy produces no emissions and having smaller reactors could be safer, produce less waste or allow for easier and/or more cost-effective set-up and implementation of reactors in smaller communities that are currently struggling with energy sources (i.e. using diesel generators).

Those who thought getting more of our energy from SMRs was not a good idea or were on the fence, most often said so because of safety concerns. Some participants also mentioned that nuclear energy still produces waste which is hard to dispose of safely or sustainably.

Hydroelectricity

Q - How can the hydroelectric sector, that is water powered electric generation, contribute, if at all, to the reduction of greenhouse gases?

What are some of the other benefits and drawbacks of having more hydroelectricity projects?

Questions on the hydroelectric sector were only asked of participants from eight of the twenty focus groups where time allowed, which included the four focus groups conducted in Quebec.

Most participants said hydroelectricity is a clean source of energy that does not directly produce any greenhouse gas emissions. A majority of participants also mentioned that Canada was rich in water resources so power generation from water made a lot of sense. One participant from the Rural/small community Nova Scotia group said they heard mentions of potential in tidal power, but not actual outcomes.

When discussing other benefits and drawbacks of having more hydroelectricity projects, participants mentioned that Canada already produces a lot of power from this source and it is time to focus on making the technology more efficient, supplying other provinces, and power storage. Flooding from the creation of damns was mentioned as a major drawback of hydroelectric power generation, including unearthing toxic metals in the soil such as mercury, as well as the displacement of communities, namely Indigenous communities.

Alternative fuels

Q - Have you heard or not heard of alternative fuels such as biodiesel, or ethanol used for transportation and industry? What have you heard about these alternative fuels?

How can alternative fuels contribute, if at all, to the reduction of greenhouse gases?

Questions on alternative fuels were only asked of participants from two of the twenty focus groups where time allowed.

While a majority of the participants asked had heard about alternative fuels such as biodiesel or ethanol used for transportation, their views on whether these fuels can contribute to the reduction of greenhouse gases were mixed and/or uncertain. Most said that these fuels could be good alternatives to traditional oil and gas derived from fossil fuels, but some noted that there would still be emissions created from these fuels. A few participants mentioned being unsure about the cost, how clean these fuels are, and how feasible it is to use these fuels.

E. Communications

Q - If the Government of Canada were to put together a plan to help educate and motivate individuals to take action on the transition to low-carbon economy in Canada, what should their key message be? Where should this message be shared?

Participants mentioned a variety of key messages that the Government of Canada should consider when putting together a plan to help educate and motivate individuals to take action on the transition to a low-carbon economy in Canada. Messages could be categorized by focus: many participants suggested focusing on the impacts of climate change and the implications of a lack of action, while others suggested focusing on the positives of transitioning to a low-carbon economy and the individual and collective actions that can be undertaken by Canadians to help with this transition to a low-carbon economy. Some participants also mentioned including key messaging on the emotional piece of the transition, such as taking action for their

children, grandchildren and the future generation(s). A few participants mentioned the importance of the Government of Canada providing clear, easy to digest and transparent information and facts to Canadians. A couple of participants said key messages should include assurances that 'no one would get left behind' in the transition to a low-carbon economy, including those that work in high emissions sectors such as oil and gas.

When it comes to where these messages should be shared, many participants said that information on transitioning to a low-carbon economy and climate change should be part of school curriculums. Social media, TV ads, radio, and newspapers were also mentioned by most participants, with some adding that the mode of sharing the messages should be determined by which demographic the Government is looking to target. Some participants also mentioned utilizing celebrity influencers, sharing information at community meetings, having a dedicated website, and setting up education and networking events. A few participants mentioned that having the municipal and provincial governments communicate the message would be more impactful than hearing them from the federal government alone.

Detailed findings – quantitative phase

A. Natural resources

Top natural resource issues

When asked the single biggest issue Canada faces in terms of its natural resources, Canadians mention making sure the country has enough resources for future generations and sustainability (11%; 18% in 2021), while 9% each mention pollution from extracting and distributing natural resources (17% in 2021), and government intervention/politics working against oil and development.

Q - What would you say is the single biggest issue Canada faces when it comes to our natural resources? [OPEN-ENDED]

Biggest natural resource issue – Top Mentions	2023 Total (n=3,522)	2020-21 Total (n=3,457)	2018-19 Total (n=3,444)
Making sure we have enough resources for future generations / sustainability	11%	18%	14%
Pollution from extracting and distributing natural resources	9%	17%	8%
Government intervention/politics working against development/oil industry	9%	6%	4%
Foreign control of our resources instead of Canadians benefiting from them	8%	5%	3%
Climate change/global warming	8%	7%	7%
Pipelines/oil spills/environmental impact	7%	1%	7%
Marketing our natural resource products /get them to market	6%	5%	6%
Reliable energy supply/ Access to energy sources/ declining oil supply	5%	-	-
Water pollution/contamination/fresh water supply	5%	6%	3%
We do not use them enough/take advantage of what we have	4%	-	-
Green energy/reliance on oil instead of clean energy	3%	6%	3%
Protecting forests, lakes, habitat	3%	5%	6%
Forestry issues/ forest fires	3%	2%	-
Selling raw resources cheaply/import finished products at high prices	2%	7%	3%
Oil/gas industry (unspecified)	2%	3%	4%

Base: All respondents, n=3,522.

Government's performance on natural resources issues

Canadians are more likely to say the Government of Canada is doing a poor job rather than a good job when it comes to various aspects of managing Canada's natural resources. They gave slightly higher performance scores to promoting the economic growth of natural resource industries (28%) and making sure natural resources are developed in a way that respects the environment (26%) than striking a balance between environmental and economic considerations (19%). The government's performance in all three areas continues to trend down compared to the benchmark results from 2019.

Q - When it comes to Canada's natural resources, how would you rate the performance of the Government of Canada in each of the following areas? Please use a 10-point scale where "1" means a very poor job and "10" means a very good job. [RANDOMIZE]

Government performance on natural resource issues	Good job (7-10)	Neutral (5-6)	Poor job (1-4)	Unsure	Good job (7-10) 2020-21	Good job (7-10) 2018-19
Promoting the economic growth of natural resource industries	28%	26%	40%	7%	30%	35%
Making sure natural resources are developed in a way that respects the environment	26%	30%	40%	4%	29%	37%
Striking a balance between environmental and economic considerations	19%	28%	50%	3%	24%	31%

Base: All respondents, n=3593.

Province/territories

- Positive perceptions of the federal government's performance in terms of promoting the economic growth of natural resource industries are higher in Quebec (39%) compared to the national average (28%) and lower in Alberta (13%).

Education

- Canadians with an education level of a registered Apprenticeship or other trades certificate or diploma have a less positive view of the federal government's performance in terms of promoting the economic growth of natural resource industries (20% very good) than Canadians overall (28%).

Level of agreement with environmental friendliness of energy sources

Canadians have the highest intensity of agreement with solar energy (90% strongly or somewhat agree) being environmentally friendly, followed closely by wind energy (87%) and hydroelectric dams (83%). They have the lowest intensity of agreement with firewood and wood pellets (36%), offshore oil and gas (26%) and oil sands (25%) being environmentally friendly sources of energy. These results are generally consistent with the benchmark results from 2021.

Q - To what extent do you agree or disagree that each of the following energy sources are environmentally friendly? [RANDOMIZE]

Energy Source	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Unsure	Net Agree 2023	Net Agree 2020-21
Solar energy	64%	26%	6%	3%	1%	**90%**	**91%**
Wind energy	53%	33%	8%	5%	2%	**86%**	**87%**
Hydroelectric dams	39%	44%	10%	3%	4%	**83%**	**76%**
Nuclear energy	27%	35%	16%	14%	8%	**62%**	**43%**
Hydrogen fuel	24%	38%	11%	3%	25%	**61%**	**57%**
Natural gas	17%	36%	29%	12%	5%	**54%**	**58%**
Biodiesel and ethanol fuel *	8%	36%	28%	15%	14%	**44%**	**42%**
Firewood and wood pellets	7%	29%	37%	22%	6%	**36%**	**N/A**
Offshore oil and gas	6%	20%	28%	42%	5%	**26%**	**23%**
Oil sands	7%	17%	23%	47%	6%	**25%**	**19%**

**In 2020, this was asked as "Biodiesel fuel"*
Base: All respondents, n=3593.

Province/territories

- Canadians in Newfoundland (48%), Quebec (47%) and Manitoba (49%) are less likely to strongly or somewhat agree that nuclear energy is environmentally friendly (compared to 62% of Canadians overall), while Ontarians (70%) are more likely to strongly or somewhat agree with this.
- Alberta residents are less likely to strongly or somewhat agree that wind energy (73%; 86% of Canadians) and solar energy (78%; 90% of Canadians) are environmentally friendly sources of energy.
- Individuals in Quebec are less likely to strongly or somewhat agree that oilsands are environmentally friendly as a source of energy (13%; 25% of Canadians), as well as offshore oil and gas (15%; 26% of Canadians), natural gas (44%; 54% of Canadians), and biodiesel and ethanol fuel (34%; 44% of Canadians).

Age

- Canadians in the 18 to 34 age cohort are less likely to strongly or somewhat agree that natural gas is an environmentally friendly source of energy (44%) than those 35 to 44 (55%), 45 to 54 (58%) or 55 plus (57%).

Gender

- Men are more likely to strongly or somewhat agree than women that nuclear energy (75% men; 49% women), oil sands (29% men; 20% women), offshore oil and gas (32% men; 20% women), natural gas (60% men; 47% women) and hydrogen fuel (74% men; 49% women) are environmentally friendly sources of energy.

Community size

- A higher proportion of individuals from a rural or small community strongly or somewhat agree that firewood and wood pellets are environmentally friendly (48%) compared to those from a large urban centre (28%) or Canadians overall (36%).

Income

- Lower income individuals (under $40,000) are less likely to strongly or somewhat agree (46%) that nuclear energy is environmentally friendly than higher income Canadians ($80,000 or more) (67%), as well as hydrogen fuel (lower income: 54%; higher income: 65%).

Education

- Canadians with an education level of a registered Apprenticeship or other trades certificate or diploma are less likely to strongly or somewhat agree that wind energy is environmentally friendly (76%) than Canadians as a whole (86%) and are more likely to agree that the oilsands are environmentally friendly (41%; 25% of Canadians), as well as offshore oil and gas (39%; 26% of Canadians).

Level of support for energy development projects

Generally, support for energy development projects with various energy types aligns with perceptions of which types of energy sources are environmentally friendly. Canadians are most likely to strongly or somewhat support energy development projects for solar energy (91%), wind energy (86%) or hydroelectric dams (85%), and least supportive of energy development projects involving biodiesel and ethanol fuel (15%), oil sands (6%) and offshore oil and gas (5%).

Q - To what extent do you support or oppose the following energy development projects? [RANDOMIZE]

Energy Source	Strongly support	Somewhat support	Somewhat oppose	Strongly oppose	Unsure	Net Support 2023
Solar energy	70%	21%	5%	3%	1%	**91%**
Wind energy	60%	26%	8%	6%	1%	**86%**
Hydroelectric dams	45%	40%	8%	3%	4%	**85%**
Hydrogen fuel	30%	36%	9%	2%	22%	**67%**
Nuclear energy	33%	32%	16%	14%	6%	**65%**
Natural gas	28%	36%	21%	9%	5%	**65%**
Biodiesel and ethanol fuel	13%	40%	21%	11%	15%	**53%**
Oil sands	16%	21%	19%	39%	6%	**37%**
Offshore oil and gas	13%	23%	24%	35%	5%	**36%**

Base: All respondents, n=3593.

Province/territories

- Compared to respondents in other parts of the country, Quebec residents are less likely to strongly or somewhat support energy development projects for nuclear energy (47%; 65% of Canadians), oil sands (19%; 37% of Canadians), offshore oil and gas (22%; 36%), natural gas (53%; 65% of Canadians), and biodiesel and ethanol fuel (43%; 53% of Canadians).
- Support for energy development projects is higher among Alberta residents compared to Canadians on average for oilsands (72%), offshore oil and gas (60%) and natural gas (84%).

Gender

- Similar to views on the environmental friendliness of energy sources, men are also more likely than women to strongly or somewhat support energy development projects overall, with the largest difference observed for nuclear energy (men: 77%; women: 52%), hydrogen fuel (men: 78%; women: 56%), offshore oil and gas (men: 44%; women: 28%) and oil sands (men: 44%; women: 30%).

Income

- Higher income Canadians (over $80,000) are more likely to strongly or somewhat support (69%) nuclear energy development projects than lower income Canadians (less than $40,000)(52%), and more likely to support a hydrogen fuel development project (71%; 60% of lower income individuals).

Education

- Individuals with a registered Apprenticeship or other trades certificate or diploma are less likely to strongly or somewhat support wind energy development projects (76%; 86% of Canadians) and more supportive or projects involving oilsands (60%; 37% of Canadians), natural gas (82%; 65% of Canadians) or hydrogen fuel (75%; 67% of Canadians).

Importance of oil as an energy source in the future

Nearly six in ten Canadians (56%) believe oil will be very or somewhat important as a source of energy for Canadian households and business 30 years from now, while just over half think it will be either not very important or not important at all (52%).

Q - How important or unimportant as a source of energy for Canadian households and businesses do you believe oil is likely to be 30 years from now?

	Very important	Somewhat important	Not very important	Not important at all	Unsure	Net Important 2023
Importance of oil as energy source in the future	23%	33%	30%	12%	3%	56%

Base: All respondents, n=3593.

Province/territories

- Alberta residents are much more likely to believe oil will be very or somewhat important as a source of energy for Canadians 30 years from now (76%) than Canadians on the whole (56%).

Gender

- Men are more likely to believe oil will be very or somewhat important (62%) as a source of energy for Canadian households 30 years from now than women (50% net importance).

Education

- Individuals with an education level of a registered Apprenticeship or other trades certificate or diploma are more likely to believe oil will be very or somewhat important as a source of energy for Canadians 30 years from now (75%) than Canadians overall (56%).

B. Environment and climate change

Climate change impacts on community

A majority of Canadians feel all of the listed potential climate change impacts will have a significant or moderate impact on their community in the next 30 years, in particular increased energy costs (87%) and increased insurance costs (85%). A comparatively lower intensity of impact was given to more flooding or more severe flooding (75%), increased property damage or loss (75%) and more air pollution or lower air quality (73%).

Q - How much of an impact do you feel the following climate change impacts will have on your community in the next 30 years? [RANDOMIZE]

Potential Impact of climate change	Significant impact	Moderate impact	Limited impact	No impact at all	Unsure	Net Impact
Increased energy costs	59%	28%	8%	3%	2%	87%
Increased insurance costs	58%	27%	10%	3%	2%	85%
More extreme/unpredictable weather events	61%	21%	11%	6%	1%	82%
More extreme heat	57%	24%	13%	6%	1%	81%
More crop failures leading to higher food prices	57%	24%	12%	5%	2%	81%
More forest fires	53%	24%	15%	7%	2%	77%
Increased healthcare costs	48%	28%	14%	7%	3%	76%
More flooding/more severe flooding	50%	25%	16%	7%	2%	75%
Increased property damage or loss	45%	30%	17%	6%	2%	75%
More air pollution/lower air quality	45%	28%	17%	8%	2%	73%

Base: All respondents, n=3593.

Province/territories

- Overall, residents of Alberta are less likely than the rest of Canadians to believe various climate change impacts will have a significant or moderate impact on their community in the next 30 years, including more extreme or unpredictable weather events (62%; 82% of Canadians), more air pollution and lower air quality (57%; 74% of Canadians), more flooding and more severe flooding (53%; 75% of Canadians) and more extreme heat (67%; 80% of Canadians).
- Quebec residents are more likely to say extreme heat will have a significant or moderate impact in their community (91%; 80% of Canadians), as well as more forest fires (89%; 77% of Canadians), more flooding and more extreme flooding (88%; 75% of Canadians) and more air pollution or lower air quality (88%; 75% of Canadians).

Gender

- In terms of potential climate impacts, women are more likely than men to think they will have a significant or moderate impact on their community in the next 30 years, especially more air pollution or

lower air quality (women: 82%; men: 65%), more crop failures leading to higher food prices (women: 88%; men: 74%), and increased healthcare costs (women: 83%; men: 69%).

Education

- Canadians who have achieved a registered Apprenticeship or other trades certificate or diploma are less likely to think more extreme or unpredictable weather events will have a significant or moderate impact in their community (68%) than Canadians on average (82%), as well as extreme heat (66%; 80% of Canadians).

Familiarity with topics

Eight in ten Canadians say they are very or somewhat familiar with net-zero emissions (79%) and seven in ten say the same for a low-carbon economy (72%) as well as the Paris Agreement on Climate Change (70%). They are much less likely to say they are familiar with a circular economy (38%).

Familiarity has increased notably across the board compared to the 2021 benchmark results, with the largest increase observed for net-zero emissions (increase of 18 percentage points).

Q - In general, how familiar or unfamiliar are you with each of the following topics?

Familiarity with topics	Very familiar	Somewhat familiar	Not very familiar	Not at all familiar	Not sure	Net Familiar 2023	Net Familiar 2020-21
Net-zero emissions	22%	57%	17%	3%	1%	79%	61%
A low-carbon economy	17%	55%	22%	4%	2%	72%	57%
The Paris Agreement on Climate Change	16%	54%	22%	7%	2%	70%	54%
A circular economy	10%	28%	34%	25%	4%	38%	N/A

Base: All respondents, n=3593.

Province/territories

- Quebec residents report a lower level of familiarity with the topics low-carbon economy (62% very or somewhat familiar; 79% of Canadians overall) and net-zero emissions (67%; 79% of Canadians)
- Individuals in Manitoba (24%), New Brunswick (23%) and Newfoundland and Labrador (22%) report noticeably low familiarity with a circular economy (38% of Canadians).

Gender

- Men are more likely than women to say they are very or somewhat familiar with all of the topics (about a 10-percentage point difference in net familiarity for each topic).

Income

- Higher income individuals ($80,000 or more) are more likely than lower income Canadians (less than $40,000) to say they are very or somewhat familiar with the Paris Agreement (higher income: 74%; lower income: 62%), a low carbon economy (higher income: 77%; lower income: 61%) and net-zero emissions (higher income: 83%; lower income: 68%).

C. Low-carbon economy

Agreement with statements on low-carbon economy

Canadians have the highest net agreement (strongly and somewhat agree) with the statement that 'Canada's forest industry can continue to harvest trees in a low-carbon economy' (65% strongly agree or somewhat agree), followed by 'Canada's transition to a low-carbon economy will provide good quality jobs for Canadians' (60%). The lowest net agreement is given to 'It is possible to develop Canada's oil sands and maintain Canada's commitment to reduce greenhouse gas emissions', with just under four in ten (39%) who strongly or somewhat agree with this statement. These findings are consistent with the benchmark results from 2021.

Q - A low-carbon economy is an economy based on lower-carbon power sources that emit less greenhouse gas emissions, notably carbon dioxide, into the atmosphere. To what extent do you agree or disagree with the following statements? [RANDOMIZE]

Statement	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Unsure	Net Agree 2023	Net Agree 2020-21
Canada's forest industry can continue to harvest trees in a low-carbon economy.	20%	45%	20%	7%	9%	65%	N/A
Canada's transition to a low-carbon economy will provide good quality jobs for Canadians	24%	36%	15%	14%	11%	60%	62%
Indigenous communities will benefit from Canada's transition to a low-carbon economy.	19%	33%	15%	14%	19%	52%	50%
Communities that currently depend on carbon-intensive industries can still thrive in a low-carbon economy.	14%	35%	26%	16%	10%	49%	50%
It is possible to develop Canada's oil sands and maintain Canada's commitment to reduce greenhouse gas emissions.	17%	23%	23%	28%	9%	39%	44%

Base: All respondents, n=3593.

Province/territories

- Individuals in Alberta are less likely to strongly or somewhat agree that Canada's transition to a low-carbon economy will provide good quality jobs for Canadians (40%; 60% of Canadians) and that Indigenous communities will benefit from Canada's transition to a low-carbon economy (39%; 52%).

They are much more likely to strongly or somewhat agree that it is possible to develop Canada's oil sands and maintain Canada's commitment to reduce greenhouse gas emissions (68%; 39% of Canadians).

- Quebec residents are more likely to strongly or somewhat agree that Canada's transition to a low-carbon economy will provide good quality jobs for Canadians (71%) and are less likely to strongly or somewhat agree that it is possible to develop Canada's oil sands and maintain Canada's commitment to reduce greenhouse gas emissions (25%).

Gender

- Women are more likely to strongly agree or somewhat agree that Indigenous communities will benefit from Canada's transition to a low-carbon economy (58%) than men (46%). Meanwhile men have a higher net agreement that Canada's forest industry can continue to harvest trees in a low-carbon economy (71%; women: 59%) and that it is possible to develop Canada's oil sands and maintain Canada's commitment to reduce greenhouse gas emissions (46%; women: 33%).

Education

- Canadians who have achieved a post graduate degree above bachelor's level are more likely to strongly or somewhat agree that Canada's transition to a low-carbon economy will provide good quality jobs for Canadians (72%; 60% of Canadians), and those who have achieved up to a registered Apprenticeship or other trades certificate or diploma are less likely to agree (40%).

Government of Canada level of priority for initiatives

In terms of initiatives for the Government of Canada to prioritize, Canadians place highest priority on three: funding education and skill development programs to train or re-train workers for job opportunities in a low-carbon economy (54% say top priority; another 37% say this is important but not a top priority); ensuring that new jobs created in the low-carbon economy are well-paying and high-quality to support workers and their families (51%; another 40% say important but not a top priority); and helping communities that depend on carbon-intensive industries to develop a more diverse economy (50%; another 40% say important but not a top priority).

Somewhat fewer Canadians put top priority on engaging in meaningful consultations with Indigenous communities on natural resource projects that affect them (44%; another 42% say important but not a top priority), and even fewer say the same for removing barriers to employment in the emerging low carbon economy for underrepresented groups including women, persons with disabilities, Indigenous Peoples, Black and other racialized individuals, and 2SLGBTQI+ individuals (24% another 41% say important but not a top priority).

Q - In your view, how much of a priority should it be for the Government of Canada to support the following initiatives? [TRACKING][RANDOMIZE]

Initiative	Top priority	Important but not a top priority	Not a priority	Unsure	Net Important 2023	Net Important 2020-21
Funding education and skill development programs to train or re-train workers for emerging job opportunities in a low-carbon global economy	54%	37%	8%	1%	91%	82%
Ensuring that new jobs created in the low-carbon economy are well-paying, high-quality jobs that can support workers and their families.	51%	40%	8%	1%	91%	N/A
Helping communities that depend on carbon-intensive industries to develop a more diverse economy	50%	40%	8%	2%	90%	83%
Engaging in meaningful consultations with Indigenous communities on natural resource projects that affect them	44%	42%	13%	2%	85%	77%
Removing barriers to employment in the emerging low carbon economy for underrepresented groups including women, persons with disabilities, Indigenous Peoples, Black and other racialized individuals, and 2SLGBTQI+ individuals.	24%	41%	32%	3%	65%	N/A

Base: All respondents, n=3593.

Province/territories

- Residents in the North are less likely to say it should be a top priority for the government to help communities that depend on carbon-intensive industries to develop a more diverse economy (21%; 50% of Canadians) and more likely to say it is important, but not a top priority (72%; 40% of Canadians).
- Individuals in Alberta are less likely to say it should be either a top priority or important for the government to remove barriers to employment in the emerging low carbon economy for underrepresented groups including women, persons with disabilities, Indigenous Peoples, Black and other racialized individuals, and 2SLGBTQ (55%; 65% of Canadians).

Gender

- Women are more likely than men to say that engaging in meaningful consultations with Indigenous communities on natural resource projects that affect them should be a top priority for the Government (52%; men: 35%), as well as funding education and skill development programs to train or re-train workers for emerging job opportunities in a low-carbon global economy (59%; men: 50%), helping communities that depend on carbon-intensive industries to develop a more diverse economy (54%; men: 45%) and removing barriers to employment in the emerging low carbon economy for underrepresented groups including women, persons with disabilities, Indigenous Peoples, Black and other racialized individuals, and 2SLGBTQI+ individuals (30%; men: 17%).

Income

- Lower income Canadians (less than $40,000) are more likely to think engaging in meaningful consultations with Indigenous communities on natural resource projects that affect them should be top priority for the government (55%) than higher income Canadians ($80,000 and more)(41%), as well as removing barriers to employment in the emerging low carbon economy for underrepresented groups including women, persons with disabilities, Indigenous Peoples, Black and other racialized individuals, and 2SLGBTQI+ individuals (lower income: 36%; higher income: 21%).

D. Affordability

Concern over price of energy types

In terms of concerns about the price they pay for energy, Canadians are the most concerned about gasoline and diesel and electricity (84% very concerned/somewhat concerned each), followed by natural gas (60% net concern). The lowest level of concern is observed for firewood and/or wood pellets (23%).

Q - Thinking about the price of energy, how concerned or not concerned are you about the price you pay for each of the following types of energy: [RANDOMIZE]

Energy	Very concerned	Somewhat concerned	Not very concerned	Not at all concerned	Unsure	Not applicable	Net Concern
Gasoline and diesel	53%	31%	10%	5%	<1%	3%	84%
Electricity	51%	33%	13%	3%	<1%	1%	84%
Natural gas	34%	26%	14%	6%	1%	19%	60%
Heating oil and/or propane	24%	17%	15%	11%	1%	33%	40%
Firewood and/or wood pellets	10%	13%	20%	20%	2%	35%	23%

Base: All respondents, n=3593.

Province/territories

- Alberta residents have a higher level of concern regarding the price they pay for electricity (94%; 84% of Canadians) and natural gas (89%; 60% of Canadians). Quebec residents are also more likely to be concerned about the price they pay for natural gas (76%) compared to Canadians overall.
- Residents in the North have a higher level of concern with regards to the price they pay for heating oil and/or propane (79%; 40% of Canadians).

Community size

- Canadians residing in rural or small communities are more likely to say they are very or somewhat concerned about the price of gasoline and diesel (89%) than those from a large urban centre (79%). The same observation can be made for the price of natural gas (rural: 54%; urban: 63%), heating oil and propane (rural: 48%; urban: 34%) and firewood (rural: 32%; urban: 17%).

Education

- Individuals who have achieved a registered Apprenticeship or other trades certificate or diploma are more likely to say they are very or somewhat concerned about the price they pay for gasoline and diesel (94%) than Canadians overall (84%), as well as heating oil and propane (54%; 40% of Canadians).

Expected change in proportion of household budget for energy costs

A majority of Canadians expect their energy costs will be a larger proportion (79%) of their total household budget by 2030 compared to now, while 15% think it will be about the same and only 4% think it will be a smaller proportion.

Q - By 2030 do you expect that your energy costs will be a larger, smaller or about the same proportion of your total household budget compared to now?

	Larger	Smaller	About the same	Not sure
Proportion of household budget in 2030	79%	4%	15%	3%

Base: All respondents, n=3593.

Actions taken to lessen impacts of higher energy prices

When asked what actions they have taken in the past year to lessen impacts of these higher energy prices, Canadians most often report they have adjusted their thermostat to reduce heating and cooling (68%), followed by reducing electricity use during peak hours (55%) and driven less with their vehicle or switched to public or active transportation (41%). Just 9% report installing a heat pump and 12% report they didn't take any actions.

Q - What actions, if any, have you taken in the past year to lessen the impacts of higher energy prices? [RANDOMIZE][SELECT ALL THAT APPLY]

Actions taken in the past year	Total (n=3526)
Adjusted thermostat to reduce heating/cooling	68%
Reduced electricity use during peak hours	55%
Driven less/switched to public or active transportation (e.g., bicycle)	41%
Replaced inefficient appliances	29%
Purchased a more efficient vehicle or electric/hybrid vehicle	16%
Did not take any actions	12%
Installed heat pumps	9%

Base: All respondents, n=3526.

Gender

- Women are more likely to report they reduced electricity use during peak hours (61%) than men (49%).

Community size

- Canadians from a small or rural community are less likely to report they have driven less or switched to public or active transit (34%) than Canadians from a large urban centre (46%).

Income

- Higher income Canadians ($80,000 and more) are more likely to report they purchased a more efficient vehicle or electric/hybrid vehicle (18%) than lower income Canadians (under $40,000)(9%), but less likely to report they have driven less or switched to public transit (38%; lower income: 49%).

Main barriers when it comes to using energy efficient technologies

The single biggest barrier mentioned by Canadians in terms of using more energy efficient technologies in their household is affordability and cost (mentioned by 80% of respondents). Around one in ten each mentioned availability and selection (12%), not as efficient or reliable (12%), not an option for them (e.g., they rent) or do not own a car (10%) or the infrastructure is not sufficient (9%).

Q - What is the main barrier for you when it comes to using more energy efficient technologies in your household (e.g., electric vehicles, heat pumps, retrofitted appliances etc.)? [OPEN][UP TO THREE MENTIONS]

Barriers – Top Mentions	**Total (n=3430)**
Affordability/Cost/Expense	80%
Availability/selection (not specified)	12%
Not as efficient/reliable/shorter life span	12%
Not an option for me (renter, do not own a car, etc)	10%
Infrastructure is not sufficient (ex. Not enough EV charging stations, lack of grid capacity)	9%
Lack of knowledge/need more information	8%
Not practical (live in rural area, cold temperatures, etc)	6%
None/don't need it/not interested	6%
Current tech/vehicle/appliances work fine	6%
This tech is not good for environment/cannot recycle	5%
Other	9%

Base: All respondents, n=3430.

Income

- Lower income Canadians (under $40,000) are more likely to mention it is not an option for them (18%) than higher income Canadians ($80,000 and more)(8%).

Helpfulness of solutions for households in using more energy efficient technologies

Affordability seen as key to increasing use of energy efficient technologies, as Canadians rank increased affordability of energy efficient equipment (23%) and government rebates or grants (20%) first as the most helpful for their household to use more energy efficient technologies. This was followed by increased affordability of zero-emission vehicles (14%), financing programs allowing households to spread costs of these technologies over a longer period of time (8%) and more minimum efficiency standards for products and buildings (8%).

Q - Please rank the following, where 1 would be most helpful for your household using more energy efficient technologies, 2 would be the second most helpful, and so on. [RANDOMIZE]

Solutions – Top Three Ranked	**Rank 1 (n=3593)**	**Rank 2 (n=3347)**	**Rank 3 (n=3107)**
Increased affordability of energy efficient equipment	23%	20%	15%
Government rebates or grants (i.e., one-time payments to offset the cost of purchase and/or installation of clean technologies)	20%	18%	16%
Increased affordability of zero-emission vehicles	14%	13%	13%
Financing programs that allow households to spread the costs of energy efficiency technologies over a longer period of time	8%	13%	14%
More minimum efficiency standards for products, buildings etc.to encourage energy efficient technologies	8%	8%	10%
More information to help you understand how to be more energy efficient	7%	7%	9%
Increased availability of energy efficient equipment	5%	9%	13%
Increased availability of zero-emission vehicles	5%	8%	8%
Not sure	2%	2%	1%
None of them	8%	1%	1%

Base: All respondents, n=3593.

Levels of government viewed as most responsible for making sure energy is affordable

The federal government is viewed as the most responsible level of government for making sure energy is affordable for the average household (40%), while one in three feel all the federal, provincial/territorial/municipal governments are equally responsible (34%) and one in four think provincial or territorial is the most responsible (24%).

Q - Which level of government do you view as most responsible for making sure energy is affordable for the average household? [RANDOMIZE]

Levels of government	**Total (n=3593)**
Federal	40%
All equally responsible	34%
Provincial/territorial	24%
Municipal	1%
Not sure	2%

Base: All respondents, n=3593.

Gender

- Men are more likely than women to say view the federal government as the most responsible for this (44%; women: 35%), while women are more likely to view all levels of government as equally responsible (39%; men: 29%).

Income

- Higher income Canadians ($80,000 and higher) are more likely to than lower income Canadians (under $40,000) to view the federal government as most responsible (higher income: 42%; lower income: 33%), and less likely to think all three levels have equal responsibility (higher income: 30%; lower income: 44%).

Amount done by governments to make sure lower-income households have access to reliable and affordable energy

Nearly three in four Canadians (73%) think governments are not doing enough to make sure lower income households have access to reliable and affordable energy, while 10% think they are doing the right amount and just 5% think they are doing too much.

Q - Are governments doing too much, the right amount or not enough to make sure lower-income households have access to reliable and affordable energy?

	Too much	The right amount	Not enough	Not sure
Amount done to make sure lower-income households have access to reliable and affordable energy	5%	10%	73%	12%

Base: All respondents, n=3593.

Income

- Canadians in the lower income cohort (under $40,000) are more likely to say governments are not doing enough to make sure lower-income households have access to reliable and affordable energy (83%) than higher income individuals ($80,000 or more)(71%).

E. Energy efficiency

Impact of shifting services to electricity or low-carbon fuels on reducing climate change.

Consistent with benchmark results from 2021, Canadians see the biggest net impact on reducing climate change impacts in shifting industrial and commercial vehicles (78% significant or moderate impact) and industrial and commercial heating processes (78% net impact) to electricity or other low-carbon fuels. Around seven Canadians in ten each say there would be a significant or moderate impact if the switch was made for personal vehicles (70%) or home heating processes (68%).

Q - How much of an impact do you believe shifting each of the following to electricity or other low-carbon fuels will have on reducing climate change impacts?

Type service	Significant impact	Moderate impact	Limited impact	No impact at all	Not sure	Net Impact 2023	Net Impact 2020-21
Industrial and commercial vehicles	54%	23%	13%	8%	2%	78%	79%
Industrial and commercial heating processes	54%	24%	12%	7%	3%	78%	79%
Personal vehicles	37%	33%	19%	10%	1%	70%	72%
Home heating processes	28%	39%	21%	9%	2%	68%	67%

Base: All respondents, n=3593.

Province/territories

- Quebec residents are more likely to believe switching to a low-carbon fuel will have a significant or moderate impact for industrial and commercial vehicles (89%; 78% of Canadians), personal vehicles (82%; 70% of Canadians), home heating processes (78%; 68% of Canadians) and industrial and commercial heating processes (87%; 78% of Canadians).
- Individuals in Alberta are less likely to believe this would have a significant or moderate impact (industrial vehicles: 55%; personal vehicles: 49%; industrial heating processes: 57%; home heating processes: 47%).

Age

- Older Canadians (55 plus)(73%) are more likely than younger Canadians (18-34)(63%) to believe shifting home heating processes to electricity or another low-carbon fuel will have a significant or moderate impact on reducing climate change impacts.

Community size

- Individuals from a rural or small community are less likely to think shifting personal vehicles to a low-carbon fuel will have a significant or moderate impact on climate change impacts (63%) than those from a large urban centre (73%).

Education

- Those who have achieved a registered Apprenticeship or other trades certificate or diploma are less likely to think shifting personal vehicles to a low-carbon fuel will have a significant or moderate impact on climate change impacts (49%) than Canadians overall (70%), as well as industrial and commercial vehicles (63%; 78% of Canadians), industrial and commercial heating processes (67%; 78% of Canadians) and home heating processes (52%; 68% of Canadians).

F. Circular economy

What comes to mind when thinking of "circular economy"

Canadians who are at least somewhat familiar with the topic of a circular economy most often say they think of repurposing, recycling and reusing resources related to the term (35%). Under one in ten each mention renewable energy (8%), sustainable, balanced and efficient (8%), reducing waste and consumption (6%) and returning what was taken to how it was/net-zero/carbon neutral (6%).

Q - [IF VERY FAMILIAR/FAMILIAR WITH THE TOPIC OF A CIRCULAR ECONOMY IN Q38] When you think of the term "circular economy" in terms of natural resources, what comes to mind for you? [OPEN]

Circular economy in terms of natural resources – Top Mentions	Total (n=1084)
Repurposing/recycling/reusing resources	35%
Renewable energy (Hydro, hydrogen, solar, etc.,)	8%
Sustainable/balanced/efficient/beneficial	8%
Reducing waste/consumption	6%
Returning what was taken to how it was/net zero/carbon neutral	6%
Longer product life cycles/goods made to last	4%
Government overreach/waste/virtue signalling	4%
Unsure	4%
Other	4%
Buy local/shorten supply chains/closed economy	4%
Everything in the economy is connected/complete cycle/what comes around goes around	3%
Not good economically/increases costs/too many taxes	3%
Forestry/re-planting trees/paper	3%

Base: Respondents at least somewhat familiar with topic of circular economy, n=1084.

Agreement with statements on circular economy

Around two in three Canadians each strongly or somewhat agree that a circular economy will enable Canada to tackle climate change while allowing for economic growth and development (69%), a circular economy will transform the natural resources sector (68%) and that a circular economy will transform the Canadian economy (66%).

Q – As you may know, a circular economy is based on the idea of using and reusing materials and products for as long as possible, while maintaining their value and function. This may generate less waste and pollution and may reduce pressures on natural resources. To what extent do you agree or disagree with the following statements? [RANDOMIZE]

Statement	Net Agree	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Not sure
A circular economy will enable Canada to tackle climate change while allowing for economic growth and development.	69%	26%	43%	13%	9%	10%
A circular economy will transform the natural resources sector	68%	24%	44%	14%	7%	11%
A circular economy will transform the Canadian economy	66%	23%	43%	16%	8%	11%

Base: All respondents, n=3593.

Province/territories

- Quebec residents are more likely to strongly or somewhat agree with all three statements about circular economies, with a net agreement of about eight in ten for each statement. Individuals in Alberta are less likely to agree with these statements, without a net agreement of approximately one in two for all three statements.

Gender

- Women have a higher net agreement than men with the statement that 'a circular economy will enable Canada to tackle climate change while allowing for economic growth and development' (74%; men: 64%).

Income

- Lower income Canadians (under $40,000) are more likely to strongly or somewhat agree that a circular economy will transform the Canadian economy (74%) than higher income Canadians ($80,000 and more)(64%).

G. Mining and critical minerals

Agreement with statements on mining and critical minerals

Net agreement is highest towards the statements that 'the minerals industry can have a positive impact on regional communities in Canada' (76% strongly or somewhat agree) and 'the minerals industry provides good quality jobs to Canadians' (75%), consistent with benchmark results from the 2021 survey. Net agreement is lower towards the statements 'the minerals industry is an important employer of Indigenous peoples' (44%) and 'Canadian mining companies use innovative, less carbon intensive technologies and initiatives to help reduce the environmental impact of mining' (38%; a decline of 11 percentage points 2021).

Q - To what extent do you agree or disagree with the following statements?

Statement	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Not sure	Net Agree 2023	Net Agree 2020-21
The minerals industry can have a positive impact on regional communities in Canada.	32%	44%	8%	3%	14%	76%	N/A
The minerals industry provides good quality jobs to Canadians	33%	42%	7%	2%	16%	75%	73%
The minerals industry is an important employer of Indigenous peoples	16%	28%	11%	4%	41%	44%	40%
Canadian mining companies use innovative, less carbon intensive technologies and initiatives to help reduce the environmental impact of mining	11%	27%	22%	11%	29%	38%	49%

Base: All respondents, n=3593.

Province/territories

- Saskatchewan residents are more likely to strongly or somewhat agree that the minerals industry provides good quality jobs to Canadians (92%; 75% of Canadians), that the minerals industry is an important employer of Indigenous peoples (65%; 44% of Canadians) and that Canadian mining companies use innovative, less carbon intensive technologies and initiatives to help reduce the environmental impact of mining (68%; 38% of Canadians). Residents of the North were also more likely to agree that the minerals industry is an important employer of Indigenous peoples (65%).

Age

- Individuals in the 55 plus age cohort are more likely to strongly or somewhat agree that the minerals industry provides good quality jobs to Canadians (79%) than those 18 to 34 (68%). Older Canadians are also more likely to agree that the minerals industry can have a positive impact on regional communities in Canada (45-54: 79%; 55 plus: 79%) than those 18 to 34 (68%).

Gender

- Men are more likely than women to strongly or somewhat agree with all four statements about the minerals industry, especially the statements that 'the minerals industry provides good quality jobs to Canadians' (85%; women: 67%) and 'the minerals industry can have a positive impact on regional communities in Canada' (84%; women: 67%).

Income

- Higher income Canadians ($80,000 and more) are more likely than lower income Canadians (under $40,000) to strongly or somewhat agree that the minerals industry provides good quality jobs to Canadians (higher income: 78%; lower income: 68%) and that the minerals industry can have a positive impact on regional communities in Canada (higher income: 78%; lower income: 67%).

Canada compared to other countries on mining activity in terms of environmental footprint

Canadians are around four times more likely to say Canada is better (43%) rather than worse (9%) than other countries with mining activity in terms of the environmental footprint, and 30% think Canada is the same. Eighteen per cent are unsure how Canada compares to other countries.

Q - Compared to other countries with mining activity, do you think Canada is better, worse or the same in terms of the environmental footprint of mining?

	Better	Worse	The same	Unsure
Environmental footprint of mining compared to other countries	43%	9%	30%	18%

Base: All respondents, n=3593.

Province/territories

- Individuals in Saskatchewan (63%), Alberta (65%) and the North (62%) are more likely to say Canada is better compared to other countries when it comes to the environmental footprint of mining (43% of Canadians), while Quebec residents are less likely to say this (30%).

Gender

- Men are more likely to think Canada is better than other countries (49%) than women (31%).

Income

- Higher income Canadians ($80,000 and more) are more likely to say Canada is better than other countries (47%) compared to lower income Canadians (under $40,000)(36%).

Education

- Canadians who have completed a registered Apprenticeship or other trades certificate or diploma are more likely to say Canada is better (56%) than Canadians overall (43%).

Agreement with statements on critical minerals

More than eight in ten Canadians each strongly or somewhat agree that critical minerals and metals are essential to the Canadian economy (86%; an increase of eight percentage points from the 2021 benchmark results) and that Canada can be a global supplier of critical minerals and metals (81%).

Q - Many forms of renewable energy require critical minerals or metals such as platinum, nickel, cobalt, and rare earth elements. To what extent do you agree or disagree with the following statements?

Statement	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Unsure	Net Agree 2023	Net Agree 2020-21
Critical minerals and metals are essential to the Canadian economy	48%	37%	5%	1%	8%	86%	78%
Canada can be a global supplier of critical minerals and metals.	46%	35%	6%	2%	11%	81%	N/A

Base: All respondents, n=3593.

Age

- Canadians 55 plus are more likely than those 18 to 34 to strongly or somewhat agree that critical minerals and metals are essential to Canada's economy (55 plus: 89%; 18-34: 79%) and that Canada can be a global supplier of critical minerals and metals (55 plus: 86%; 18-34: 73%).

Gender

- Men have a higher net agreement than women with the statement 'Canada can be a global supplier of critical minerals and metals' (89%; women: 74%).

H. Forest sector

Views of Canada's forest industry

Canadians are more than twice as likely to have a positive (50%) rather than a negative (19%) view of Canada's forest industry, consistent with the 2021 benchmark results.

Q - What is your overall view of Canada's forest industry? Please use a 10-point scale where "1" means very negative and "10" means very positive.

	Positive (7-10)	Neutral (5-6)	Negative (1-4)	Unsure	Positive (7-10) 2021
Overall view of Canada's forest industry	50%	27%	19%	5%	47%

Base: All respondents, n=3593.

Province/territories

- Alberta residents are more likely to have a positive view of Canada's forest industry (63%, score of 7-10) than Canadians overall (50%).

Gender

- Men have a more positive view of the forest industry (57%, score of 7-10) than women (42%).

Agreement with statements about Canada's forest industry

Canadians are most likely to agree that Canada's forestry industry produces high quality products (80%), followed by that it provides economic benefits for local rural, forest-based economies (70%). Just over one in two agree that Canada's forest industry produces a wide variety of non-conventional products (51%; 64% in 2021) and 19% are unsure. The biggest shift since the 2021 benchmark results is observed for agreement that the forest industry produces a lot of jobs for Canadians (60%; a 19-percentage point decrease compared to 2021).

Q - To what extent do you agree or disagree with the following statements about Canada's forest industry [RANDOMIZE]

Statements	Agree (7-10)	Neutral (5-6)	Disagree (1-4)	Unsure	Net Agree* 2021
Produces high quality products such as lumber, pulp and paper	80%	11%	6%	3%	86%
Provides economic benefits for local rural, forest-based communities	70%	17%	9%	5%	75%
Provides a lot of jobs for Canadians	60%	23%	10%	6%	79%
Produces a wide variety of non-conventional products (i.e., products other than lumber, pulp, and paper, such as biodegradable packaging)	51%	19%	11%	19%	64%

**In 2021, scale was strongly agree, somewhat agree, somewhat disagree, strongly disagree. Net agree represents the percentage who strongly or somewhat agreed.*
Base: All respondents, n=3593.

Gender

- Men are more likely to agree that Canada's forest industry provides a lot of jobs for Canadians than women (65%; women: 56%), as well as that it provides economic benefits for local rural, forest-based communities (75%; women: 65%).

Government of Canada's performance when it comes to Canada's forests

Overall, Canadians are divided with regards to the Government of Canada's performance when it comes to Canada's forests, with about one in three each who say they are doing a good job of promoting the economic growth of Canada's forest industry (33%), using science-based sustainable forest management practices to conserve and protect Canada's forests (31%), working with provinces and territories to make sure Canada's forests are managed in a way that respects the environment (29%) and working with provinces and territories to make sure Canada's forests are managed in a way that respects local rural, forest-based communities (28%). About one in four say the government is doing a good of working with provinces and territories to make sure Canada's forests are managed in a way that respects Indigenous communities (23%; 33% say a poor job). This is consistent with benchmark results from 2021.

Q - When it comes to Canada's forests, how would you rate the performance of the Government of Canada in each of the following areas? Please use a 10-point scale where "1" means a very poor job and "10" means a very good job. [RANDOMIZE]

Areas of performance	Good job (7-10)	Neutral (5-6)	Poor job (1-4)	Unsure	Good job (7-10) 2021
Promoting the economic growth of Canada's forest industry	33%	26%	26%	16%	34%
Using science-based sustainable forest management practices to conserve and protect Canada's forests	31%	23%	29%	18%	N/A
Working with provinces and territories to make sure Canada's forests are managed in a way that respects the environment	29%	24%	32%	15%	30%
Working with provinces and territories to make sure Canada's forests are managed in a way that respects local rural, forest-based communities	28%	24%	31%	17%	27%
Working with provinces and territories to make sure Canada's forests are managed in a way that respects Indigenous communities	23%	24%	33%	20%	25%

Base: All respondents, n=3593.

Province/territories

- Individuals in Quebec have a more positive view of the government's performance when it comes to promoting the economic growth of Canada's forest industry (44% say it has done a good job; 33% of Canadians), while those in Alberta are less likely to say the government has done a good job at this (21%).
- British Columbia residents are less likely to say the government has done a good job at using science-based sustainable forest management practices to conserve and protect Canada's forests (21%), compared to Canadians overall (31%).

Agreement with statements on forest bioeconomy and its products

More than eight in ten Canadians strongly or somewhat agree that the forest bioeconomy is an area in which Canada should try to be a world leader (83%), followed by the forest bioeconomy is environmentally friendly (65%) and Canada's bioeconomy contributes to the transition to a net-zero carbon emissions economy (58%; a slight decrease from 66% in the 2021 benchmark survey).

Q - The forest bioeconomy is a set of economic activities related to the invention, development, production, and use of sustainably managed and harvested forest biomass – material that comes from any part of a tree, and non-timber forest products —for materials, energy, or chemicals.

To what extent do you agree or disagree with each of the following statements about the forest bioeconomy and its products (e.g., mass timber buildings, mushrooms, maple syrup)? [RANDOMIZE]

Statement	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Unsure	Net Agree 2023	Net Agree 2021
The forest bioeconomy is an area in which Canada should try to be a world leader.	49%	34%	4%	2%	10%	83%	83%
The forest bioeconomy is environmentally friendly.	16%	49%	11%	3%	20%	65%	69%
Canada's bioeconomy contributes to the transition to a net-zero carbon emissions economy.	14%	44%	12%	4%	26%	58%	66%

Base: All respondents, n=3593.

Province/territories

- Residents of Quebec are more likely to strongly or somewhat agree that Canada's bioeconomy contributes to the transition to a net-zero carbon emissions economy (69%) than Canadians overall (58%).

Gender

- Men are more likely to strongly or somewhat agree that the forest bioeconomy is environmentally friendly (70%) than women (61%).

I. Nuclear energy

Agreement that nuclear energy should be part of Canada's energy mix

Seven in ten Canadians strongly or somewhat agree that nuclear energy should be part of Canada's energy mix (70%), a net agreement increase of 15 percentage points from the benchmark results in 2019.

Q - Nuclear energy is an electricity source that provides reliable electricity without carbon pollution (greenhouse gas emissions). It must be operated in a safe manner and nuclear energy produces long-lived radioactive waste that must be carefully managed.

To what extent do you agree or disagree that nuclear energy should be part of Canada's energy mix?

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Not sure	Net Agree 2023	Net Agree 2019
Nuclear energy as a part of energy mix	41%	30%	13%	12%	4%	70%	55%

Base: All respondents, n=3593.

Province/territories

- Ontario residents are more likely to strongly or somewhat agree that nuclear should be part of Canada's energy mix (80%; 70% of Canadians overall), while Quebec residents are less likely to agree (52%).

Gender

- Men are more likely to agree that nuclear energy should be part of Canada's energy mix (81% strongly or somewhat agree) than women (60%).

Income

- Higher income Canadians ($80,000 and more) have a higher net agreement that nuclear energy should be part of Canada's energy mix (75%) than lower income Canadians (under $40,000)(56%).

Extent that small nuclear energy reactors should be part of Canada's energy mix

Three in four Canadians agree (strongly or somewhat) that small nuclear energy reactors should be a part of Canada's energy mix (76%), an 18-percentage point increase from 2019.

Q - Small nuclear energy reactors are an emerging area of innovation. Compared to current nuclear power plants, small reactors will have enhanced safety features and could have smaller footprints and produce less waste.

To what extent do you agree or disagree that small nuclear energy reactors should be part of Canada's energy mix?

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Not sure	Net Agree 2023	Net Agree 2019
Small nuclear energy reactors as a part of energy mix	44%	32%	10%	9%	6%	76%	58%

Base: All respondents, n=3593.

Province/territories

- Ontarians are more likely to agree that small nuclear reactors should be part of Canada's energy mix (85% strongly or somewhat agree) than Canadians overall (76%), and Quebec residents have a lower net agreement (58%).

Gender

- There is higher agreement among men (83% strongly or somewhat agree) than women (69%) regarding whether small nuclear energy reactors should be part of Canada's energy mix.

Income

- Those with a higher income ($80,000 and more) are more likely to strongly or somewhat agree (79%) that small nuclear reactors should be part of Canada's energy mix than lower income individuals (under $40,000)(63%).

Appendix A: Qualitative methodology

Nanos conducted 20 online focus groups between March 1st and 28th, 2023 among Canadians, 18 years of age and older among residents of eleven communities across Canada as identified by NRCan.

Group composition

Two online sessions each were conducted among residents of Toronto, Regina, Fredericton, Calgary, Vancouver, Montreal, Rural (population of 999 or less)/small communities (population of 1,000 to 29,999) in Nova Scotia, Rural (population of 999 or less)/small communities (population of 1,000 to 29,999) among residents of British Columbia, and Rural (population of 999 or less)/small communities (population of 1,000 to 29,999) among residents of Quebec. Residents from each community were split into two online groups, one session was conducted with lower income residents, and one was conducted with higher income residents.

Lower to middle income was defined as households with no more than one person over the age of 18, with a household income of less than $75,000 or households with more than one person over the age of 18, with a household income of less than $100,000, while the higher income group contained all those who did not fit the profile of lower to middle income. One online focus group was conducted with residents of the North (includes Northwest Territories, Yukon, and Nunavut) and another was conducted with residents of the Atlantic provinces (with a focus on Newfoundland) which included a mix of lower to middle- and higher-income individuals. A total of sixteen (16) sessions were conducted in English and four (4) were conducted in French.

The sessions were distributed as follows:

Date and time	Group Composition
March 1st at 5:15PM EST	Lower to middle income - Toronto
March 1st at 7:00PM EST	Higher income - Toronto
March 2nd at 5:15PM EST	Lower to middle income - Regina
March 2nd at 7:00PM EST	Higher income - Regina
March 3rd at 5:15PM EST	Lower to middle income - Fredericton
March 3rd at 7:00PM EST	Higher income - Fredericton
March 4th at 12:30PM EST	Lower to middle income - Calgary
March 4th at 2:15PM EST	Higher income - Calgary
March 5th at 1:30PM EST	Lower to middle income - Vancouver
March 5th at 3:15PM EST	Higher income - Vancouver
March 7th at 5:15PM EST	Lower to middle income – Montreal (French)
March 7th at 7:00PM EST	Higher income - Montreal (French)
March 9th at 5:15PM EST	Lower to middle income – Rural/small community Nova Scotia
March 9th at 7:00PM EST	Higher income - Rural/small community Nova Scotia
March 10th at 5:15PM EST	Lower to middle income - Rural/small community Quebec (French)
March 12th at 1:30PM EST	Lower to middle income - Rural/small community British Columbia
March 12th at 3:15PM EST	Higher income - Rural/small community British Columbia
March 16th at 5:15PM EST	Higher income - Rural/small community Quebec (French)
March 18th at 2:15PM EST	Mixed income - North (NWT, Yukon, Nunavut)
March 28th at 5:15PM EST	Mixed income - Atlantic

Each online group lasted approximately 90 minutes and consisted of between three (3) and eight (8) participants (out of seven (7) to nine (9) people recruited for each group).

Recruitment

Nanos Research developed the recruitment screener and provided it to Natural Resources Canada for review prior to finalizing. Participants were screened to ensure they were invited to the appropriate session according to household income. Participants were also screened to ensure the groups included a mix of gender, education, age, and that they would be comfortable voicing their opinions in front of others. Normal focus group exclusions were in place (marketing research, media, and employment in the federal government, and recent related focus group attendance). All participants were offered a $100 honorarium to encourage participation and thank them for their commitment.

As recruiting for focus groups among residents of smaller communities can be challenging, Nanos used a combination of Facebook ads and online panel recruitment from the Nanos Probability Panel to recruit focus group participants. In some cases, Facebook ads alone were sufficient to recruit participants for the groups. All potential participants were administered the recruiting screener online and only those who qualified were invited to participate in the online group discussions.

All groups were video and audio recorded for use in subsequent analysis by the research team. During the recruitment process, participants provided consent to such recording and were given assurances of anonymity.

Moderation

Three senior researchers were used to moderate all sessions, as follows:

- Nik Nanos, Senior Researcher/Founder, Nanos Research, moderated sessions on March 1st, 2023.
- Alexandra Apavaloae, Senior Researcher/Moderator, moderated sessions on March 3rd, 4th, 7th, and 18th, 2023.
- Sarah Lafleur, Senior Analyst/Intermediate Moderator, Nanos Research, moderated sessions on March 2nd, 5th, 9th, 10th, 12th, 16th, and 28th, 2023.

All qualitative research work was conducted in accordance with professional standards and applicable government legislation (e.g., PIPEDA).

Appendix B: Quantitative methodology

Nanos conducted a mixed-sample RDD dual frame (land- and cell-lines) hybrid random telephone and online survey of 3,593 Canadians, 18 years of age or older, between March 31st and June 9th, 2023. Participants were randomly recruited by telephone using live agents and administered a survey online. The results were statistically checked and weighted by age and gender using the latest Census information and the sample is geographically stratified to be representative of Canada.

The sample was drawn from two sources:

1) the Nanos RDD Online Probability Panel and,
2) random digit dialled (RDD) land- and cell-lines and administered online.

With over 50,000 panelists, the Nanos Online Probability Panel consists of individuals randomly recruited by land-and cell-lines using live agents. As panelists are randomly recruited, this ensures the panel is representative of Canadians. Due to the parameters of the Nanos Online Probability Panel, the oversample of 75 individuals in the Territories were recruited by random telephone sample to take the online survey which ensured coverage this area, while the remaining 3518 interviews were recruited directly from the Nanos Online Probability Panel.

As part of the sampling methodology, Nanos also included a dual frame RDD (Random Digit Dialled) sample of land- and cell-line numbers to recruit participants. With this approach a separate sampling frame was created for the land-line portion of the sample and for the cell-line portion of the sample. This approach ensured sample coverage for not only landlines but households with land and cell line and households which are cell-line only residences. The overlap resulted in a greater level of granularity.

Sample Characteristics

The following table outlines the sample composition for the survey. Please note this includes the weighted sample. For the weighted and unweighted composition, please see Appendix A. The questions asked to obtain the sample characteristics are contained in the final survey instrument in Appendix D.

Demographic	Total
Age	n=3593
18-34	24%
35-44	17%
45-54	24%
55 plus	35%
Gender	n=3593
Male	52%
Female	48%
Prefer not to answer	<1%
Education	n=3593
Less than a High School diploma or equivalent	1%
High school diploma or equivalent	12%
Registered Apprenticeship or other trades certificate or diploma	6%

College, CEGEP or other non-university certificate or diploma	23%
University certificate or diploma below Bachelor's level	7%
Bachelor's degree	27%
Post graduate degree above bachelor's level	23%
Prefer not to answer	1%
Total household income	n=3593
Low income (under $40,000)	10%
Mid-income ($40,000 to $80,000)	25%
High income ($80,000 or more)	50%
Prefer not to answer	15%
Region	n=3593
British Columbia	14%
Alberta	10%
Saskatchewan	4%
Manitoba	4%
Ontario	30%
Quebec	22%
New Brunswick	4%
Nova Scotia	5%
Prince Edward Island	2%
Newfoundland and Labrador	4%
North	2%

Screening

Once invited, participants were administered a set of screening questions to filter out anyone who was not eligible to participate in the study. For the purposes of this study the following screening criteria were applied:

- The first set of screening criteria that were applied are industry standard screening criteria. This involves several components, the first of which is age – in this case, all respondents confirmed they are 18 years of age or older at the time they are taking the survey. Any respondent who indicated they are under 18 years of age or refused to answer the question was not allowed to proceed through the survey.
- Respondents were also screened on their employment situation and the employment situation of their immediate family members/household members. The industry standards required that any respondents who indicated they are employed, or have family members employed, in the market research, advertising and/or media sectors were not allowed to proceed through the survey.

As noted, respondents who fell into any of the above categories were immediately terminated from the research/prevented from proceeding any further and they were no longer eligible to participate in the study.

Readers should note that panel members have already been pre-screened for the industry specific criteria; however, as part of industry best practices, respondents are always screened on this question in case either their or an immediate family members' employment situation has changed, and they are now employed in an ineligible field. In that case the email is scrubbed from the panel and placed on a 'never contact' database.

As a best practice a screening question was added to ensure respondents had not participated in Government of Canada surveys in the last 30 days before being contacted.

Fieldwork Dates

Fieldwork was conducted between March 31st to June 9th, 2023.

Questionnaire design

Natural Resources Canada provided Nanos with desired topic areas and draft questions in line with the research objectives, as well as tracking questions from previous studies to be repeated. Nanos Research then designed a questionnaire and advised on best practices in question design. Upon approval of the English questionnaire, Nanos Research translated the questionnaire into French which was then reviewed by NRCan.

Nanos programmed the questionnaire, then thoroughly tested the programming in English and French to ensure accuracy. The programming was then provided to NRCan for testing and feedback provided was implemented. This procedure ensured that the survey logic accurately reflected the questionnaire and data was collected properly. The final survey questionnaire is included in Appendix D.

Interview Duration

The average interview length was 21.7 minutes and ranged from 12 to 44 minutes.

Incentives/Methods to Encourage Participation

An incentive of $5 (either via e-transfer or to a donation to a registered charity) was offered to all panelists who participated in the research. A minimum of two reminder emails were sent to invitees to encourage their participation.

Weighting Procedures

Our sampling methodology stratified the population along three key variables which allowed triangulation of the weighting approach and yielded robust, geographic and demographic representation across the country.

The sample was stratified along three axes – by region/province, by sex and by age. Fixed completion quotas were assigned to each province, regionally in the Territories due to their relative size, which were anchored by their population distribution relative to the national total.

In order to ensure balanced representation within each province/region, the sample was further stratified by sub-regions. This prevented over/under-sampling of geographies (ex. City of Toronto), within the provincial total.

Within each province soft gender/sex quotas were then set which approximate that area's sex distribution. The data collection allowed for a variance of +/- 5% for sex within each region, again preventing over representation by either men or women. The third stratification axis was by age category. The age categories were used to group respondents and for weighting purposes.

Each of the age categories were weighted, within their sex and their province/region, the outcome of which yielded a dataset which accurately reflects the demographic composition of the population at large.

Quality Controls

Prior to launching the survey, a pre-test was conducted online with 31 individuals (20 English, 11 French). The purpose of the pre-test was to ensure that the content of the questionnaire was understandable, that the duration of the interview fit the target, to ensure comparability between the French and the English, and to ensure that the logic of the survey flowed smoothly. The pre-test was completed on March 23rd to 24th, 2023.

Upon completion of the pre-test, Nanos and NRCan reviewed the findings and determined no modifications were needed and the survey was deployed to the full sample.

For our online surveys from our panel, we have a minimum field period of one week to give people a chance to complete the survey and for Nanos to send reminders to those who did not complete the survey (this limits the bias of only taking people who respond to the first invitation because they are free and/or have immediate access to a computer for online surveys).

The data file was checked on a number of elements to ensure accuracy and validity, both during and after the data collection as follows:

- Average time taken – surveys which fall outside the acceptable range of variation for the average survey response time are subjected to extra checks for accuracy. For example, the survey duration is checked for 'speed-racers' – those who complete the survey in an inordinately short period of time so they can be entered into a prize draw offered. These surveys are deleted. By the same token surveys which take far in excess of the average time are double checked in case the respondent may have been conducting external research on the subject matter while completing the survey.

- Page loading – our software platform tracks the page order viewed by respondents. This allows us to identify respondents who may have continually moved back and forth through a survey.

- Single use – survey invitations are tied to a unique code embedded in the invitation link. This only allows the respondent to access/complete the survey once.

Nanos Research monitors ten percent of all fieldwork for quality control and assurance in accordance with the standards of CRIC, ESOMAR and AAPOR.

Panel Maintenance

Individuals cannot self-select to join the panel or to complete surveys once they are panelists. For each project the sample is randomly selected from the randomly recruited panel.

Individuals are randomly recruited for the panel by land- and cell-lines across Canada. They provide their consent on the call and voluntarily provide their email address to Nanos to be contacted for future online research. We recruit for the panel every week as we do a weekly national survey which is representative of Canada and includes recruitment for the panel. Panelists usually drop out of the panel after a few months.

Call Dispositions

The following table outlines the contact disposition for the fieldwork.

Online Survey Contact Disposition	
Total Invitations (a)	27002
Total Completes (b)	3593
Qualified Break-offs (c)	156
Disqualified (d)	43
No response (e)	23210
Contact Rate (b+c+d)/a	14.0%
Participation Rate (b+d)/a	13.5%

Telephone Survey Contact Disposition	
	Total
Total Numbers Attempted	50024
Out of scope - invalid	26877
NIS, Business, etc	26877
Unresolved (U)	13783
No answer/machine/etc	13736
Busy	47
In-scope Non-responding (IS)	8793
Language barrier	43
Callback	310
Refusal	8428
Termination	12
In-scope responding (R)	571
Complete	571
Partials	0
Response Rate	2.5%

Survey completes by Online	3352
Survey completes from Telephone Recruit	241
Total	**3593**

Response Rate

The response rate for this survey was 2.5%. This was calculated using the Canadian Research Insights Council (CRIC) formula, which has been approved by the Government of Canada (Response Rate/Participation Rate = R/(U + IS + R).

Non-Response Bias

First, there is potential non-response bias based on the profile of the responding sample. Based on our experience, using the RDD dual frame land and cell-line sample represents the optimal and most reliable form of research that requires the least amount of post fieldwork statistical weighting (both for the telephone sample and the online, as participants were recruited by land- and cell-lines). From a research perspective, the less weighting the better since the data remains random and in its raw form as shared with Nanos.

There was potential for under-coverage among individuals who may not even have access to a land or cell-line to be included in the sample. Nanos managed the non-response bias by statistically checking the demographics of the participating sample group with the Canadian population. Where a valid variance occurred, the dataset was weighted to be consistent with the profile of Canadians 18 years and older, including those, for example, of a lower socio-economic status. The estimated proportion of Canadians without access to internet to complete the survey is 6%[1].

[1] https://www150.statcan.gc.ca/n1/en/daily-quotidien/210531/dq210531d-eng.pdf?st=A1Uw2f80

Second, there is the potential non-response bias based on the answers themselves. Although the demographic profile of the sample reflects the Canadian population, hypothetically, the non-responding participants may have different opinions. Although this is a hypothetical possibility, the Nanos track record with respect to both economic and political sentiment which very accurately captures opinion and closely correlates to a number of external measures intended to be examined, suggests that there is little non-response bias in the Nanos methodology.

Appendix C: Focus group discussion guide

Discussion	Moderator Notes & Objectives	Time
Introduction Moderator introduces self and defines his/her role, the discussion timeframe (90 minutes), encourages all participants to speak up. Audio/video recording announcement (and the presence of observers). The meeting will be recorded for research purposes only and all your feedback will remain anonymous. There are no right or wrong answers. I'm interested in your ideas as individuals.	To make participants feel at ease by clearly explaining the process.	3 min
Quick self-introduction – Let's go around the group and introduce ourselves with our first name and our favourite pass-time. Participants introduce themselves to the group (e.g., first name and favourite personal hobby). Go through software functionality ("Raise hand" button) which can be found at the bottom of the screen under reactions. I recommend using the "raise hand" function so that everyone has their turn to share their views. I want to be respectful of your time and ensure the group is no longer than 90 minutes, so you might see me move things forward and ask a question to only one or two of you before moving on to the next question.	Respondent warm-up and group bonding.	5 min
Outline the purpose of the session. Tonight we are going to get your impressions on issues related to energy and natural resources.	To explain the broad subject topic.	2 min

Discussion	Moderator Notes & Objectives	Time
MODULE A: GENERAL VIEWS ON ENERGY & LOW-CARBON ECONOMY • We will begin with a general discussion on energy in Canada. When you think of energy in Canada in the next 20 to 30 years, what sectors/types of energy will play the biggest role? Why do you say that? Have you heard or not heard the term "net-zero"? What do you think this term means? [IF NEEDED, PROMPT WITH DEFINITION AND EXAMPLES] As you may have heard, Canada has set a climate goal of achieving "net-zero emissions" by 2050. What comes to mind when you think about this goal? Have you heard or not heard the term "low-carbon economy"? What do you think this term means? [IF NEEDED, PROMPT WITH DEFINITION] What positives come to mind, if any, when you hear the term "low-carbon economy"? What negatives come to mind, if any, when you hear the term "low-carbon economy"?	To gather impressions of energy in Canada and views of low-carbon economy. NET ZERO: Achieving net-zero emissions means our economy either emits no greenhouse gas emissions or offsets its emissions, for example, through actions such as tree planting or employing technologies that can capture carbon before it is released into the air. LOW CARBON: A low-carbon economy is an economy whose power needs are derived not primarily from carbon-intensive sources such as fossil fuels but from 'cleaner' or less carbon-intensive energy sources, such as wind, solar and hydroelectric power.	15 min

Discussion	Moderator Notes & Objectives	Time
MODULE B: IMPACTS/IMPLICATIONS OF A LOW-CARBON ECONOMY We will now chat about a low-carbon economy in Canada. First, let's think about Canada shifting to a low-carbon economy on the individual level. What are the benefits of shifting to a low-carbon economy for you? What about for your family and friends? What are the drawbacks of shifting to a low-carbon economy for you? What about for your family and your friends? We have been talking about the shift to a low-carbon economy at the individual level. Now I want to look at it at a broader community level. What impacts, if any, will the shift to a low-carbon economy have on jobs in [CITY/REGION]? How will the industry or job(s) in which you work be impacted? Have you heard or not heard about sustainable jobs? What have you heard or what comes to mind when you hear this term? [SEE DEFINITION IF NEEDED] What impacts, if any, will the shift to a low-carbon economy have on	To explore impacts of low-carbon economy transition on the individual and community levels. SUSTAINABLE JOBS: A 'sustainable job' means any job that is compatible with Canada's path to a net-zero emissions and climate resilient future. The term 'sustainable jobs' also reflects the concept of decent, well-paying, high-quality jobs that can support workers and their families over time and includes such elements as fair income, job security, social protection, and social dialogue.	15 min

the economy of Canada as a whole?		

Discussion	Moderator Notes & Objectives	Time
MODULE C: ROLES OF KEY INDUSTRIES IN THE SHIFT TO LOW-CARBON ECONOMY Our focus will now be on key industries in the energy and natural resources sectors. The energy and natural resources sector directly and indirectly accounted for 16.9% of Canada's nominal GDP and 1.9 million jobs in Canada in 2019 (Data Source: Natural Resources Canada estimates, based on Statistics Canada data, National Accounts). But Canada, like the rest of the world, recognizes that the way we produce and use our resources has an impact on climate change . <u>Oil (from oilsands and off-shore) 600/end 745/ 215/400</u> How can the oil sector contribute, if at all, to the reduction of greenhouse gases? Is it possible to continue to develop Canada's oil resources and achieve a low-carbon economy/meet our net-zero target? How so? What are some of the benefits and drawbacks of oil extraction in Canada? <u>Natural gas 605/end 750/ 220/405</u> How can the natural gas sector contribute, if at all, to the reduction of greenhouse gases? What are some of the benefits and drawbacks of natural gas development in Canada? <u>Carbon capture and storage 610/end 755/ 225/410</u> Have you heard or not heard of carbon capture and storage? [IF HEARD] What do you think carbon capture and storage is? *DEFINITION: In fact, carbon capture and storage is when you capture carbon dioxide from industrial activities, such as fuel processing and then compress and store it underground.* Is it important or not important for Canada to invest in carbon capture and storage? Why or why not? <u>Mining 615/end 800/ 230/415</u> As you may know, many forms of renewable energy and clean technology require critical minerals such as platinum, nickel, cobalt, and rare earth elements. Do you support or oppose critical minerals mining in Canada? Why or why not? <u>Hydrogen 620/end 805/ 235/420</u> Have you heard or not heard about hydrogen as a fuel? [*DEFINITION: Hydrogen is a fuel that, when consumed in a fuel cell, produces only water. Hydrogen can be produced from a variety of domestic resources, such as natural gas, nuclear power, biomass, and renewable power like solar and wind.]* Do you oppose or support the production of hydrogen fuel in	To explore awareness and impacts/roles of key industries in the transition to low-carbon economy. Nominal GDP: GDP at current market prices – not adjusted for inflation or deflation. EXTRA CONTENT IF TIME PERMITS: <u>Hydroelectricity</u> How can the hydroelectric sector, that is water powered electric generation, contribute, if at all, to the reduction of greenhouse gases? What are some of the other benefits and drawbacks of having more hydroelectricity projects? <u>Alternative fuels</u> Have you heard or not heard of alternative fuels such as biodiesel, or ethanol used for transportation and industry? What have you heard about these alternative fuels? How can alternative fuels contribute, if at all, to the reduction of greenhouse gases?	40 min 5-6 minutes per section (7x)

Canada? Why or why not? What kinds of information would you be interested in learning about hydrogen fuel? <u>Forest sector</u> Have you ever heard of mass timber buildings, wood-based substitutes to plastics or bioenergy from forest biomass? What have you heard about it? *DEFINITION: Forest biomass includes all parts of the tree, not only the trunk but also the bark, the branches, the needles, or leaves, . Biomass can be converted into solid, liquid, or gaseous biofuels that can then be burned for energy or used as fuel substitutes for transportation or industrial processes. Forest biomass is increasingly being used to make a wide variety of bioproducts, including chemicals, textiles, personal care products, and other engineering wood products.* How can forest products contribute, if at all, to the reduction of greenhouse gas emissions? Should this be part of or not be a part of Canada's strategy for a low-carbon economy? Why or why not? <u>Nuclear energy 630/end 815 / 245/430</u> How can nuclear energy contribute, if at all, to the reduction of greenhouse gases? Nuclear energy does not emit greenhouse gases and accounted for 15% of the country's total electric energy generation in Canada in 2018. Do you think Canada should increase, decrease or keep the use of nuclear energy in Canada at the same level? Why? Have you heard or not heard of Small Modular Reactors also know as "SMRs"? Small Modular Reactors (SMRs) are an emerging area of nuclear energy innovation, in Canada and around the world. SMRs will have enhanced safety features, a smaller footprint and produce less waste than traditional nuclear energy reactors. Do you think getting more of our energy from SMRs could be a way to move to a low-carbon economy? Is there a downside to moving to Small Modular Reactors?		

Discussion	Moderator Notes & Objectives	Time
<u>MODULE D: COMMUNICATIONS</u> We've talked about the changes that need to be made by each of us individually, more broadly in our communities and also in our key industries – if we are going to shift to a low-carbon economy. If the Government of Canada were to put together a plan to help educate and motivate individuals to take action on the transition	To unpack views of a just transition and motivating messages.	8 min Start – 6:35PM 8:20PM 2:50PM End –

to low-carbon economy in Canada, what should their key message be? Where should this message be shared?		6:43PM 8:28PM 2:58PM

Discussion	Moderator Notes & Objectives	Time
MODULE E: WRAP UP ***Check in with observers to see if there are any follow-up items or clarification needed.*** Follow up questions for participants, if needed. Thank you everyone for your engagement in the discussion. In appreciation of your time, you will receive $100 sent to you via e-transfer. We will follow up with you in the next couple of days with details on your incentive.	To establish that objectives have been reached.	2 min End – 6:45PM 8:30PM

Appendix D: Survey questionnaire

INTRODUCTION

Thank you for your interest in participating in this 20-25 minute research survey for the Government of Canada. All the views and information you share with Nanos Research will be confidential and protected in accordance with Canada's privacy laws. Thank you, in advance, for sharing your time.

This research project is registered with the CRIC Research Verification Service that allows you to verify its legitimacy and share your feedback. If you have feedback on this research, you can share it by going to https://canadianresearchinsightscouncil.ca/rvs and using the RVS code: XYZ.

A. Are you 18 years of age or older?

☐ Yes ☐ No (*Terminate – not qualified)*

B. Do you or does anyone in your immediate family, work in any of the following occupations?

☐ Market research firm (*Terminate – not qualified)*

☐ TV, radio or news media (*Terminate – not qualified)*

☐ Advertising company (*Terminate – not qualified)*

C. Have you participated in any Government of Canada surveys in the last 30 days?

Yes (Terminate – not qualified)
No

-

D. What was your sex at birth? Sex refers to sex assigned at birth. [CAPTURED FOR QUOTA MANAGEMENT]

Male.....1
Female.....2
Prefer not to say.....99

E. What is your gender? Refers to the gender that you identify with (which may be different from sex assigned at birth and may be different from what is indicated on legal documents) [OPEN]

- Prefer not to say

-

F. In which province or territory do you currently live?

Alberta (AB).....1
British Columbia (BC).....2
Manitoba (MB).....3
New Brunswick (NB).....4
Newfoundland and Labrador (NL)...5
Northwest Territories (NT).....6
Nova Scotia (NS).....7
Nunavut (NU).....8
Ontario (ON).....9
Prince Edward Island (PE).....10
Quebec (QC).....11
Saskatchewan (SK).....12
Yukon (YT).....13

Our next few questions are about natural resources.

Natural Resources

1. What would you say is the single biggest issue Canada faces when it comes to our natural resources? [TRACKING – CODE WITH EXISTING CODING KEY][OPEN-ENDED]

When it comes to Canada's natural resources, how would you rate the performance of the Government of Canada in each of the following areas? Please use a 10-point scale where "1" means a very poor job and "10" means a very good job. [TRACKING][RANDOMIZE]

2. Making sure natural resources are developed in a way that respects the environment
3. Striking a balance between environmental and economic considerations
4. Promoting the economic growth of natural resource industries

1 (very poor job).....1
2.....2
3.....3
4.....4
5.....5
6.....6
7.....7
8.....8
9.....9
10 (very good job) 10
Unsure 77

To what extent do you agree or disagree that each of the following energy sources are environmentally friendly? [TRACKING][RANDOMIZE]

5. Hydroelectric dams
6. Nuclear energy
7. Wind energy
8. Oilsands
9. Offshore oil and gas
10. Natural gas
11. Solar energy
12. Biodiesel and ethanol fuel [TWEAKED]
13. Firewood and wood pellets [NEW]
14. Hydrogen fuel

Strongly agree.....1
Somewhat agree.....2
Somewhat disagree 3
Strongly disagree 4
Unsure 77

To what extent do you support or oppose the following energy development projects? [TRACKING][RANDOMIZE]

15. Hydroelectric dams
16. Nuclear energy
17. Wind energy
18. Oilsands
19. Offshore oil and gas
20. Natural gas
21. Solar energy

22. Biodiesel and ethanol fuel [TWEAKED]
23. Hydrogen fuel
    Strongly support 1
    Somewhat support 2
    Somewhat oppose 3
    Strongly oppose 4
    Unsure 77

24. How important or unimportant as a source of energy for Canadian households and businesses do you believe oil is likely to be 30 years from now? [TRACKING]
    Very important 1
    Somewhat important 2
    Not very important 3
    Not important at all 4
    Unsure 77

Environment and Climate Change

How much of an impact do you feel the following climate change impacts will have on your community in the next 30 years? [TRACKING][RANDOMIZE]

25. More extreme/unpredictable weather events [TRACKING]
26. More air pollution/lower air quality [TRACKING]
27. More flooding/more severe flooding [TRACKING]
28. More forest fires [TRACKING]
29. More extreme heat [NEW]
30. More crop failures leading to higher food prices [TRACKING]
31. Increased healthcare costs [TRACKING]
32. Increased insurance costs [TRACKING]
33. Increased energy cost [TRACKING]
34. Increased property damage or loss [TRACKING]
    Significant impact 1
    Moderate impact 2
    Limited impact 3
    No impact at all 4
    Not sure 77

In general, how familiar or unfamiliar are you with each of the following topics? (Winter 2021)

35. The Paris Agreement on Climate Change [TRACKING]
36. A low-carbon economy [TRACKING]
37. Net-zero emissions [TRACKING - TWEAKED]
38. A circular economy [NEW]
    Very familiar 1
    Somewhat familiar 2
    Not very familiar 3
    Not at all familiar 4
    Unsure 77

Low Carbon Economy

A low-carbon economy is an economy based on lower-carbon power sources that emit less greenhouse gas emissions, notably carbon dioxide, into the atmosphere. To what extent do you agree or disagree with the following statements? [TRACKING – DESCRIPTION TWEAKED][RANDOMIZE]

39. Communities that currently depend on carbon-intensive industries can still thrive in a low-carbon economy. [TRACKING]
40. Canada's transition to a low-carbon economy will provide good quality jobs for Canadians [TRACKING]
41. Indigenous communities will benefit from Canada's transition to a low-carbon economy. [TRACKING]
42. Canada's forest industry can continue to harvest trees in a low-carbon economy. [NEW]
43. It is possible to develop Canada's oil sands and maintain Canada's commitment to reduce greenhouse gas emissions [TRACKING]
    - Strongly agree.....1
    - Somewhat agree.....2
    - Somewhat disagree 3
    - Strongly disagree 4
    - Unsure 77

In your view, how much of a priority should it be for the Government of Canada to support the following initiatives? [TRACKING][RANDOMIZE]

44. Engaging in meaningful consultations with Indigenous communities on natural resource projects that affect them [TRACKING]
45. Funding education and skill development programs to train or re-train workers for emerging job opportunities in a low-carbon global economy [TRACKING – TWEAKED]
46. Helping communities that depend on carbon-intensive industries to develop a more diverse economy [TRACKING]
47. Removing barriers to employment in the emerging low carbon economy for underrepresented groups including women, persons with disabilities, Indigenous Peoples, Black and other racialized individuals, and 2SLGBTQI+ individuals. [NEW]
48. Ensuring that new jobs created in the low-carbon economy are well-paying, high-quality jobs that can support workers and their families. [NEW]
    - Top priority.....1
    - Important, but not a top priority.....2
    - Not a priority 3
    - Unsure 77

Affordability (NEW)

Thinking about the price of energy, how concerned or not concerned are you about the price you pay for each of the following types of energy: [NEW][RANDOMIZE]

49. Gasoline and diesel
50. Electricity
51. Natural gas
52. Heating oil and/or propane
53. Firewood and/or wood pellets
    - Very concerned 1
    - Somewhat concerned.....2
    - Not very concerned.....3
    - Not at all concerned 4
    - Unsure 77
    - Not applicable 99

54. By 2030 do you expect that your energy costs will be a larger, smaller or about the same proportion of your total household budget compared to now? [NEW]
    - Larger.....1
    - Smaller.....2
    - About the same 3
    - Not sure.....77

55. What actions, if any, have you taken in the past year to lessen the impacts of higher energy prices? [NEW][RANDOMIZE][SELECT ALL THAT APPLY]
    - Purchased a more efficient vehicle or electric/hybrid vehicle 1
    - Installed heat pumps 2
    - Replaced inefficient appliances 3
    - Driven less/switched to public or active transportation 4
    - Adjusted thermostat to reduce heating/cooling 5
    - Reduced electricity use during peak hours 6
    - Other (Specify) 20
    - Did not take any actions 7

56. What is the main barrier for you when it comes to using more energy efficient technologies in your household (e.g., electric vehicles, heat pumps, retrofitted appliances etc.)? [NEW][OPEN][UP TO THREE MENTIONS]

57. Please rank the following, where 1 would be most helpful for your household using more energy efficient technologies, 2 would be the second most helpful, and so on. [RANDOMIZE][NEW]

	Rank
Government rebates or grants (i.e., one-time payments to offset the cost of purchase and/or installation of to buy and/or installation of clean technologies	____
Financing programs that allow households to spread the costs of energy efficiency technologies over a longer period of time	____
More minimum efficiency standards for products, buildings etc.to encourage energy efficient technologies	____
More information to help you understand how to be more energy efficient	____
Increased availability of energy efficient equipment	____
Increased availability of zero-emission vehicles	____
Increased affordability of energy efficient equipment	____
Increased affordability of zero-emission vehicles	____
Not sure	____
None of them	____

58. Which level of government do you view as most responsible for making sure energy is affordable for the average household? [NEW][RANDOMIZE]
    - Federal 1
    - Provincial/territorial 2
    - Municipal 3
    - All equally responsible 4
    - Not sure 77

59. Are governments doing too much, the right amount or not enough to make sure lower-income households have access to reliable and affordable energy? [NEW]
    - Too much 1
    - The right amount 2
    - Not enough 3
    - Not sure 77

Energy Efficiency

How much of an impact do you believe shifting each of the following to electricity or other low-carbon fuels will have on reducing climate change impacts? [TRACKING](Winter 2021)

60. Industrial and commercial vehicles
61. Personal vehicles
62. Industrial and commercial heating processes

63. Home heating processes
    - Significant impact 1
    - Moderate impact.....2
    - Limited impact.....3
    - No impact at all 4
    - Not sure.....77

Circular Economy

64. [IF VERY FAMILIAR/FAMILIAR IN Q38] When you think of the term "circular economy" in terms of natural resources, what comes to mind for you? [OPEN][NEW]

As you may know, a circular economy is based on the idea of using and reusing materials and products for as long as possible, while maintaining their value and function. This may generate less waste and pollution and may reduce pressures on natural resources.
To what extent do you agree or disagree with the following statements? [NEW][RANDOMIZE]

65. A circular economy will transform the natural resources sector
66. A circular economy will transform the Canadian economy
67. A circular economy will enable Canada to tackle climate change while allowing for economic growth and development.
    - Strongly agree.....1
    - Somewhat agree.....2
    - Somewhat disagree 3
    - Strongly disagree 4
    - Unsure 77

Mining/Critical Minerals

To what extent do you agree or disagree with the following statements?

68. The minerals industry provides good quality jobs to Canadians [TRACKING]
69. The minerals industry is an important employer of Indigenous peoples [TRACKING].
70. The minerals industry can have a positive impact on regional communities in Canada. [NEW]
71. Canadian mining companies use innovative, less carbon intensive technologies and initiatives to help reduce the environmental impact of mining [TRACKING – TWEAKED]
    - Strongly agree.....1
    - Somewhat agree.....2
    - Somewhat disagree 3
    - Strongly disagree 4
    - Unsure 77

72. Compared to other countries with mining activity, do you think Canada is better, worse or the same in terms of the environmental footprint of mining? [TRACKING]
    - Better.....1
    - Worse 2
    - The same 3
    - Unsure 77

Many forms of renewable energy require critical minerals or metals such as platinum, nickel, cobalt, and rare earth elements. To what extent do you agree or disagree with the following statements? [TRACKING]

73. Critical minerals and metals are essential to Canada's economy. [TRACKING]
74. Canada can be a global supplier of critical minerals and metals.[TRACKING – TWEAKED]
    - Strongly agree.....1
    - Somewhat agree.....2

Somewhat disagree 3
Strongly disagree 4
Unsure 77

FOREST SECTOR (tracking Fall 2021)

75. What is your overall view of Canada's forest industry? Please use a 10-point scale where "1" means very negative and "10" means very positive. [TRACKING]
    1 (very negative).....1
    2.....2
    3.....3
    4.....4
    5.....5
    6.....6
    7.....7
    8.....8
    9.....9
    10 (very positive).....10
    Unsure 77

To what extent do you agree or disagree with the following statements about Canada's forest industry [TRACKING][RANDOMIZE]

76. Produces high quality products such as lumber, pulp and paper [TRACKING]
77. Provides economic benefits for local rural, forest-based communities [TRACKING]
78. Provides a lot of jobs for Canadians [TRACKING]
79. Produces a wide variety of non-conventional products (i.e., products other than lumber, pulp, and paper, such as biodegradable packaging)[TRACKING – TWEAKED]
    1 (strongly disagree).....1
    2.....2
    3.....3
    4.....4
    5.....5
    6.....6
    7.....7
    8.....8
    9.....9
    10 (strongly agree) 10
    Unsure 77

When it comes to Canada's forests, how would you rate the performance of the **Government of Canada** in each of the following areas? Please use a 10-point scale where "1" means a very poor job and "10" means a very good job. [TRACKING][RANDOMIZE]

80. Promoting the economic growth of Canada's forest industry [TRACKING]
81. Working with provinces and territories to make sure Canada's forests are managed in a way that respects the environment [TRACKING]
82. Using science-based sustainable forest management practices to conserve and protect Canada's forests [NEW]
83. Working with provinces and territories to make sure Canada's forests are managed in a way that respects local rural, forest-based communities [TRACKING]
84. Working with provinces and territories to make sure Canada's forests are managed in a way that respects Indigenous communities [TRACKING]
    1 (very poor job).....1
    2.....2
    3.....3
    4.....4

5.....5
6.....6
7.....7
8.....8
9.....9
10 (very good job) 10
Unsure 77

The **forest bioeconomy** is a set of economic activities related to the invention, development, production, and use of sustainably managed and harvested forest biomass – material that comes from any part of a tree, and non-timber forest products —for materials, energy, or chemicals.

To what extent do you agree or disagree with each of the following statements about the forest bioeconomy and its products (e.g., mass timber buildings, mushrooms, maple syrup)? [RANDOMIZE][NEW]

85. The forest bioeconomy is environmentally friendly.
86. Canada's bioeconomy contributes to the transition to a net-zero carbon emissions economy.
87. The forest bioeconomy is an area in which Canada should try to be a world leader.

Strongly agree.....1
Somewhat agree.....2
Somewhat disagree 3
Strongly disagree 4
Unsure 77

NUCLEAR (Tracking 2019)

88. Nuclear energy is an electricity source that provides reliable electricity without carbon pollution (greenhouse gas emissions). It must be operated in a safe manner and nuclear energy produces long-lived radioactive waste that must be carefully managed. To what extent do you agree or disagree that nuclear energy should be part of Canada's energy mix? [TRACKING]

Strongly agree.....1
Somewhat agree.....2
Somewhat disagree 3
Strongly disagree 4
Unsure 77

89. Small nuclear energy reactors are an emerging area of innovation. Compared to current nuclear power plants, small reactors will have enhanced safety features and could have smaller footprints and produce less waste. To what extent do you agree or disagree that small nuclear energy reactors should be part of Canada's energy mix? [TRACKING]

Strongly agree.....1
Somewhat agree.....2
Somewhat disagree 3
Strongly disagree 4
Unsure 77

Demographics

The following are a few questions about you and your household, for statistical purposes only. Please be assured all of your answers will remain completely confidential.

90. In what year were you born? _____

91. For verification purposes only, please enter the first three digits of your postal code. _____

92. What is the highest level of formal education you have completed? [Select one only][TRACKING]

Less than a High School diploma or equivalent..... 1

High school diploma or equivalent 2
Registered Apprenticeship or other trades certificate or diploma 3
College, CEGEP or other non-university certificate or diploma 4
University certificate or diploma below bachelor's level 5
Bachelor's degree 6
Post graduate degree above bachelor's level 7
Prefer not to answer 99

93. Which of the following best describes your own present employment status? [Select one only][TRACKING]
Working full-time 1
Working part-time 2
Unemployed or looking for a job 3
Self-employed 4
Stay at home full-time 5
Student 6
Retired 7
Prefer not to answer 99

94. How big is the community in which you live? Would you say it is: [TRACKING]
A rural or small community (with a population below 30,000) 1
A medium-sized community or city (with a population over 30,000 but under 500,000) 2
A large urban centre (with a population over 500,000) 3
Prefer not to answer 99

95. Which of the following categories best describes your total household income? That is, the total income of all persons in your household combined, before taxes? [Select one only][TRACKING]
Under $20,000 1
$20,000 to just under $40,000 2
$40,000 to just under $60,000 3
$60,000 to just under $80,000 4
$80,000 to just under $100,000 5
$100,000 to just under $150,000 6
$150,000 and above 7
Prefer not to answer 99

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Thank you very much for your time. This completes the survey. On behalf of the Department of Natural Resources Canada, thank you for your valuable input. In the coming months, the results of this survey will be available on the Library and Archives Canada website.