PUBLIC UNDERSTANDING OF ATLANTIC ELECTRICITY ISSUES

LOUISE COMEAU

CONSERVATION COUNCIL OF NEW BRUNSWICK

JULY 2021

OVERVIEW

- Survey method
- Analysis note
- Results in total and/or by province, variables driving results
- Topline results summary

SAMPLE METHOD: ATLANTIC CANADA

- Field dates June 18 29, 2021
- Online panel Narrative Research
- Total sample: 952
 - NB: 303
 - NL: 243
 - NS: 292
 - PEI: 108

- Male, 48%; Female, 52%; Other, 1%
- **18-34: 24%; 35-54: 33%; 55+: 43%**
- High school: 23%; College, Apprenticeship: 39%; University/Post: 37%
- City, 32%; Suburb, 25%; Small town, rural, 42%
- Political Ideology: Left 14%; Centre, 60%, Right, 13%

ANALYSIS NOTE

- People don't often think about energy or electricity other than their bills
- For many questions about ¼ to 1/3 of respondents are neutral, not sure; Opinions are highest for renewable energy and reasons for supporting or opposing energy sources: People know more about what they want than government gives them credit for
- We analyze the factors that influence having an opinion (positive or negative) and not having an opinion
 - People identifying as female, and people who are less motivated toward environmental goals, for example, are most often neutral or not sure
- This presentation focuses on provincial results and factors associated with having an opinion

DEFINITIONS

RATE EACH OF THE FOLLOWING ENERGY SOURCES IN TERMS OF WHETHER YOU AGREE OR DISAGREE THAT THEY REPRESENT 'CLEAN ELECTRICITY'

ELECTRICITY IS "EMISSIONS-FREE "WHEN...

SOURCES THAT REPRESENT 'CLEAN ELECTRICITY': ATLANTIC (TOTAL AGREE %)



SOURCES OF ELECTRICITY THAT REPRESENT "CLEAN ELECTRICITY": (TOTAL AGREE %) NB, NS, PEI FAVOUR NUCLEAR MORE THAN NL; CONFLICTED ON GAS



NO AIR, WATER OR NUCLEAR POLLUTION DEFINE "CLEAN ELECTRICITY" FOR THREE-QUARTERS OF RESPONDENTS

ELECTRICITY IS CLEAN WHEN THAT ELECTRICITY GENERATES (TOTAL AGREE, %)

No pollution to the air or water to make electricity

No nuclear waste to make electricity

No pollution to the air or water or nuclear waste to make electricity



CARBON CAPTURE, NUCLEAR DO NOT DEFINE EMISSIONS-FREE; SOLAR, WIND, HYDRO DO

ELECTRICITY IS EMISSIONS-FREE WHEN... (TOTAL AGREE, %)

Tailpipe or chimney stack pollution is captured and stored underground

Electricity is generated with solar, wind or hydro

There is no nuclear waste

There is no air or carbon pollution, but there is nuclear waste



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ENVIRONMENTAL AND SOCIAL RISKS MEAN NUCLEAR IS NOT CLEAN OR EMISSIONS-FREE

Which statement comes closest to your own point of view?

- Terms such as "clean" and "emissions free" apply to nuclear power because it does not produce greenhouse gases
- Terms such as "clean" and "emissions free" should not apply to nuclear power because there are <u>other environment</u>
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PLEASE INDICATE HOW MUCH YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS.

I WANT (SOURCE) POWERING MY ELECTRICITY (TOTAL AGREE, %)



I WANT (SOURCE) POWERING MY ELECTRICITY OR OPEN TO (TOTAL AGREE, %)



I WANT (SOURCE) POWERING MY ELECTRICITY (TOTAL DISAGREE, %)



THE FEDERAL GOVERNMENT IS REQUIRING UTILITIES IN NEW BRUNSWICK AND NOVA SCOTIA THAT BURN COAL TO CUT THEIR GREENHOUSE GAS POLLUTION BY AT LEAST HALF BY 2030. TO MEET THE NEW REGULATED STANDARD, UTILITIES MUST USE CARBON CAPTURE TECHNOLOGY*, CLOSE THE PLANTS, OR SWITCH TO OTHER FORMS OF ELECTRICITY GENERATION. UNDERSTANDING THAT THERE ARE COST IMPLICATIONS TO EACH OF THE OPTIONS BELOW, WHICH MAY IMPACT ELECTRICITY RATES, TO WHAT EXTENT DO YOU SUPPORT OR OPPOSE EACH OF THE FOLLOWING OPTIONS.

FOR COAL PHASE-OUT BY 2030, RESPONDENTS PREFER TO CLOSE PLANTS AND REPLACE WITH IN-PROVINCE RENEWABLES, THEN HYDRO FROM QC/NL (TOTAL SUPPORT %)



FOR COAL PHASE-OUT BY 2030, RESPONDENTS PREFER TO CLOSE PLANTS AND REPLACE WITH IN-PROVINCE RENEWABLES, THEN HYDRO FROM QC/NL: NL MOST STRONGLY SUPPORTS HYDRO

NB/NS COAL PHASE-OUT OPTIONS, (TOTAL SUPPORT, %)

Keep plants open, capture carbon

Close plants, use SMRs

Close plants, use Hydro QC, NL

Close plants, use renewables made in my province

Keep open, find GHG reductions elsewhere in NB, NS



NEW BRUNSWICK IS PROPOSING TO BUILD TWO NUCLEAR PLANTS AT ITS POINT LEPREAU NUCLEAR GENERATING STATION. THE PILOTS ARE NEW DESIGNS CALLED SMALL MODULAR NUCLEAR REACTORS. PLEASE INDICATE IF YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS.

ALMOST EVENLY SPLIT AMONG SMALL MODULAR NUCLEAR PILOT OPTIONS: HALF OR MORE NOT SURE OR NEUTRAL

SMALL MODULAR NUCLEAR REACTORS (TOTAL AGREE, %)

SMR 10-15 years to build, can't wait, climate change means close fossil plants now

Close fossil plants when SMRs ready

Not enough renewable capacity now so need fossil, nuclear

There is enough renewable capacity now, don't need fossil



LESS THAN 4 IN 10 AGREE REPROCESSING NUCLEAR WASTE IS A GOOD IDEA; 1/3 NOT SURE

PROPOSAL TO RECYCLE 1% OF SOLID NUCLEAR WASTE (%)



FACTORS THAT INFLUENCE YOUR OPINION OF AN ELECTRICITY SOURCE

ELECTRICITY SOURCES EFFECT ON RATES, RELIABILITY

VIEWS ON THE ATLANTIC LOOP

MOST IMPORTANT ASPECT WHEN IT COMES TO YOUR ELECTRICITY

HEALTH, ENVIRONMENT, ECONOMY, NOT COST DRIVING EVALUATION OF ELECTRICITY SOURCES (TOTAL IMPORTANT, %)

Natural environment	Health and safety	Regional economy, consumers
• 91%	• 91%	• 89%

THOSE WITH AN OPINION SAY LARGE HYDRO, SMRS WOULD RAISE RATES MORE THAN RENEWABLES A THIRD TO HALF NOT SURE

WHICH APPROACH COULD INCREASE ELECTRICITY RATES MORE (%)

Large hydro dams and nuclear power plants will increase electricity rates more
 Wind and solar technologies will increase electricity rates more



44 TO 46% SAY RENEWABLES ARE MORE RELIABLE THAN LARGE HYDRO, SMRS NL LOWEST AND MORE EVENLY SPLIT; ABOUT 1/4 NOT SURE

WHICH APPROACH COULD INCREASE RELIABILITY MORE (%)



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48% (NB) TO 36% (PEI) BELIEVE WE CAN SPEND THE SAME OR LESS ON ELECTRICITY WITH EFFICIENCY NB MOST OPTIMISTIC; PEI LEAST OPTIMISTIC; 1/4 NOT SURE

EFFECTS OF MORE ELECTRICITY POWERING OUR LIVES (%)

We will spend the same or less on electricity because we will be more energy efficient

Electricity will cost more as we power more of our day-to-day activities



ATLANTIC RESIDENTS ARE GENERALLY SUPPORTIVE OF THE IDEA OF AN ATLANTIC LOOP

THE ATLANTIC LOOP WOULD LINK THE ATLANTIC PROVINCES, AND QUEBEC TO CREATE A TRANSMISSION NETWORK TO TRADE ELECTRICITY AMONG ALL FIVE PROVINCES. (%)

NB NL NS PEI



ATLANTIC LOOP MOST BENEFITS RELIABILITY, THEN SUSTAINABILITY; NS/PEI LEAST CONVINCED IT HELPS AFFORDABILITY; 1/3 NEUTRAL

THE ATLANTIC LOOP WILL MAKE OUR ELECTRICITY MORE...(TOTAL AGREE, %)

Affordable Environmentally sustainable Reliable 59 58 57 3 53 S 49 47 47 38 35 NL NS NB PEI

AFFORDABILITY IS MOST IMPORTANT ATTRIBUTE OF A PERSON'S ELECTRICITY, FOLLOWED BY ENVIRONMENTAL SUSTAINABILITY

MOST IMPORTANT CONSIDERATION WHEN IT COMES TO "YOUR" ELECTRICITY (%)



STATISTICAL ANALYSIS

WHAT DRIVES OPINION AND SUPPORT?

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FACTORS THAT INCREASE THE PROBABILITY OF SUPPORT



Strong environmental motivation

Health and safety

Trust academics, ENGOs

FACTORS THAT INCREASE THE PROBABILITY OF SUPPORT

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Weak environmental motivation

Concern economy, consumers

Being Conservative

FACTORS THAT DECREASE THE PROBABILITY OF SUPPORT



THE LIKELIHOOD OF CONSIDERING ELECTRICITY CLEAN WHEN THE SOURCE OF THAT ELECTRICITY

Generates no pollution to the air or water or no nuclear waste to make electricity

Trust academics

Trust ENGOS

FACTORS THAT INCREASE THE PROBABILITY OF SUPPORT FOR COAL PHASE-OUT OPTIONS

SMRs

- Concern economy, consumers
- \$80k-\$119.9k/year

QC/NL Hydro

- Live in NL
- Concern impact environment

Renewables my province

- Health and safety
- University

SUMMARY: NUCLEAR STORY

Increases support

- Trust utilities
- Earn \$80k-\$119.9k/year
- Anglophone
- Concern about economy/consumers

Decreases support

- Strong environmental identity (Intrinsic)
- Trust environmental groups
- Identify as female
- Over 35 years of age

Topline #1 Governments and utilities are out of step with the public on electricity

Topline #2 People want in-province renewables before interprovincial connections to hydro

Topline #3

Topline #4

 Atlantic Loop advantage is reliability, then affordability, women least supportive of large hydro

• Little social license for SMRs, especially among rural, female, 55+ respondents

Topline #5 • We need to consult the public to define electricity vision, set renewable energy targets

Topline

#6

• Health, environment and economy are primary evaluation criteria

Topline #7

Topline #8 • Environmental identity, selfdetermination toward environmental goals, concerns about health and safety important to forming opinions

• This is not the work of competing technology options; it is the work of values, trust, and then information

APPENDIX

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MORE PROVINCIAL DETAIL

STRONG MAJORITY SAY CLEAN ELECTRICITY SOURCES ARE SOLAR, WIND, THEN HYDRO ; CONFLICTED ON GAS NB, NS, PEI FAVOUR NUCLEAR MORE THAN NL



HOME GROWN RENEWABLES, THEN REGIONAL CONNECTION TO HYDRO; NL NEGATIVE TOWARD QC HYDRO

1/3 NEUTRAL

SMRS: LESS THAN ¹/₄ AGREE;

SMRS: DISAGREE: NB, 32%, NL, 40%, NS, 34%, PEI, 38%)

I WANT (SOURCE) POWERING MY ELECTRICITY OR OPEN TO (TOTAL AGREE, %)

■ NB ■ NL ■ NS ■ PEI



ELECTRICITY

HEALTH, ENVIRONMENT, ECONOMY, NOT COST DRIVING OPINION OF SOURCES

FACTORS INFLUENCING OPINION OF SOURCES (TOTAL IMPORTANT, %)

EFFECTS ON THE PROVINCE/ATLANTIC REGION ECONOMY AND/OR CONSUMERS VISUAL IMPACT (E.G., TRANSMISSION LINES OR

POWER PLANTS, WIND TURBINES)

IMPACT ON HUMAN HEALTH AND SAFETY

COSTS TO DEVELOP OR MAINTAIN

IMPACT TO THE NATURAL ENVIRONMENT



PEI NS NL NB