

SHAPE BC's ENERGY FUTURE

YOUTH INPUT WORKSHOP 2

AGES 14-18

AUG 31, 2021



Youth Engagement Session 2 Report CleanPower 2040

Sep 2021 | Report prepared for BC Hydro

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Event summary

BC Hydro is in the process of developing an Integrated Resource Plan (IRP), commonly referred to as Clean Power 2040. BC Hydro's IRP will outline how BC Hydro plans to provide reliable, affordable and clean electricity to meet customers' demand now and into the future. It considers BC Hydro's 20-year projections of electricity demand in B.C., including high and low load ranges and scenarios, to account for a range of potential impacts from electrification to achieve greenhouse gas reductions through to the effects of economic downturns.

A key component of this planning process is public consultation and engagement. Phase 1 consultation with the Indigenous Nations, customers and the broader public on the IRP began September 14th, 2020 and allowed BC Hydro to receive customer input during the development of its long-term plans. On February 2nd, 2021, CityHive facilitated a virtual workshop with almost thirty youth from across the province, and the report and notes from that engagement, as well as the input received from other demographics helped inform a draft IRP. The draft plan included seven key areas of focus: energy conservation, time-varying rates, renewing purchase agreements, transmission system upgrades, future resources, small BC Hydro plants, and planning for the unexpected.

On August 31st, 2021 CityHive reconvened youth from the February workshop to explore three of those focus areas and receive feedback. The three focus areas included: Electricity Management, Future Resources, and Planning for the Unexpected. The notes collected from that event have been compiled and are included in this report. Some of the key themes that emerged include:

- Climate change & the environment
- Social responsibility
- Technology

The following pages will provide a basic overview of the event details, the demographics of the participants, as well as a full compilation of the raw data and notes that were collected during the session.

Session details

Date: Tuesday, August 31st, 2021

Time: 5:00-6:30pm Pacific Time

Location: Zoom

CityHive Staff: 2

BC Hydro Staff: 5

Youth Attendees: 14

Attendee demographic details

Total Number of Attendees: 14

Category	Identifier	Number of Participants
City of Residence	Burnaby	1
	Campbell River	2
	Coquitlam	1
	Nanaimo	1
	North Vancouver	1
	Powell River	1
	Prince George	3
	Surrey	2
	Vancouver	2

Event data

Key themes

- Climate change & the environment:
 - reducing impacts on land and waterways
 - planning for climate change-driven changes to energy use
- Social responsibility:
 - Indigenous consultation
 - accountability and transparency
 - individual responsibility to limit use (ie support for time varying rates)
- Technology:
 - opportunities and concerns about the promise and drawbacks of new energy tech (ie. tidal power; utility scale batteries)
 - its unpredictable trajectory makes planning for the future challenging

Breakout rooms: notes

The following notes were taken in Breakout Room 2 when there was low uptake on using the Jamboard tool. The questions were broken into three categories corresponding to their prompting question themes: Electricity Management, Future Resources, and Planning for the Unexpected.

Electricity management

- When prompted whether it would be permissible in their minds to allow BC Hydro to selectively turn off peoples' power there was some concern about vulnerable populations being particularly at risk of negative impacts of such a shut down.

Future resources

- A number of concerns were raised about the renewed purchase agreements with private energy providers. In particular, there was a worry raised that those independent providers might have less requirements toward local Indigenous nations.
- Another concern was raised around the gas plant in Campbell River and whether the decision to no longer use it for power generation adequately took into account local jobs.
- Concern was raised about the creation of new transmission lines and the destruction of habitat for engaged species that it could cause.

- There was some curiosity raised about BC Hydro's openness to thermal nuclear options as a way to meet future capacity needs.

Planning for the unexpected

- One concern raised was what back-ups were in place in the case of Earthquakes.
- One possible unexpected challenge raised was for more frequent or severe damage to infrastructure caused by climate change.
- A number of folks raised questions about utility scale batteries, including questions about their reusability, their longevity, how long they hold a charge and what the environmental impact of their production was.

Breakout rooms: Jamboard transcription (compiled)

The following notes are directly transcribed from the interactive Jamboards used in Breakout room 1. Photos of the Jamboards have been included in the Appendix for your reference. All responses are unedited, and the responses have been compiled based on questions for your convenience. The questions were broken into three categories corresponding to their prompting question themes: Electricity Management, Future Resources, and Planning for the Unexpected.

Electricity management

Question 1:

- What else should we consider?

Responses (unedited):

- Electricity management devices
- Super clean energy like water turbines
- Publishing statistic reports to let the community know how we are doing currently and what we should aim to do to improve in the future (referring to energy usage)
- Making sure people know how much electricity they are using at all times
- Be more mindful of using electricity
- Remind that power is a privilege not a right
- Discount for off-peak times

Question 2:

- Indicate which of those options you most agree with (1 "x" = 1 vote)

Responses (unedited):

- Electricity management devices (x)

- Super clean energy like water turbines (x)
- Publishing statistic reports to let the community know how we are doing currently and what we should aim to do to improve in the future (referring to energy usage) (xxx)
- Making sure people know how much electricity they are using at all times (x)
- Be more mindful of using electricity (x)
- Remind that power is a privilege not a right (x)
- Discount for off-peak times (xxx)

Future resources

Question 1:

- What do you think are BC's best options for renewable resources?

Responses (unedited):

- Solar panels
- Solar panels if we can make the production process more eco-friendly
- Geothermal
- Tidal energy
- Wind turbines
- Water turbines
- Nuclear

Question 2:

- Indicate which of those options you most agree with (1 "x" = 1 vote)

Responses (unedited):

- Solar panels (xxx)
- Solar panels if we can make the production process more eco-friendly
- Geothermal
- Tidal energy (xx)
- Wind turbines (xx)
- Water turbines (xx)
- Nuclear (x)

Planning for the unexpected

Question 1:

- What may be a surprise that may affect electricity use in the future?

Responses (unedited):

- Heat waves and cold climates

- Rapid urbanization
- Melting icecaps
- More radiation and heat
- More people using electrical vehicles
- Taxes for using too much electricity that isn't needed
- Digitalization
- Earthquake
- More electric cars
- Common use of artificial intelligence?
- Companies will make electric devices more affordable as changes are made to software
- More virtual jobs
- More people will choose to work from home
- The world ending
- Aliens kidnap the population
- Greater use of air conditioning due to higher climates
- The Maze Runner coming to life

Question 2:

- Anything else that BC Hydro should know?

Responses (unedited):

- Thinking about ways to get people from different generations to do the same ie if you're older and can't easily make the same changes

Participant questions

These questions were asked in the chat or in plenary by the youth workshop participants. Responses have been noted.

Question: Curious about the man camps and whether there are plans better integrate the camps into community especially given violence and covid?

Response : There are currently 3 camps - Site C, Micah, Bridge River. There are lots of women and Indigenous people working in those camps, there were lots of assurances to meet the needs of the camps and not impact the community. I don't think we've seen the adverse impacts of camps on community in part due to all the planning - ie. bridge river has been there for 25 years and we work hard to be good neighbours and there are lots of coordinating, especially in light of covid.

Question: I was wondering about how reusable the batteries where and how long thy would last for , and a concern for energy would be earthquakes turning off power to communities and how long BC hydro would take to respond to that

Response : about batteries and their lifecycle. Utility batteries are exactly the same as the ones used in electric vehicles. There are some utilities actually looking to use batteries recycled from older EVs - but the issue is that the future will be using a LOT more of these batteries than we use today. The recycling of batteries is an issue.

Question: I've read about how with many transmission lines, native plant species are removed and replaced with invasive species. Moving forward, is there a plan for BC Hydro to restore native ecosystems on current lines and new projects?

Response: None recorded

BC Hydro Team Reflections

The following notes were captured live at the event when the three BC Hydro guest speakers were asked to reflect on what stood out to them in their breakout sessions.

I'm hearing a real concern about ensuring that the impacts of our decisions are being made thinking about First Nations, land and water impacts and addressing the wrongs done in the past, and that's one thing I heard and took away and heard strongly last time too -- I believe this plan will look quite different than plans in the past but you will be able to see for yourselves when you read it.

I tuned into the sense of worry of the future and whether Hydro was doing enough to prepare for a future with some anxiety -- ie I heard "we should go back to using candles" and is Hydro doing enough to be resilient and prepared and I hope you're seeing that we are being flexible and responsive to the changing future.

I was particularly energized by the conversation about the ideas for the future, what I did hear is that the future is going to be different and we're going to have to think about climate change and the way we live and that may mean we live differently and some of the things we don't even know what there might be demand for in the future like AI and how are we ready for that innovation that's coming -- very excited, I got optimism.

Appendix - Jamboards

Electricity management

What else should we consider? Annotate!

electricity management devices

✓ Super clean energy
like water turbines

✓ making sure people know
how much electricity they
are using at all times.

✓ Be more mindful of using
electricity

✓ Remind that power is a
privilege not a right

✓ Publishing statistic reports to let the
community know how we are doing
currently and what we should aim to do
to improve in the future. (referring to
energy usage)

✓ discount for off-peak times

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Future resources

What do you think are B.C.'s best options for
renewable resources? Annotate

✓ Solar panels

Solar panels if we can make the
production process more eco-friendly.

✓ wind turbines

water turbines ✓

✓ Tidal energy

Geothermal

✓ Nuclear

BC Hydro
Power smart

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Planning for the unexpected

What may be a surprise that may affect electricity use in the future?

Heat waves and cold climates

Earthquake

Greater use of air conditioning due to higher climates.

more electric cars

The Maze runner coming to life

Rapid urbanization.

Melting icecaps
more radiation and heat

More people using electrical vehicles

Taxes for using too much electricity that isn't needed

Common use of artificial intelligence?

Companies will make electric devices more affordable as changes are made to software.

More virtual jobs

More people will choose to work from Home.

Digitalization

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Planning for the unexpected

What may be a surprise that may affect electricity use in the future?

Anything else BC Hydro should know?

Thinking about ways to get

people from different generations to do the same - ie if you're older and can't easily make the same changes

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Power smart

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