

# Clean Power 2040

Powering the future



## BC Hydro 2021 Integrated Resource Plan Summary Notes: Public Consultation

<b>Meeting</b>	Public Workshop about the Draft 2021 Integrated Resource Plan (IRP)
<b>Date</b>	July 12, 2021 – 7:00 p.m. to 8:20 p.m.
<b>Location</b>	Virtual Workshop (Microsoft Teams)
<b>Host Services</b>	Producer: Adil Zaheer
<b>BC Hydro Representatives</b>	Anne Wilson - Moderator Alex Tu – Presenter Bill Clendinning – Director of Energy Planning and Analytics Eddie Young – Policy Specialist, Strategic Planning Grace Chan, Jen Thompson – Notetakers
<b>Attendees</b>	Eight people attended the session  Four attendees identified as an Independent Power Producer, three identified as a BC Hydro residential customer, and one identified as not a BC Hydro customer

<b>LEGEND</b>	
<b>Areas of interest/comments</b>	Areas of interest or comments from public attendee
<b>Response</b>	BC Hydro staff member response
<b>EPA</b>	Electricity Purchase Agreement
<b>IRP</b>	Integrated Resource Plan
<b>IPP</b>	Independent Power Producer
<b>DSM</b>	Demand-Side Management
<b>GHG</b>	Greenhouse Gas
<b>MW</b>	Megawatt

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### WELCOME

BC Hydro opened the session with a welcome and introductions.

BC Hydro took participants through the upfront information including meeting logistics and then provided an overview of the draft 2021 Integrated Resource Plan (IRP). BC Hydro described what the IRP is, and provided an overview of the main elements in the draft plan. Participants were invited to ask question and provide feedback throughout the session, and opportunities to provide additional feedback was provided at the end of the session.

The summary notes below capture a summary of themes and session areas of interest. This is followed by, for each section of the presentation, participant questions and comments followed by the general BC Hydro response, as appropriate.

### Summary of themes and session areas of interest

In reviewing the **planning context**, there was interest in the resource options database used for options costing, including how BC Hydro takes into account the declining cost of some resources like wind and solar (that are seeing rapid declines). It was mentioned that there's likely opportunity for offshore wind, certainly onshore wind and likely solar. It was confirmed the capacity charts captured effective load-carrying capacity (not nameplate capacity) for the resource options in the load resource balance. There was interest in using future carbon pricing to help add cost factors to account for climate action.

In reviewing the **demand-side measures draft elements**, BC Hydro was encouraged to do more with demand-side management as decisions are being made now that impact future electricity use.

In reviewing the **EPA renewal draft element**, interest was expressed for further details on renewal implementation, such as the meaning of longer-term and whether BC Hydro has considered how to value capacity. A participant questioned if we are valuing the fact that these projects already have existing footprints (so avoiding future habitat destruction if kept in operation). A participant was interested in municipal solid waste and looking for a strategy to halt their use due to environmental impacts.

In reviewing the **transmission upgrades draft element**, there was interest in understanding transmission upgrades cost versus demand-side measures.

In reviewing the **contingencies**, there was interest in the extent in which BC Hydro has included the amount of possible provincial electrification in the contingency scenario with underperforming DSM and whether BC Hydro is under forecasting what electrification is coming based on other jurisdictions. It was also mentioned the sense of a climate emergency as not apparent when looking at the plan. A very conservative response and not a leadership role was feedback expressed.

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In terms of **additional** areas of interest during the question and answer period following the session included:

Regarding demand-side measures:

- encouraged BC Hydro to produce a chart shows DSM costs per MWh compared with other resources.
- The idea of how far we can take demand-side measures was asked as well.
- A participant mentioned some neighborhoods in their area don't have access to natural gas and so with the two-tiered system, they are paying more with electricity and less with gas; and wondered if there has been thought to address climate change by having rates that address this?

Regarding EPA renewals and future resources:

- Interest in BC Hydro considering options and opportunities for optimizing IPP power through the export markets and splitting the premium prices if additional value related to storage capability.
- Questioned the cost of wind and solar. A reference of cost declines in the U.S., with wind at \$17 and solar at \$23 – a lot less than BC Hydro is using.

## Introduction and planning context

### Area of interest/comment

There was interest in the resource options database used for options costing. There was also interest in how BC Hydro takes into account the declining cost of some resources like wind and solar (that are seeing rapid declines). A participant noted that as the plan looks out through 2040 as there's likely opportunity for offshore wind, certainly onshore wind and likely solar. It was mentioned that it's important to look at this as we move forward.

### Response

BC Hydro described the resource options update in more detail and how future cost declines was considered in the planning.

### Area of interest/comment

There was a question, which was confirmed by BC Hydro, that the capacity charts shown captured effective load-carrying capacity for the resource options in the load resource balance (not the nameplate capacity).

## ELEMENTS OF THE DRAFT IRP

### Conservation, time-varying rates and demand response options

BC Hydro outlined the first draft elements of the Base Resource Plan: demand-side measures including energy efficiency and time-varying rates and demand response programs.

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### **Area of interest/comment**

A question was raised wondering why BC Hydro is not going with more demand-side management. It was mentioned the longer we wait, the more we're seeing people making decisions and buying gadgets and appliances and putting in outdoor heating systems based on unreasonably cheap energy.

### **Response**

BC Hydro described the balance of factors in choosing this draft level of conservation.

## **Electricity purchase agreement renewals**

BC Hydro described the element related to electricity purchase agreement renewals.

### **Areas of interest/comment**

Areas of interest included what is meant by longer-term contracts, as well as opportunities for stakeholders to review information on implementation details. It was mentioned by a participant that they understood the reasoning behind market-based pricing for energy and asked whether BC Hydro has considered how to value capacity or take a market-based approach to capacity.

### **Response**

It was mentioned that details are still to come. The IRP is a high-level strategy and identifies the approach, some of the more details will be provided through separate processes to the Commission. Avenues to provide additional feedback outlined at the end of this presentation.

### **Area of interest/comment**

A participant was interested in municipal solid waste and looking for a strategy to exit the use of these facilities, and pointed to the example of Sweden where, now they are built, they need to keep feeding the facility waste. The participant offered to provide information in support of taking municipal solid waste facilities off the table.

### **Response**

BC Hydro acknowledged the feedback and that we would bring this back to our specialist who handles this resource and they can reach out directly for more information, if needed.

### **Area of interest/comment**

A participant questioned if we are valuing the fact that these projects already have existing footprints (so avoiding future habitat destruction if kept in operation).

### **Response**

BC Hydro mentioned that we have considered footprint with our bridging strategy.

## **Transmission Upgrades**

BC Hydro described the element related to transmission upgrades.

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### **Area of interest/comment**

There was interest in understanding transmission upgrades cost versus DSM.

### **Response**

BC Hydro mentioned that, at a high level, DSM is more cost-effective compared with transmission upgrades but at the higher levels of DSM it is not as cost-effective and transmission is the next best option.

### **Future Resources**

BC Hydro described the element related to future resources.

**No questions or feedback on this topic (in this section – resource options discussed earlier and later).**

### **Small BC Hydro facilities**

BC Hydro described the element related to small BC Hydro facilities.

**No questions or feedback on this topic.**

### **Planning for the unexpected**

BC Hydro described the contingency planning.

### **Area of interest/comment**

There was interest in the extent to which BC Hydro has included the amount of possible provincial electrification in the contingency scenario with underperforming DSM. They pointed to Washington State's plans of extensive electrification by 2045, and the latest federal government announcement of a phase out of combustion engines by 2035.

Another participant mentioned they are not getting the sense of a climate emergency when looking at the plan; some ideas are here but not a sense of emergency. What if what we are doing is not adequate? A very conservative response and not a leadership role was feedback expressed. A question was also asked as to whether BC Hydro has the tools, and how could the public help.

### **Response**

BC Hydro mentioned the accelerated electrification scenario meets the provincial greenhouse gas targets and acknowledged this feedback.

### **Conclusion of presentation and broader discussion**

BC Hydro closed off the meeting, providing information on how to provide further details submissions and feedback. The discussion continued with various areas of interest.

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### **Area of interest/comment**

Additional questions and interest arose regarding demand-side measures, including a desire for a chart that shows DSM costs per MWh and comparisons with other resources. The idea of how far we can take demand-side measures was asked as well.

### **Response**

BC Hydro mentioned we did look at the leading edge of conservation options in this plan. Also, that it is difficult to compare demand-side measures with other resource options as it is an apples to oranges comparison.

### **Area of interest/comment**

A participant mentioned some neighborhoods in their area don't have access to natural gas and so with the two-tiered system, they are paying more with electricity and less with gas; and wondered if there has been thought to address climate change by having rates that address this?

A participant wondered about using future carbon pricing to help add cost factors to account for climate action.

### **Response**

Government has released some information about carbon pricing for our projects. On supply side, we don't have a firm idea of future carbon pricing, so we use what we have now.

### **Area of interest/comment**

There was a question as to whether BC Hydro had considered options and opportunities for optimizing IPP power through the export markets and splitting the premium prices if additional value related to storage capability.

### **Response**

BC Hydro mentioned that the IRP currently is about meeting domestic needs.

### **Area of interest/comment**

A participant raised questions about the cost of wind. They reference cost declines in the U.S., where wind is at \$17 and \$23 for solar – it seems to be a lot less than what BC Hydro is using. Asked the question of how BC Hydro incorporate that six-month old data – that wind is two and three cents US and solar three and four cents US.

### **Response**

BC Hydro mentioned that with the recent resource options update work worked with experts in the B.C. context, we have a fairly comfortable sense of what's happening. It is not down as low as the \$17 number.

BC Hydro thanked the participants and session ended.