

Clean Power 2040

Powering the future



2021 Integrated Resource Plan (IRP) Technical Advisory Committee (TAC) Meeting #10

July 7, 2021

 **BC Hydro**
Power smart

Welcome & meeting context

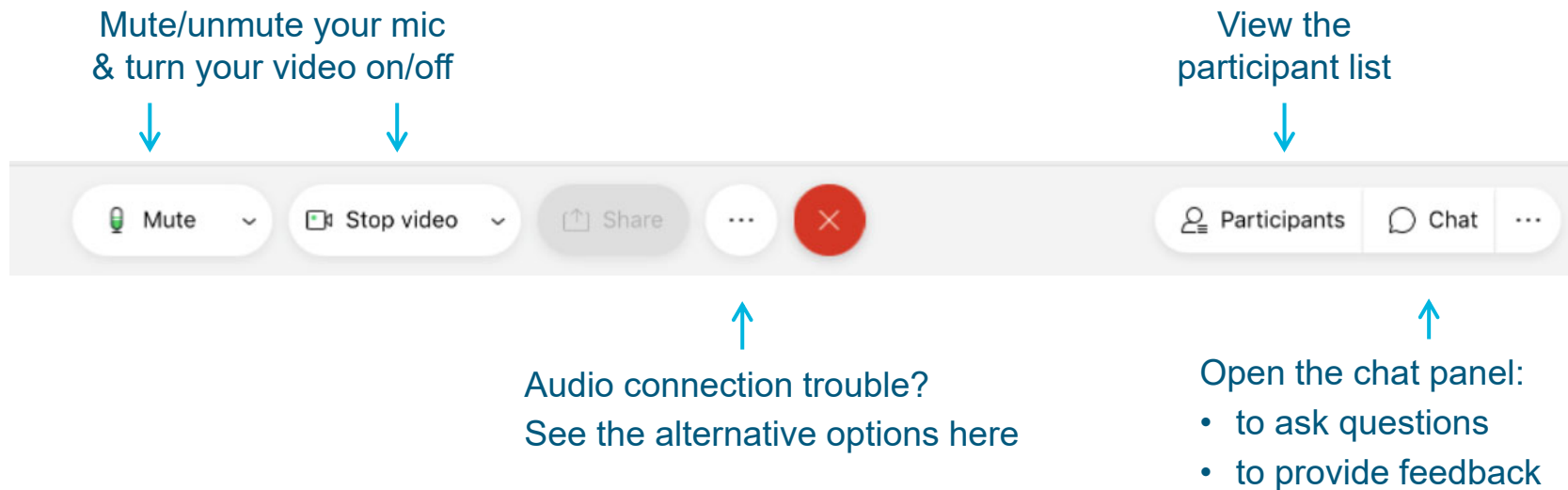
Virtual meeting etiquette

These principles should make our meetings more effective

- As with in-person meetings, continue to have members participate and alternates observe
- Keep the conversation respectful by focusing on ideas, not the person
- Stay curious about new ideas
- Share the air time – to ensure everyone gets heard
- To minimize distractions – keep yourself on mute
- We'll use the chat box to seek input and ask questions
- We'll not be recording these sessions, and ask for others not to record

Cisco Webex reminders

We'll be using a few basic tools, which you can find if you hover your mouse over the bottom of the screen



The image shows a screenshot of the Cisco Webex toolbar with several annotations. On the left, two blue arrows point down to the 'Mute' and 'Stop video' buttons, with the text 'Mute/unmute your mic & turn your video on/off' above them. In the center, a blue arrow points up to the three-dot menu button, with the text 'Audio connection trouble? See the alternative options here' below it. On the right, a blue arrow points down to the 'Participants' button, with the text 'View the participant list' above it. Another blue arrow points up to the 'Chat' button, with the text 'Open the chat panel:' followed by a bulleted list: '• to ask questions' and '• to provide feedback'.

Mute/unmute your mic
& turn your video on/off

View the participant list

Audio connection trouble?
See the alternative options here

Open the chat panel:

- to ask questions
- to provide feedback

Cisco Webex reminders

We'll also be using annotation tools, and here is a time to practice



→ Up arrows & down arrows

→ Check marks

→ Eraser

Meeting purpose and format

Objective is to gather feedback on draft plan elements and gaps in analysis

As a TAC member, we're seeking two types of feedback by July 31:

- **Draft elements:** How much does this element align with your interests of BC Hydro's long-term electricity planning? What are your reasons?
- **Planning analysis:** Analysis we brought into the draft; gaps; any direction given the gaps we've identified. Where should we continue to prioritize work?

Ways to provide feedback:

- At these meetings
- Written submissions by July 31 (either using the 'comment form' or a separate submission)
 - Feedback will be considered as we finalize the plan
 - Submissions will form part of the public record

Elements of the Draft IRP

Annotations and roundtable to indicate alignment and gaps, and help focus today's discussion

Demand-Side Measures

Energy efficiency	Voluntary time-varying rates & supporting programs	Electric Vehicle Peak Reduction	Renewing electricity purchase agreements	Transmission system upgrades	BC Hydro generating facilities	Future resources	Contingency plans
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CHECK MARK = GENERAL ALIGNMENT

UP ARROW = WOULD LIKE TO SEE MORE OF

DOWN ARROW = WOULD LIKE TO SEE LESS OF

Energy conservation

Proposed base plan element

Continue with a base level of energy efficiency programs (Base energy efficiency) and plan to ramp up to higher levels (Higher energy efficiency) in future years to achieve 1,700 GWh/year of energy savings and 290 MW of capacity savings at the system level by fiscal 2030.

Time varying rates & demand response

Proposed base plan element

Pursue voluntary time-varying rates supported by demand response programs to achieve 220 MW of capacity savings at the system level by fiscal 2030 (Rate Suite 2 and Demand Response Program A), and advance the Industrial Load Curtailment Program to achieve 100 MW of incremental capacity savings at the system level by no later than the fiscal 2027 to fiscal 2030 period.

Electric vehicle peak reduction

Proposed base plan element

Pursue a combination of education and marketing efforts as well as incentives for smart-charging technology for customers to support a new or existing (as applicable) voluntary residential time-of-use rate to shift home charging by 50% of residential electric vehicle drivers to off-peak demand periods (50% electric vehicle driver participation) to achieve 100 MW of capacity savings at the system level by fiscal 2030.

Renewing electricity purchase agreements

Proposed base plan element

Offer a market-price based renewal option to existing clean or renewable independent power producers with electricity purchase agreements expiring in the next five years.

There are approximately 20 existing clean or renewable projects, that produce a total of roughly 900 GWh, with electricity purchase agreements set to expire before April 1, 2026.

Transmission system upgrades

Proposed base plan element

Advance the first sequential step of upgrades to transmission infrastructure into the South Coast region including series compensation, shunt capacitors and thermal upgrades to achieve 550 MW of capacity for the South Coast region by fiscal 2033; prepare to initiate a second step of upgrades to achieve an additional 700 MW of capacity for the South Coast region by fiscal 2039.

Future resources

Proposed base plan element

Beyond the elements identified above and after demand-side measures, plan to acquire new energy and capacity resources starting with 580 GWh in fiscal 2031, then shifting to primarily capacity resources starting with 110 MW in fiscal 2038.

These future resources would be selected from amongst:

- Expiring electricity purchase agreements with independent power producers
- New clean and renewable energy resources
- Upgrades to BC Hydro facilities

BC Hydro small plants

Proposed base plan element

Undertake a structured decision-making approach to evaluate small BC Hydro plants that are at end-of-life, or in operation and nearing end-of-life, on a facility by facility basis to determine whether to decommission, divest, or refurbish these facilities, on the following schedule.

Facility	Timing to review end-of-life investment decision
Shuswap	Analysis in progress
Elko	2025
Spillimacheen	2029
Alouette	2030
Falls River	In operation – date not set
Walter Hardman	In operation – date not set

Contingency plans

Three have been completed, with a short-term action expected as exploring the introduction of utility scale batteries in the South Coast

Contingency plan scenarios	Draft IRP	Final IRP
Low demand forecast scenario (electricity demand stagnates)	Yes	Yes
Accelerated North Coast LNG scenario (electrification of industry in the North)	Not yet	Yes
Accelerated electrification (increased fuel switching from gas to electric for cars and home)	Yes	Yes
Variation: Delays of transmission upgrades along the South Coast	Not yet	Yes
Variation: Under-delivery of energy efficiency programs and time varying rate savings	Yes	Yes

Thank you and Next steps