Clean Power 2040

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Draft 2021 Integrated Resource Plan

Columbia Basin Regional Advisory Committee

July 21, 2021

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Welcome & introduction

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MS Teams reminders

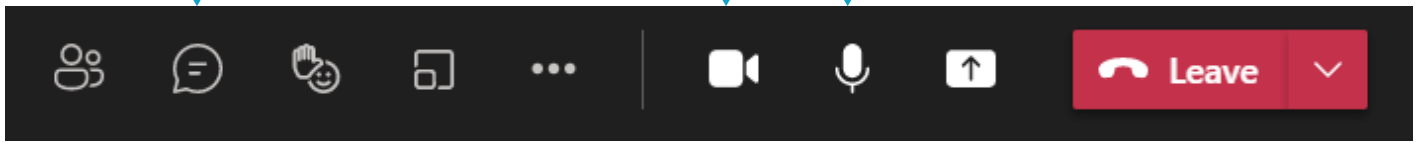
We'll be using a few basic tools, located at the top right-hand side of the screen

Use the meeting chat to:

- to ask questions
- to provide feedback

Video on/off

Mute/ unmute



Participant list

More actions (settings)

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Virtual meeting etiquette

- Be respectful by listening to others and sharing time so that everyone gets heard
- Stay curious about new ideas
- Minimize distractions by “muting” when not speaking
- Use the chat function to seek input and ask questions
- We are not recording these sessions, and kindly ask that others do not record

Purpose and outline

To provide an overview of the Draft Integrated Resource Plan and gather feedback

- Welcome and introductions
- Overview of the Draft Integrated Resource Plan
- Gathering feedback
- Close and next steps

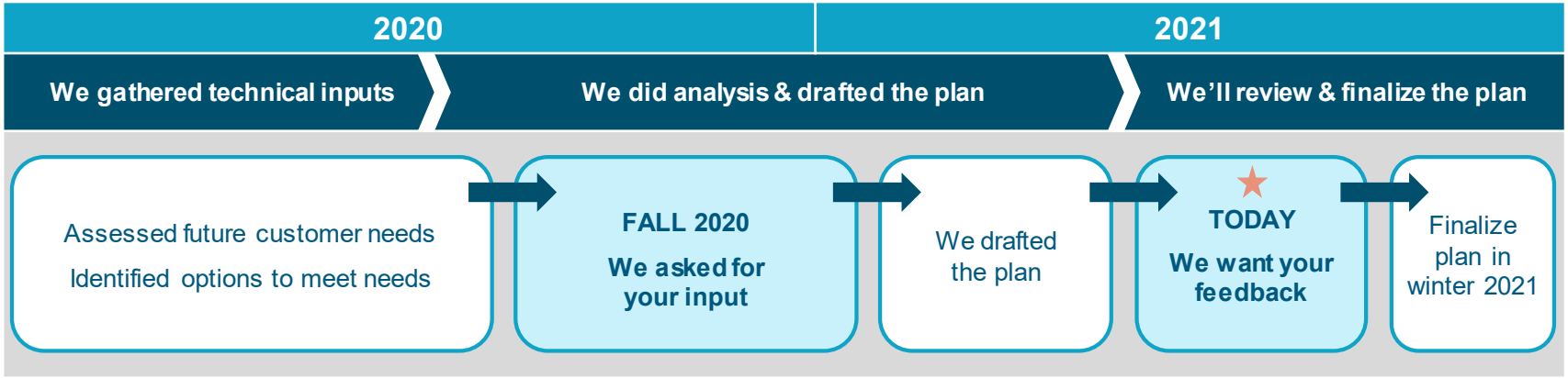
What is an Integrated Resource Plan? (recap)

The actions BC Hydro needs to make to meet our customers' future need for electricity

- BC Hydro's plan for the integrated power system
- Addresses any gap between forecast electricity demand and BC Hydro's supply
- Relies on scenarios to address the many uncertainties
- Guided by Provincial legislation and policy, such as the Clean Energy Act and CleanBC Plan
- Involves public, Indigenous, and technical consultation throughout
- Will be submitted to the BC Utilities Commission

Where are we in the schedule?

After gathering input, we're now bringing you the draft plan for your feedback



The Draft Integrated Resource Plan

Planning to meet future energy and capacity needs

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Two important terms

Energy

The amount of electricity customers consume throughout the year.

Gigawatt hours (GWh)

Capacity

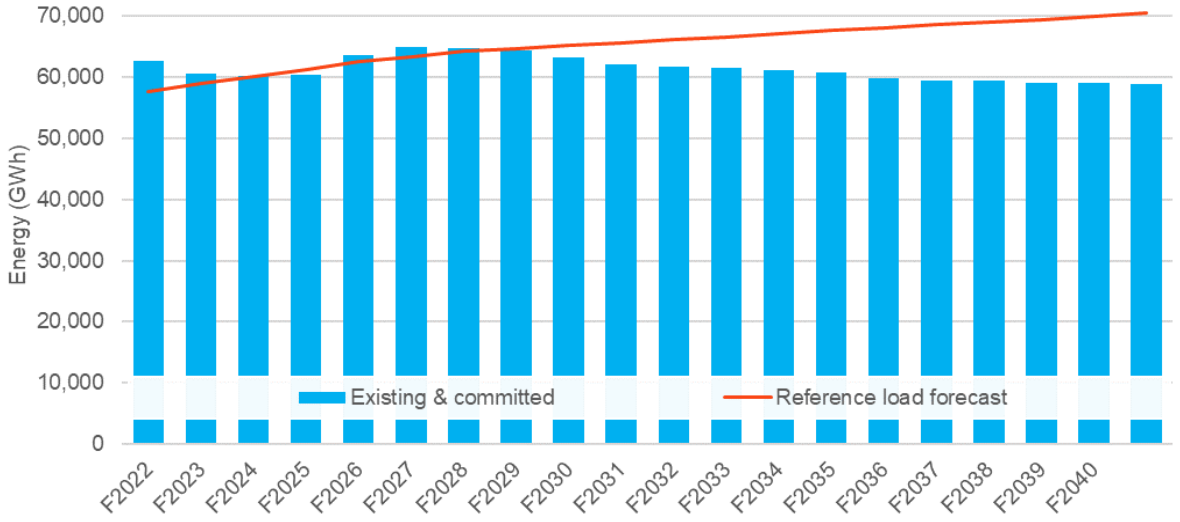
The ability of our system to meet the maximum amount of electricity used at any moment.

Also known as "**peak demand**" from a customer electricity use perspective.

Megawatts (MW)

Energy: 20-year outlook of supply and demand

We expect to have enough resources to meet B.C.'s energy needs for about 10 years



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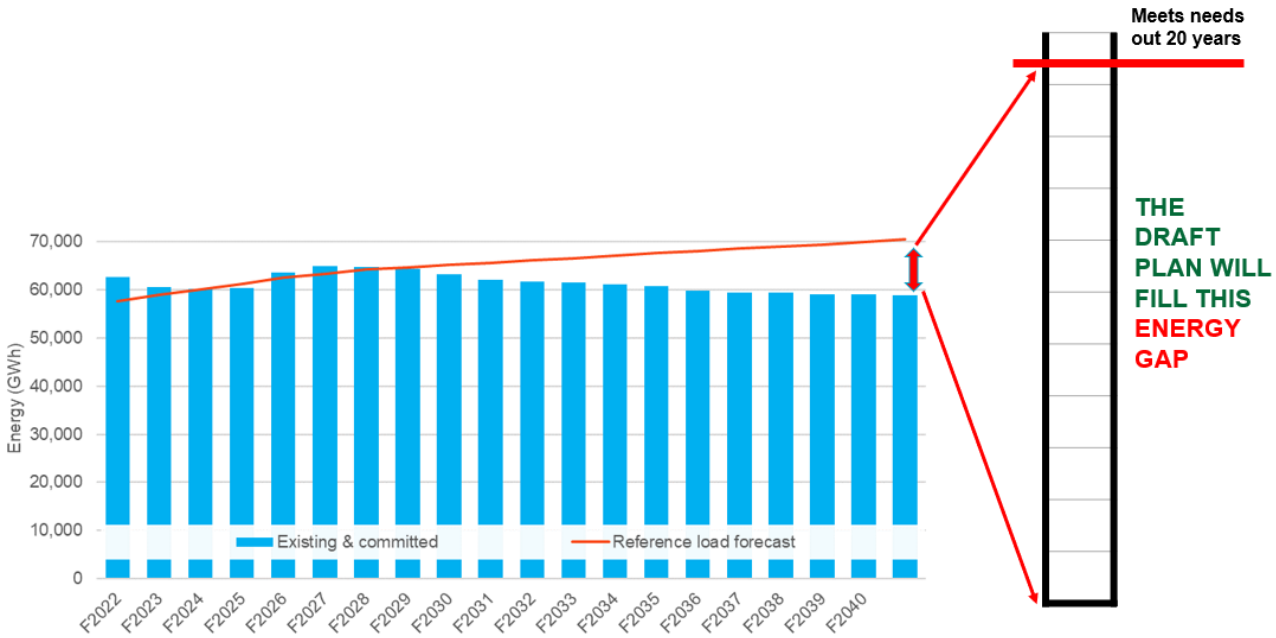

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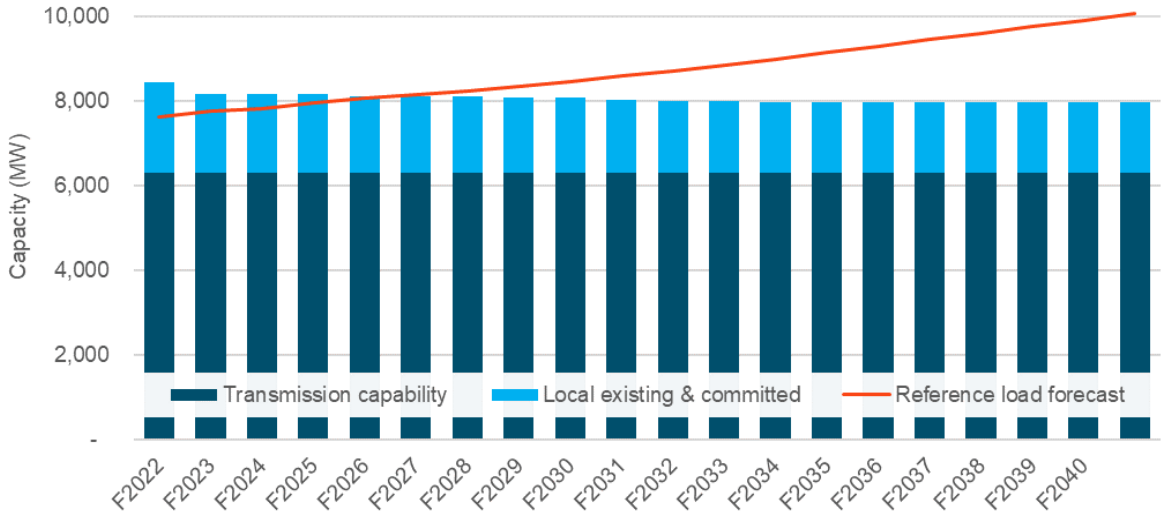
South Coast capacity: 20-year outlook

We expect to have enough system capacity for more than 10 years, however it will be needed sooner for the South Coast



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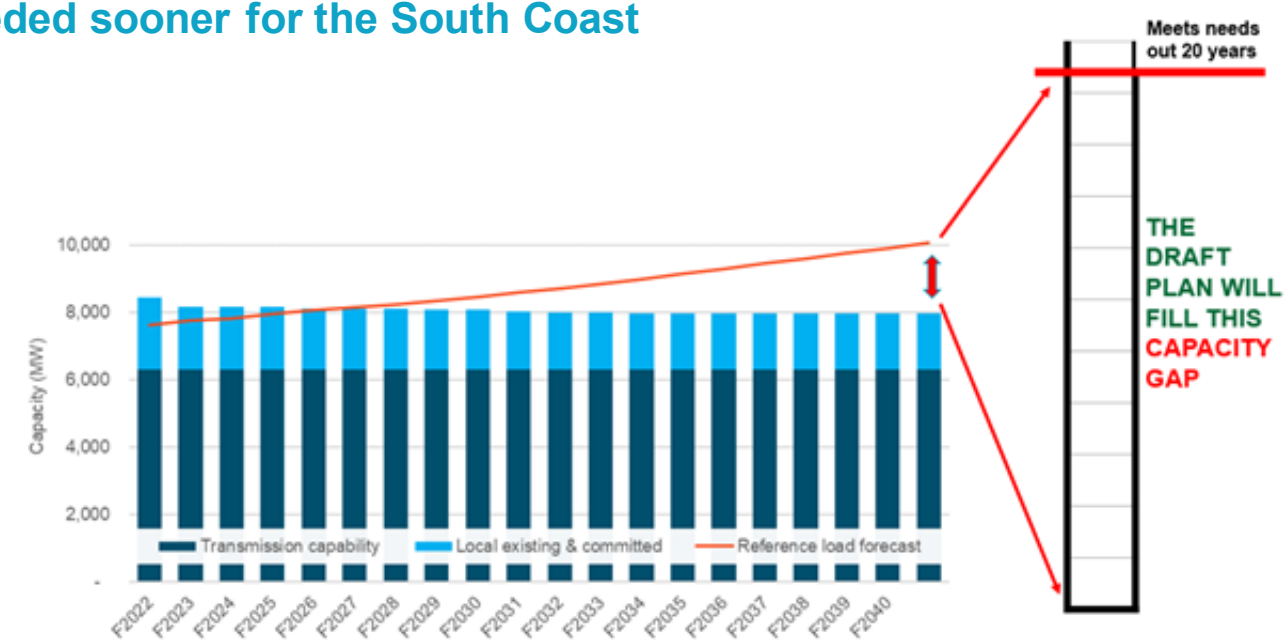


Elements of the Draft 2021 Integrated Resource Plan

We'll walk through each part of the plan at a high level

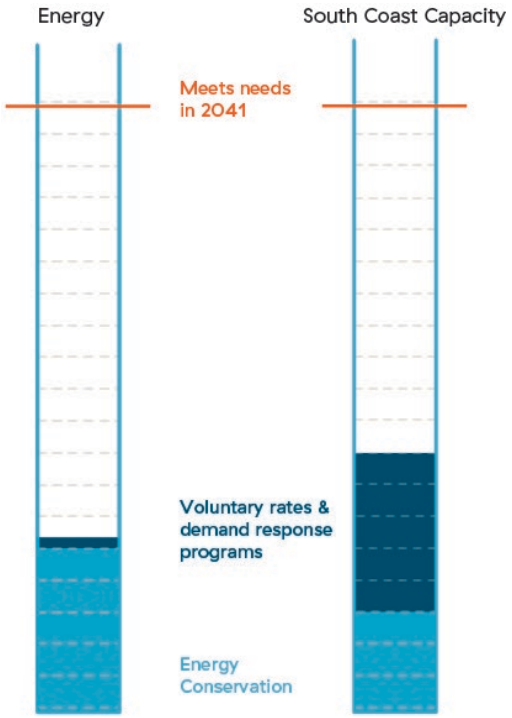
Energy conservation	Voluntary time-varying rates & supporting programs	Renewing electricity purchase agreements	Transmission system upgrades	Future resources	Small BC Hydro plants	Planning for the unexpected

Conservation provides energy and capacity

Draft: Keep our current level of energy conservation programs and prepare to ramp up
Draft: Pursue voluntary time-varying rates and supporting demand response programs
Draft: Also target electric vehicle charging

- Low cost relative to other supply alternatives
- Flexible so we can increase or decrease effort when needed
- Customers can take advantage of lower electricity rates
- As voluntary, customers don't have to participate

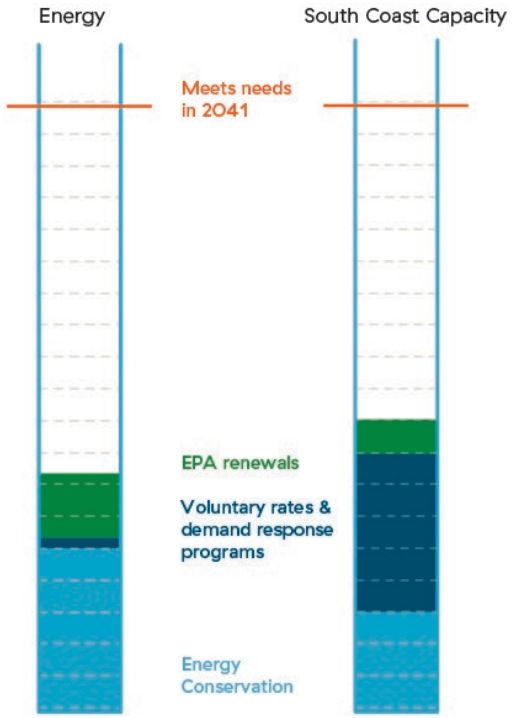
- Limits land and water impacts



Renewing electricity purchase agreements

Draft: Offer market-based renewal option for contracts expiring in the next five years

- Brings us more power than we need now, but helps to keep costs down because we can sell the power we don't use for a similar price that we paid for it.
- Helps limit land and water impacts by making use of existing facilities.
- Helps facilities continue to operate until we need the electricity in future.



Transmission system upgrades

Transmission upgrades to existing lines are an alternative to new transmission lines

Preliminary upgrade plan – two steps

Step 1: Replaces and adds equipment to six existing stations.

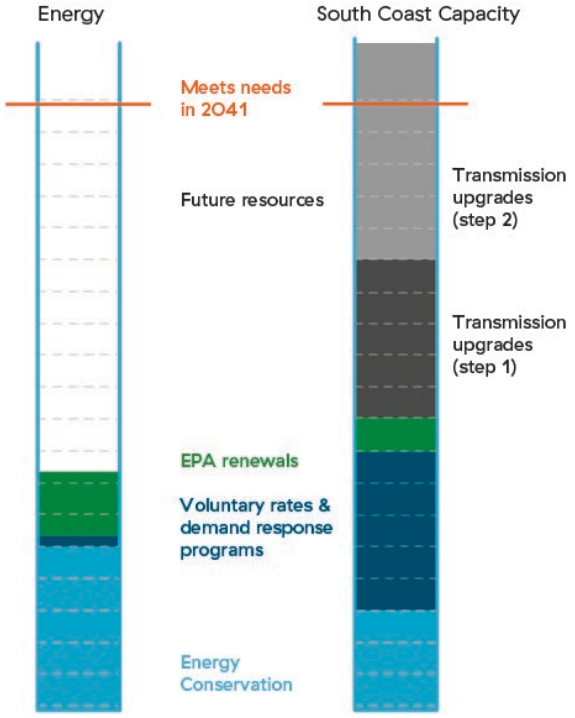
Step 2: Add up to five new capacitor stations. Locations to be determined.

Early engagement with Indigenous Nations.

Transmission system upgrades

Draft: Advance a first step of upgrades for transmission to the South Coast and prepare for a second step. Undertake early engagement with Indigenous Nations on both.

- Provides a large amount of capacity relative to other resources
- Low cost relative to other capacity supply alternatives
- Limits land and water impacts relative to building new transmission lines or new pumped storage hydro facilities in the South Coast



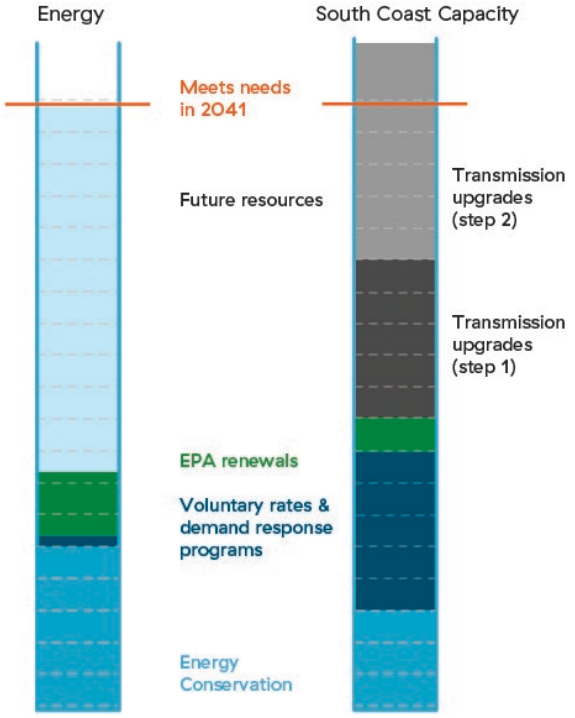
Future resources

Draft: Beyond the elements identified above and after demand-side measures, the plan is to keep our options open

Future resources mix could include:

- Renew more expiring electricity purchase agreements for clean power from Independent Power Producers
- Upgrades to BC Hydro's existing facilities
- Pursue new clean and renewable sources of power such as wind, solar with batteries, geothermal, etc.

The integrated resource plan is for 20 years, but we will update it within five years – we have time to see how the future unfolds



Small BC Hydro hydroelectric facilities

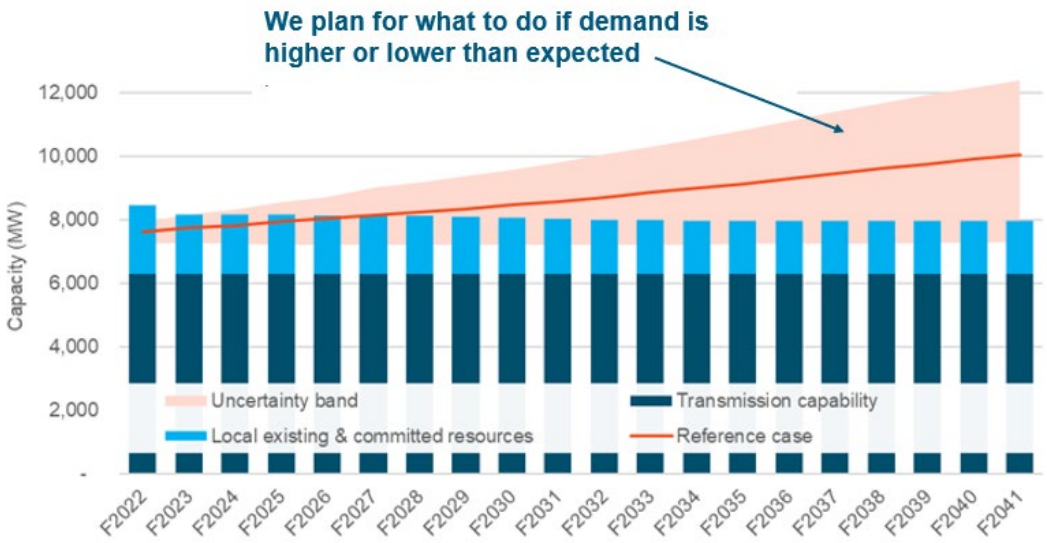
Draft: Evaluate what to do with small generating facilities near or at their end of life on a case-by-case basis – decommission / refurbish / divest

- Using a case-by-case staged approach allows us to manage costs
- A later decision allows BC Hydro to respond based on future needs

Facility	Schedule to review
Shuswap	Analysis in progress
Elko	2025
Spillimacheen	2029
Alouette	2030
Falls River	Operating – date not set
Walter Hardman	Operating – date not set

Planning for the unexpected

Contingency plans consider what to do if electricity demand is higher or lower than expected



Thank you and next steps

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We're seeking feedback by July 31

Thanks for participating in this session and providing your feedback

Please take the feedback survey on the Draft Integrated Resource Plan:

- Complete the survey online at www.bchydro.com/CleanPower2040
- Organizations can also request a comment form at CP2040@bchydro.com

Questions? Contact us by email at CP2040@bchydro.com