

Clean Power 2040

Powering the future



Welcome to the Integrated Resource Plan workshop

December 15, 2020



Workshop overview

Purpose: to learn what matters to you as we plan for the future of our power system





Virtual Meeting Etiquette



- Keep the conversation respectful by focusing on ideas, not the person
- Stay curious about new ideas
- Share the air time – ensure everyone gets heard
- To minimize distractions, keep yourself on “mute”
- We’ll not be recording these sessions, and ask for others not to record
- We will take notes and provide a summary report

Cisco Webex reminders



We'll be using a few basic tools, which you can find at the bottom of the screen

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



Audio connection trouble?
See the alternative options here



Open the chat panel:
• For questions / feedback





The Integrated Resource Plan

Actions we need to take now to meet future electricity needs

- BC Hydro's 20-year plan to meet future customer electricity needs
- Province-wide plan for our integrated system
- Considers Provincial legislation and policy (e.g. Clean Energy Act and the CleanBC Plan)
- Submitted to the BC Utilities Commission



What does the Plan include?

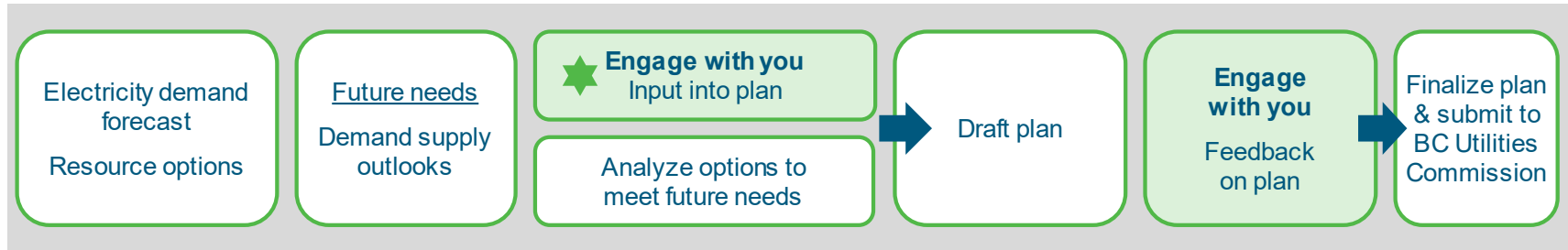
An assessment of future customer needs and actions to meet these needs

Three primary 'buckets' of actions

- Conservation and energy management
- Major resource investments (power lines, generating stations)
- Power acquisitions (buying power from IPPs)

Where are we in the schedule?

Working towards a late 2021 filing





Two important terms to know

Energy

the amount of electricity we produce and consume throughout the year.



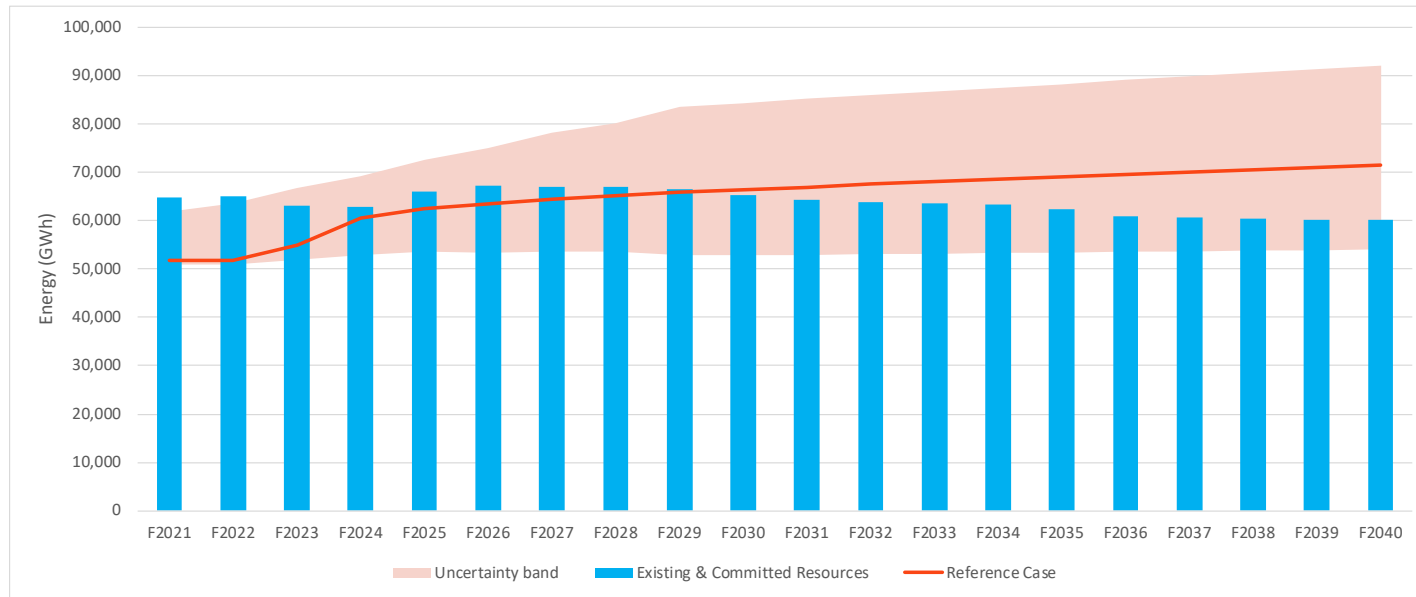
Capacity

the maximum amount of electricity that can be provided at any moment. Also known as “**peak demand**” from a customer electricity use perspective.

Peak demand is also important for planning as this determines the need for new infrastructure

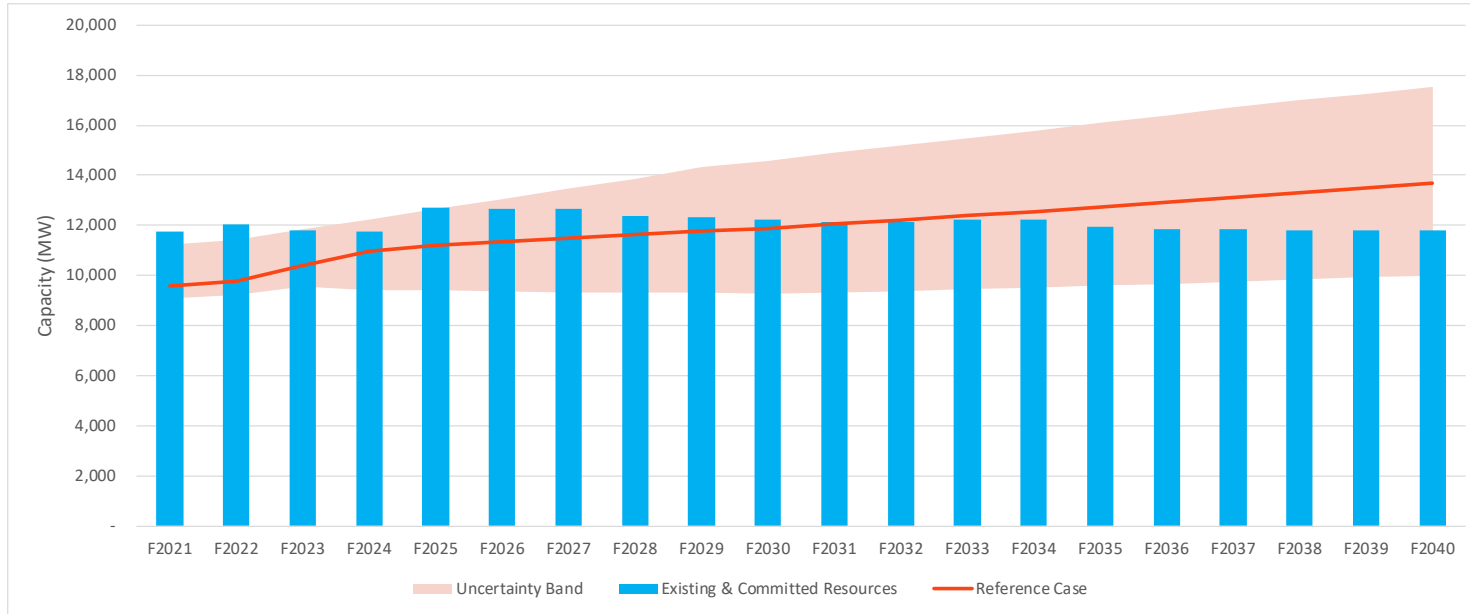
Energy 20-year outlook of supply and demand

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



Capacity 20-year outlook of supply and demand

We also expect to have sufficiency capacity resources for the same period

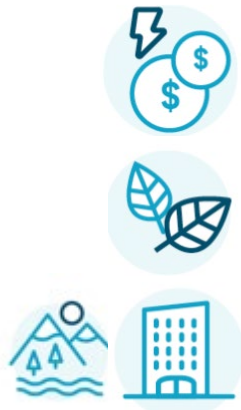


Planning Objectives



Planning Objectives

Continuing to provide clean, reliable power are key priorities. As we plan, we look at the lowest cost options to meet new demand, and we also consider other objectives:



- Keep costs down for customers
- Limit land and water impacts
- Limit greenhouse gas emissions through clean electricity
- Support reconciliation with Indigenous Nations
- Support the growth of B.C.'s economy



Discussion: Planning Objectives

Quick polls will show up in the chat window on the right-hand side of your screen

- **Which Objectives are most important to you? (pick 2)**

Questions to appear to the right in your screen

- Group discussion – Tell us more about the ranking. What did/didn't surprise you?
 - Type in the chat window that you would like to speak

Planning Topics

2020 to 2030: Managing current resources



While we may have enough electricity, there are still choices we need to make

Conservation and energy management (energy and capacity)

Consider whether to maintain our current level of energy programs, and advance new capacity programs

Expiring electricity purchase agreements

Develop a strategy for renewals when we have enough energy and capacity

Small BC Hydro facilities reaching end-of-life

Develop an approach to decommissioning or divesting



Activity: 2020 to 2030

Tell us what matters to you about...

- Energy Conservation Programs
- Expiring Electricity Purchase Agreements with Independent Power Producers
- Small BC Hydro plants reaching end of life

Planning objectives

- Keep costs down for customers
- Limit land and water impacts
- Limit greenhouse gas emissions through clean electricity
- Support reconciliation with Indigenous Nations
- Support the growth of B.C.'s economy

Instructions for Google Jamboard



Click the link in the chat window to open in your web browser

The video will disappear, but you will stay in the call

The screenshot shows a Zoom meeting window. At the top, there are icons for a mountain and water, a city building, and a document with a pencil. Below these icons is a video thumbnail showing two participants. The main content area displays the title "Instructions for Google Jamboard" and a list of instructions: "Click the link in the chat window to open in your web browser", "The video will disappear, but you will stay in the call", and "(Placeholder for image)". At the bottom left, there is a logo for "Clean Power 2040 Powering the future". At the bottom right, there is a logo for "BC Hydro Power smart". A chat window is open on the right side, showing a message from "thovland thovland to everyone" at 3:15 PM. The message contains the text "Pre-Event Jam board" and a long URL: "https://jamboard.google.com/j1KQeZVvCHW1QvuzdUo8Buttl...". The URL is circled in red. The chat window also shows a "To: Everyone" dropdown menu.

Open a sticky note



1. 2020 - 2030 Managing Current Resources

Sign In

Set background Clear frame

Planning Topic 1 - Managing Current Resources - 2020 - 2030

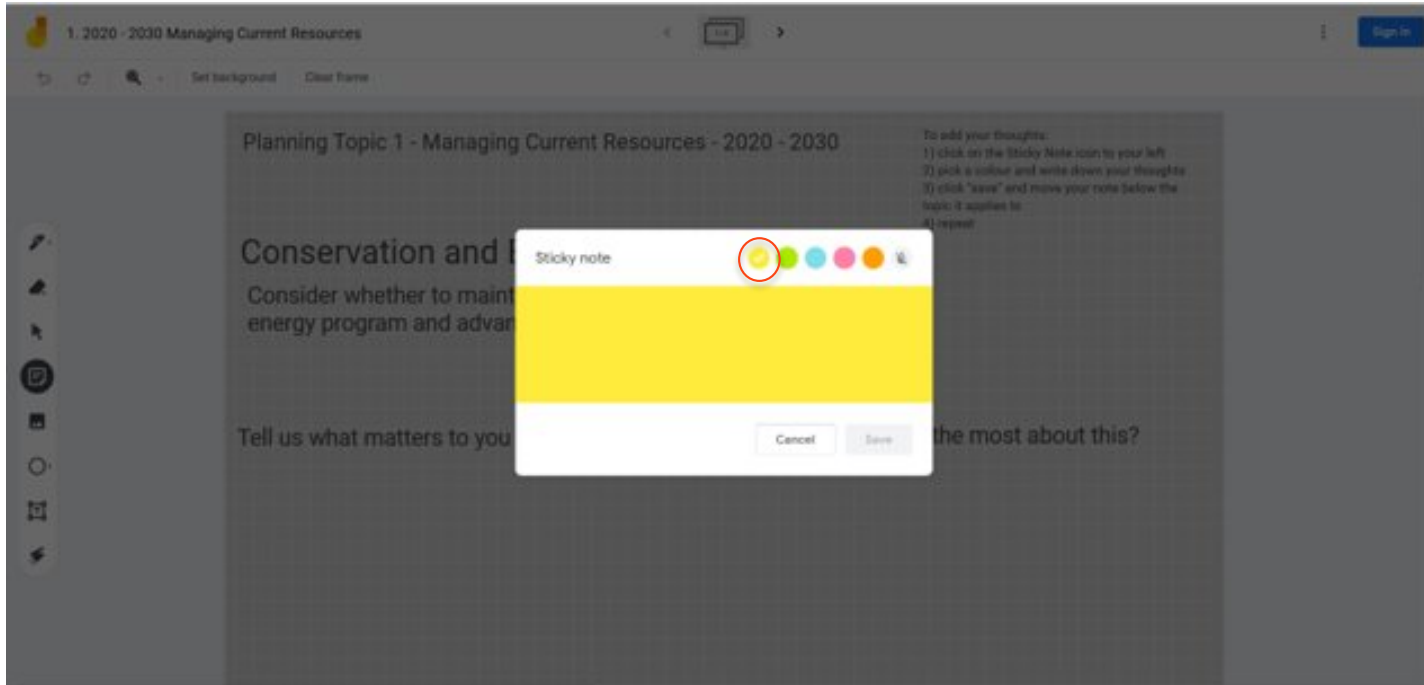
To add your thoughts:
1) click on the Sticky Note icon to your left
2) pick a colour and write down your thoughts
3) click "save" and move your note below the topic it applies to
4) repeat

Conservation and Energy Management

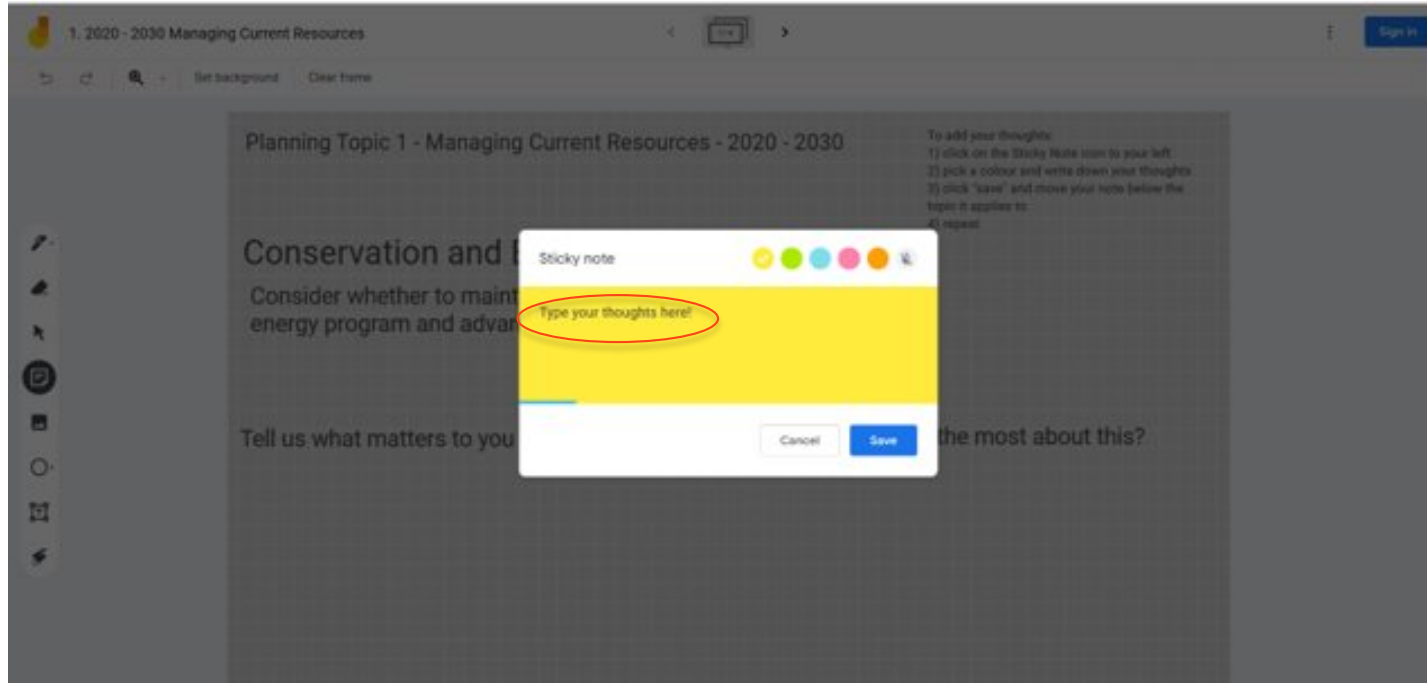
Consider whether to maintain our current level of energy program and advance new capacity

Tell us what matters to you in this topic. What excites you the most about this?

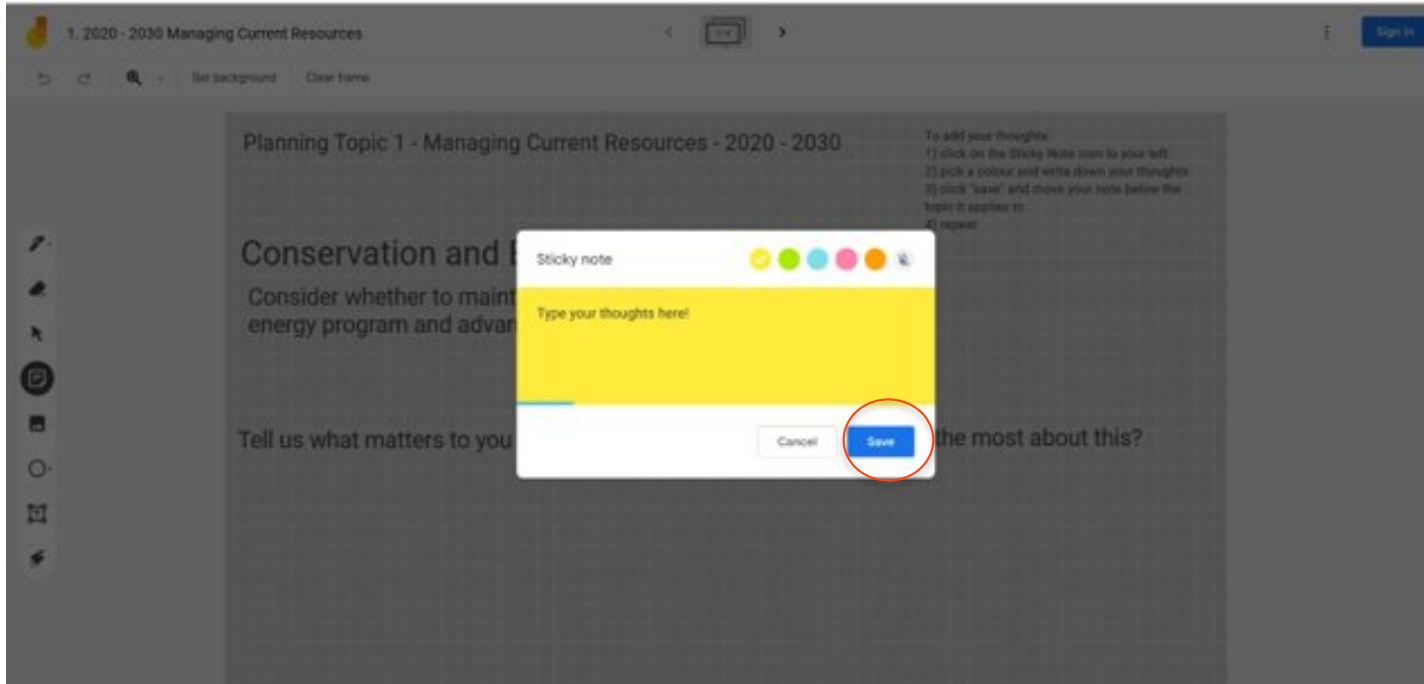
Select a note colour



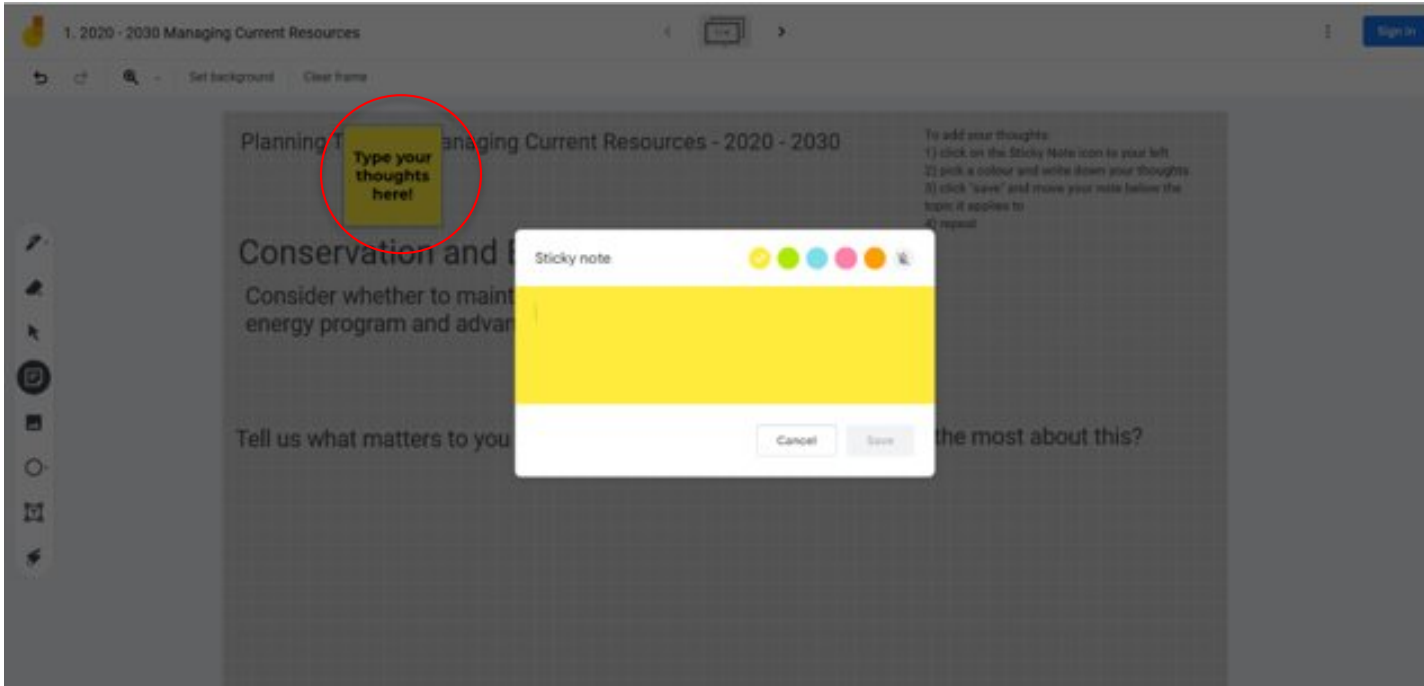
Type in your thoughts



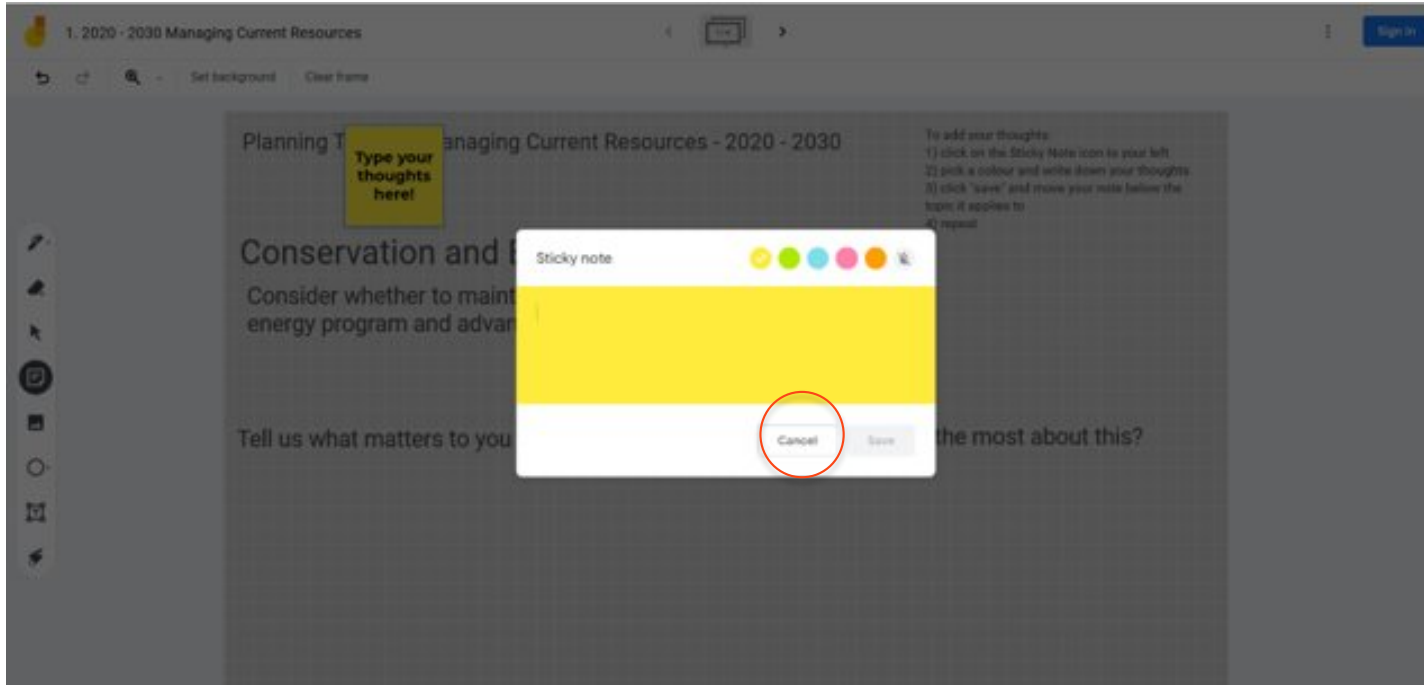
Post/Save your note



Where you note goes



Close the sticky note



Instructions for Google Jamboard – Click and drag



1. 2020 - 2030 Managing Current Resources

Set background Clear frame

Planning Topic 1 - Managing Current Resources - 2020 - 2030

To add your thoughts:
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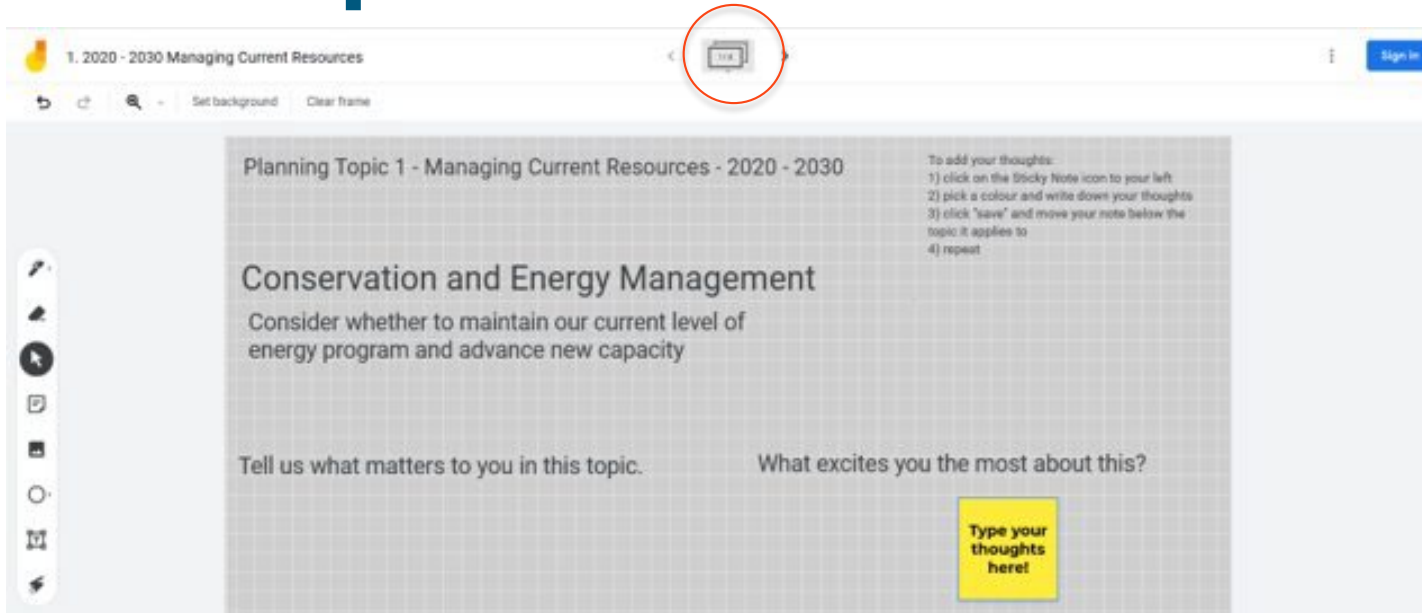
Conservation and Energy Management

Consider whether to maintain our current level of energy program and advance new capacity

Tell us what matters to you in this topic. What excites you the most about this?

Type your thoughts here!

Instructions for Google Jamboard – Switch Topics





Activity: 2020 to 2030

Tell us what matters to you about...

- Energy Conservation Programs
- Expiring Electricity Purchase Agreements with Independent Power Producers
- Small BC Hydro plants reaching end of life

Go to the google link in the chat

Planning objectives

- Keep costs down for customers
- Limit land and water impacts
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Planning Topics:

2030 - 2040



2030-2040: New power supply

Three broad ways to meet future electricity needs – what important to you?



	Greater Conservation and Customer Involvement <i>Using energy efficiently and wisely to meet provincial needs</i>	New Local Power Sources <i>Adding new infrastructure (local scale)</i>	Upgrading BC Hydro system <i>Adding new infrastructure (inter-regional)</i>
Capacity	<ul style="list-style-type: none"> • Demand response (e.g., home automation) • Time varying rates (e.g. time of use) 	<ul style="list-style-type: none"> • Utility scale batteries • Pumped storage 	<ul style="list-style-type: none"> • Revelstoke unit 6 • Transmission upgrades
Energy	<ul style="list-style-type: none"> • Expand energy efficiency programs • Customer generation (e.g. solar) 	<ul style="list-style-type: none"> • Local renewable (e.g. wind and solar) 	<ul style="list-style-type: none"> • Renewable wind and solar from most cost effective sources



Breakout Groups: 2030 to 2040

- Breakout into small groups
- Review backgrounder on the topics
- Tell us your thoughts about each planning topic
- You will stay in the same room
- Facilitators/Topics will rotate every 10 min

Planning objectives

- Keep costs down for customers
- Limit land and water impacts
- Limit greenhouse gas emissions through clean electricity
- Support reconciliation with Indigenous Nations
- Support the growth of B.C.'s economy

Breakout into Groups



Discussion: Planning Topics

Report back

Next steps and close



Next Steps

- Consultation Summary Report released in spring 2021
- Your feedback will inform Draft Actions
- Consultation on Draft Actions to take place in summer/fall 2021



Thanks for participating

- Please fill out an event evaluation and return it to us
- We're here to answer questions for the next 15 minutes



Clean Power 2040
Powering the future

 **BC Hydro**
Power smart