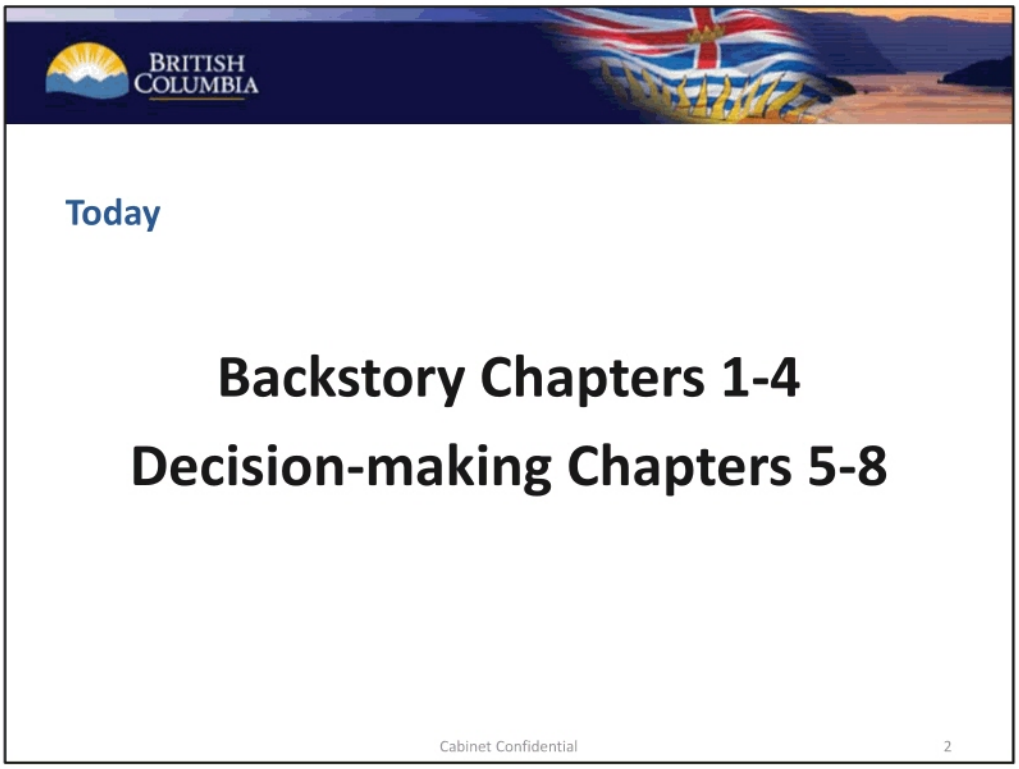
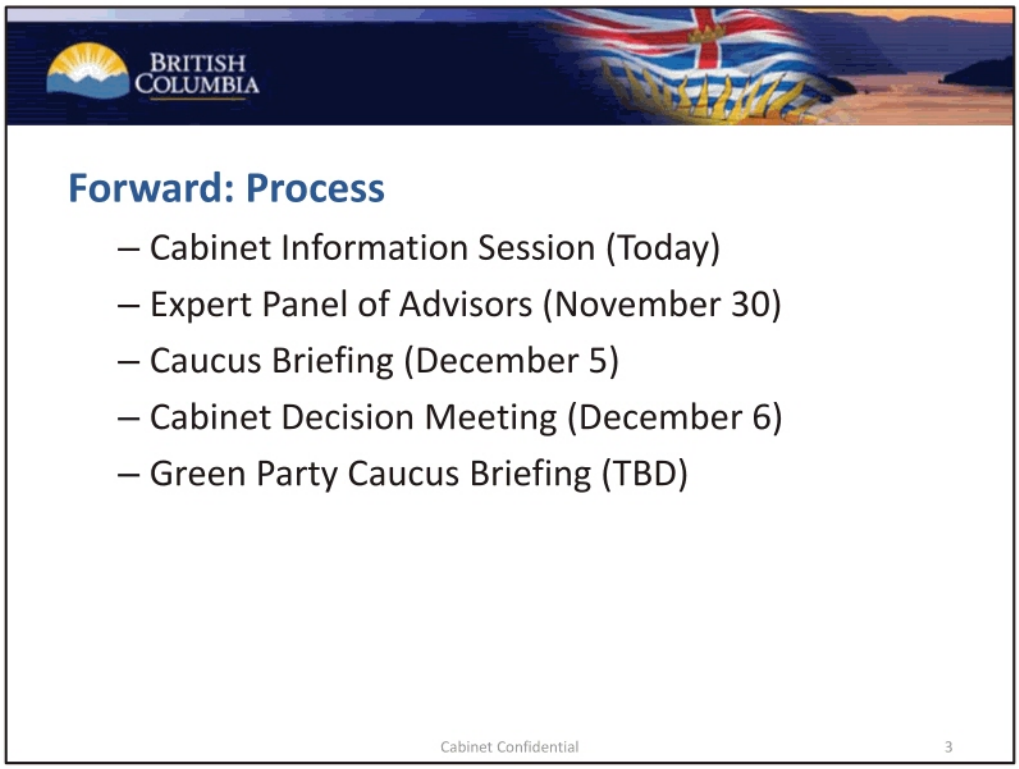
- Thank you, everyone
- We all recognize that the decision around Site C is momentous for Cabinet and for our Government. This is a tough decision as the pundits have been saying.

s.13,s.22



The rest of my presentation to you today will provide information on the upcoming process, some context for our upcoming decision, which includes additional information on power systems and utility planning practices.

s.12,s.13

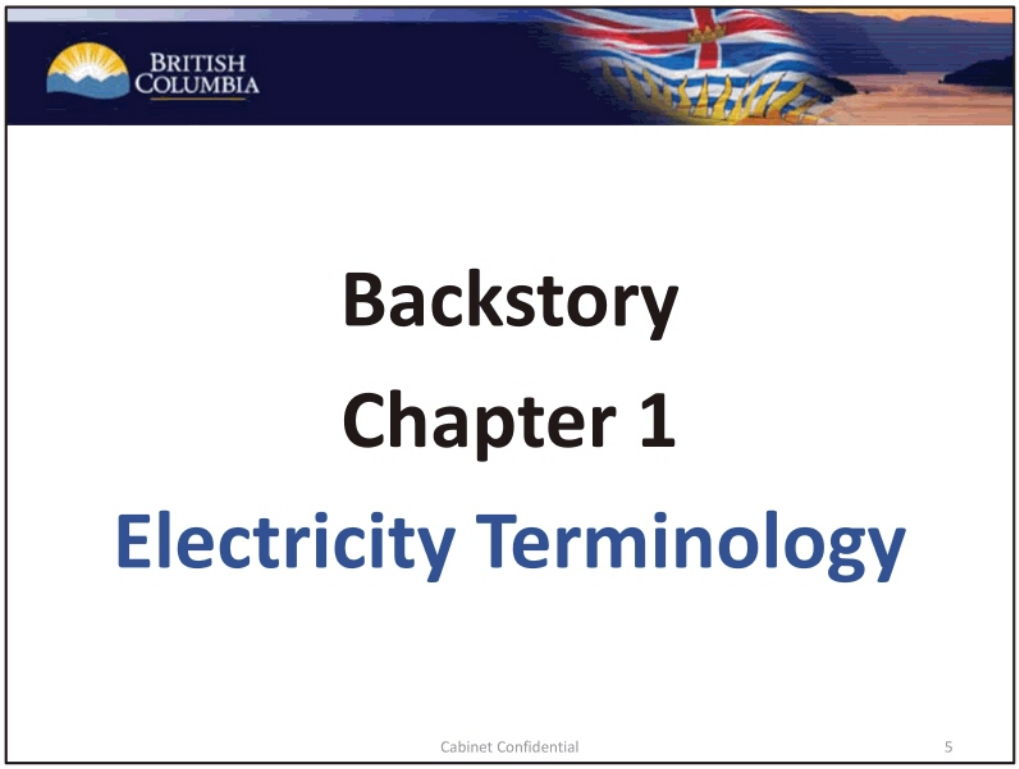


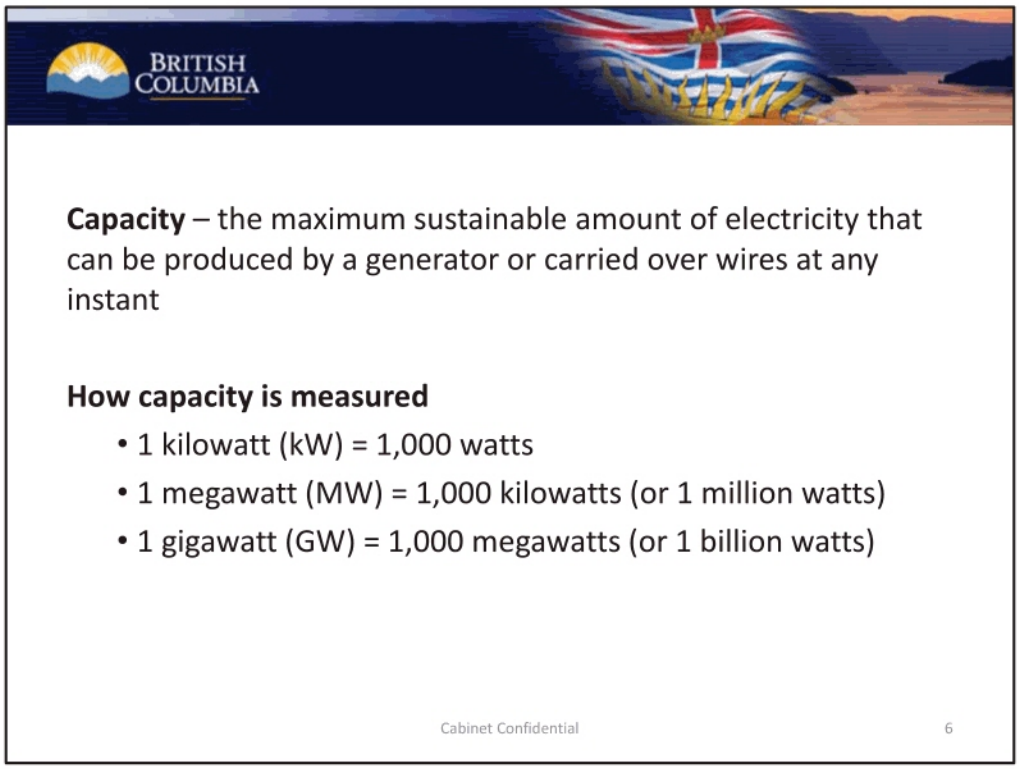
After today's information session, we will hear from the expert panel of advisors. Following in that we have our caucus discussion planned for December 5th The Cabinet Decision meeting will be on December 6th. The briefing with the Green Caucus meeting will be held on [TBD].

As part of the Provincial Cabinet's deliberations on Site C, an expert advisory panel has been asked to provide their views to Cabinet on the Site C Project and the BC Utilities Commission's Final Report. We will be hearing from them tomorrow.

The panelists were selected to speak from various perspectives:
BC Hydro ratepayers; environmental advocates; the power industry and investors; and landowners.

Each panelist will be provided with 15 minutes to lay out their perspectives. Panelists will then address points made by other panelists and will answer question from Cabinet members.


BRITISH
COLUMBIA
Backstory
Chapter 1
Electricity Terminology
Cabinet Confidential
5

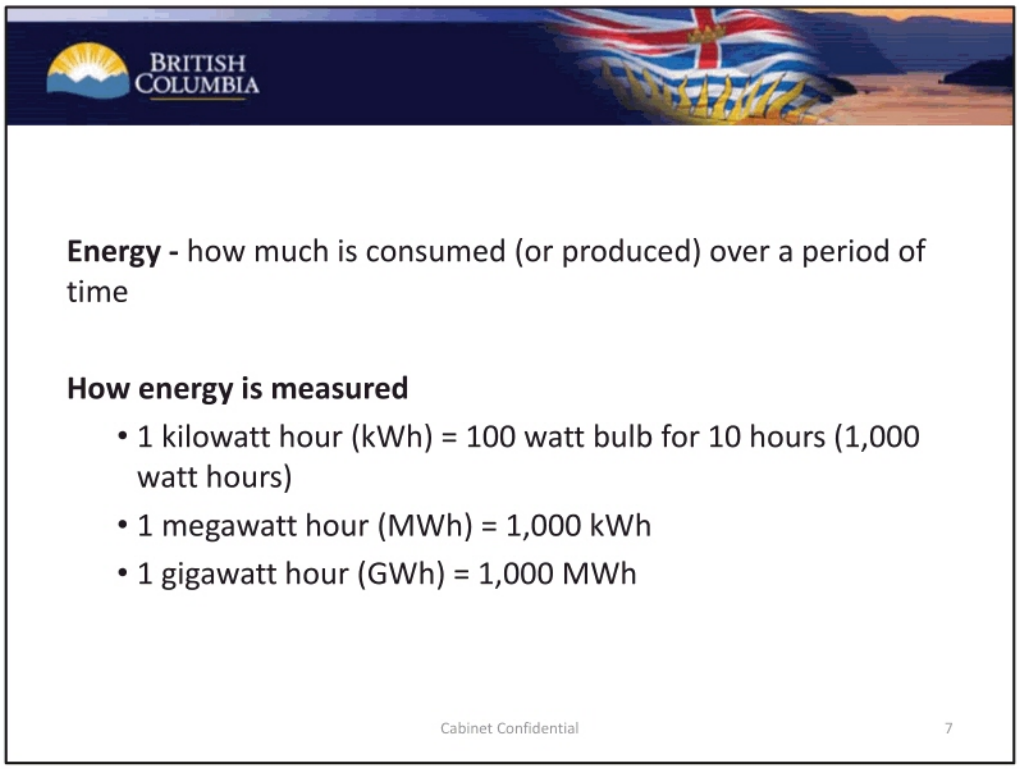


I'll briefly define some key electricity terms that will be used as we move through the presentation.

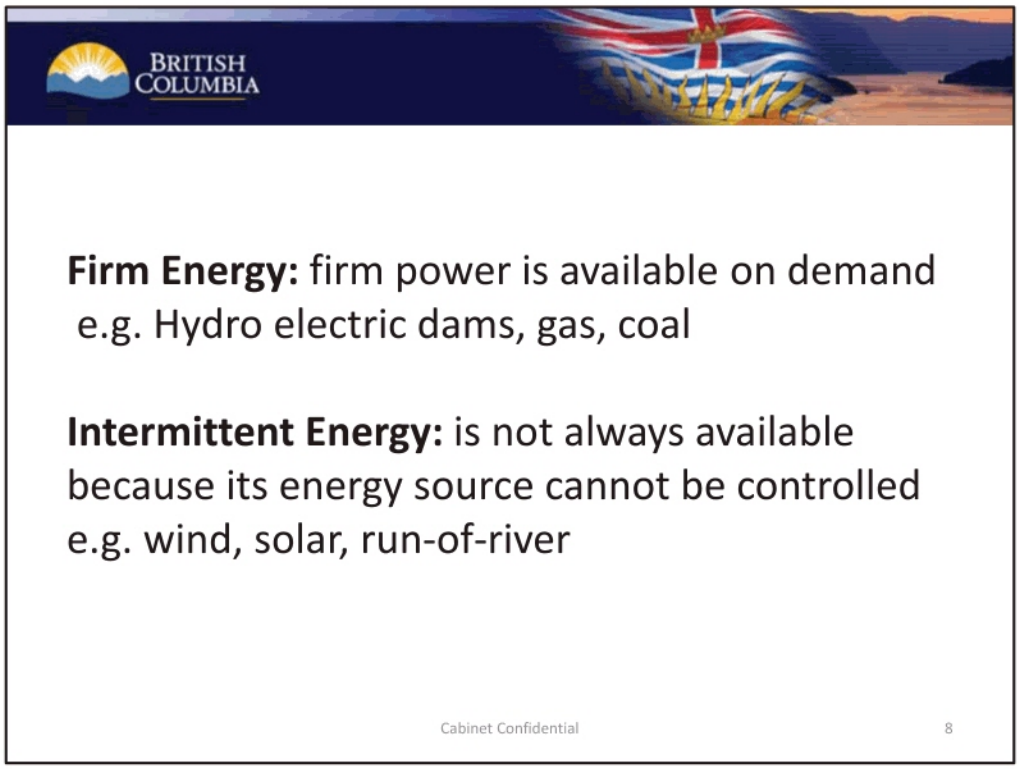
Capacity is the amount of energy that can be provided on demand. Capacity is measured in Watts and Megawatts, gigawatts

Firm Energy can be produced on demand, when needed.

Intermittent Energy is produced when its energy source, typically wind or the sun, is available. Since neither the wind or the sun can be controlled, intermittent energy cannot be provided on demand.

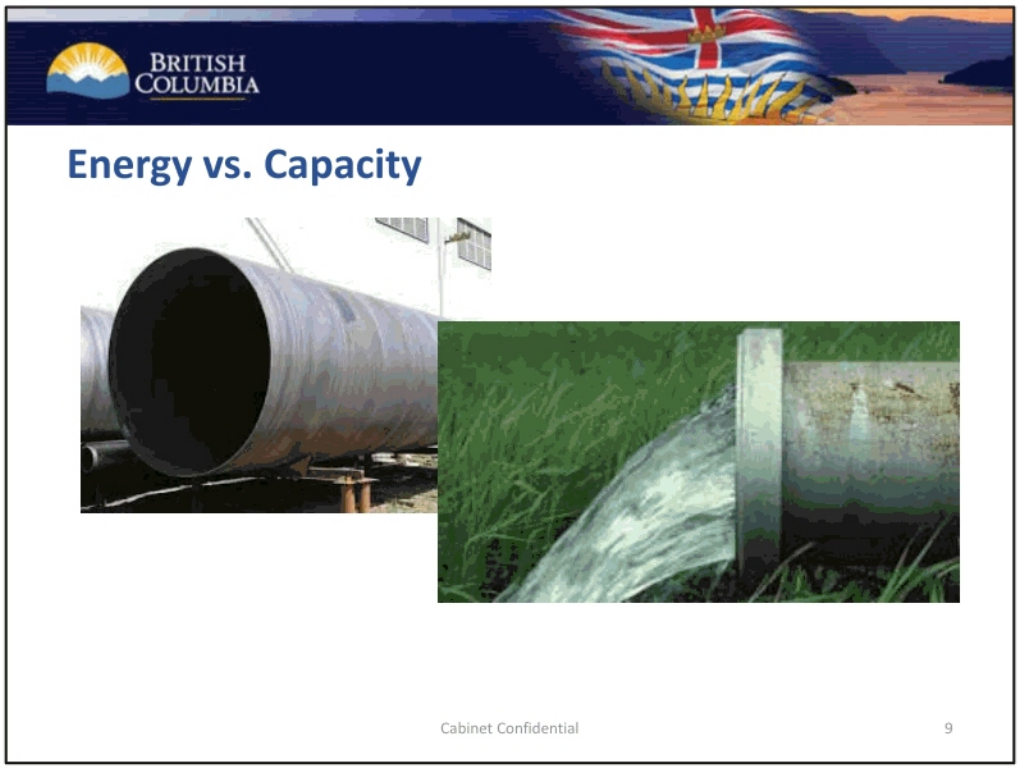


Energy is the amount provided over time. We talk about, kilowatt hours megawatt-hours and gigawatt-hours.



Two ways to understand that type of power we generate: Firm and Intermittet

Read slide



Energy and capacity are different ways to describe and measure electricity.

Using a pipe as an analogy, capacity is related to the size of the pipe and restricts the maximum amount of water that can flow through it.

Energy is analogous to the amount of water that flows through the pipe over time and it will vary.

While the amount of water (energy) can vary, the size of the pipe (capacity) does not.

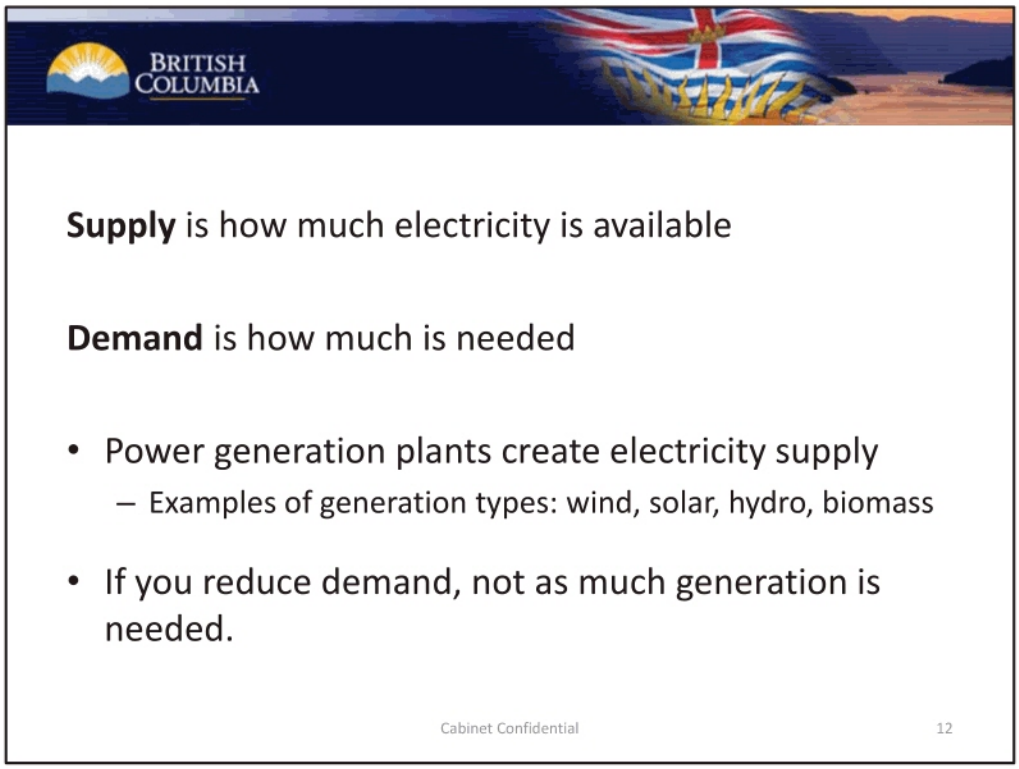
At some point, if you want to increase the amount of water you are using, you need a bigger pipe.

The difference between energy and capacity is important in the context of Site C

Backstory

Chapter 2

Supply and Demand



Supply is how much electricity is available and demand is how much needed

Demand for electricity is created when a device is plugged in to the wall or a light switch is turned on.

On the other end there needs to be supply that is providing electricity in response.

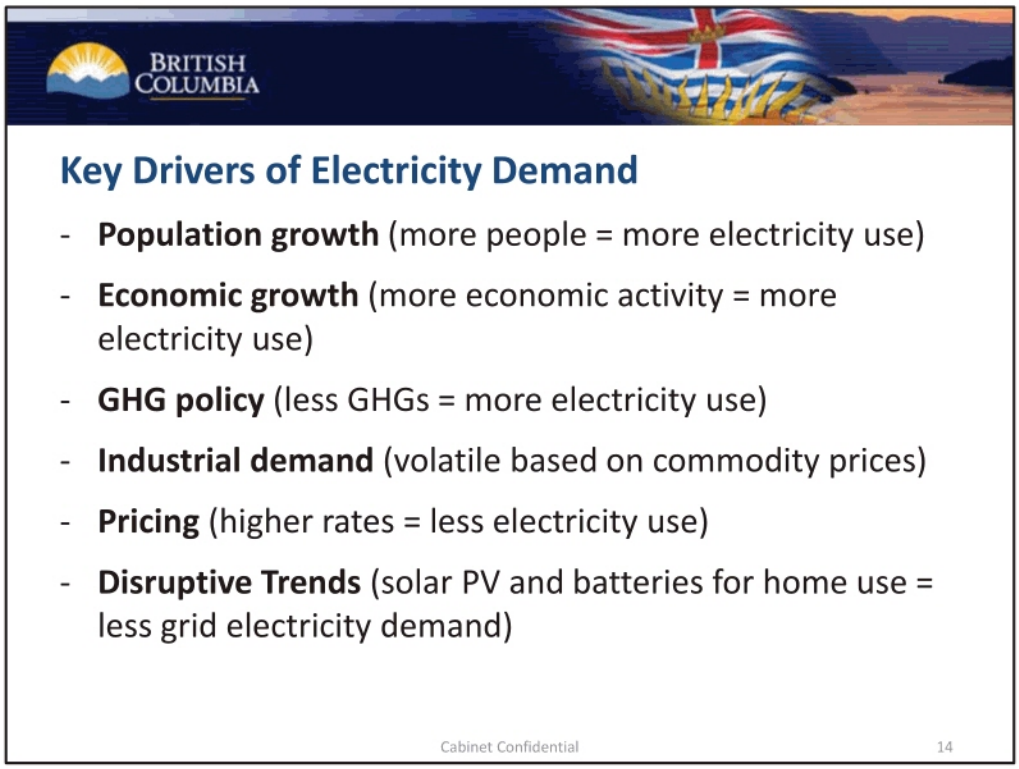
Power generation such as wind, solar, hydro, and biomass provide the electricity supply to meet demand.

However , if demand is reduced, not as much supply is needed.

Demand side management programs such as BC Hydro's Power Smart Program encourage less electricity use and that reduces the amount of electricity supply that is needed

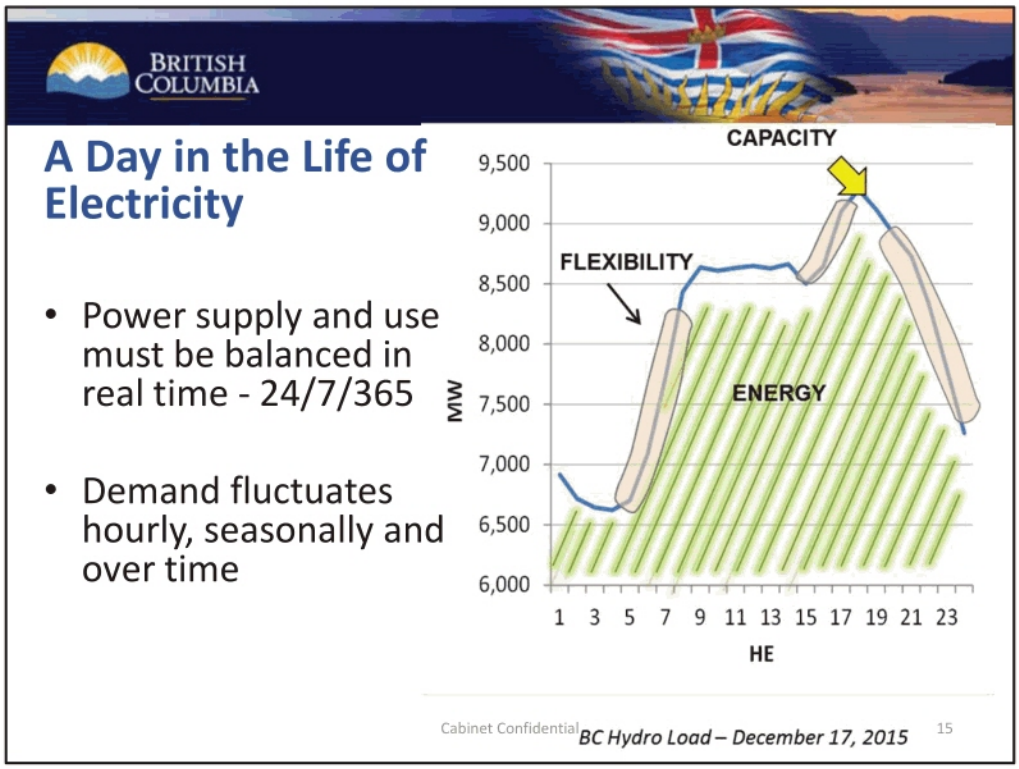
BC Hydro's Power Smart program encourages residential, business and local governments to reduce electricity use

Financial incentives are used to encourage investment in more energy efficient technologies.



BC Hydro's forecasts account for population growth, economic growth, known GHG policy, industrial demand, and pricing.

BC Hydro maintains flexibility in its plans to respond to changes in GHG policy and "disruptive trends," like a major drop in battery prices and increased availability.



Electricity use, aka demand, fluctuates during the day as shown here. Notices when electricity demand is at the highest –after work, and when it jumps – like when we all wake up in the morning.

It also fluctuates seasonally. Anyone want to guess the time of year where energy is in greatest demand? So imagine what would happen if we didn't have enough energy supply to meet the demand.

Tell story of Lwangua village. Electricity came on between 8am and 11pm and that's it. Sweating with no AC, no fan and no light in the bathroom. The hospital used a diesel generator to power one light in the ER during the night.

To ensure reliable electricity service to customers, an electric utility must ensure that supply equals demand in real-time and at all times, it's a balance that must be maintained 24 hours a day, 7 days a week, 365 days of the year.

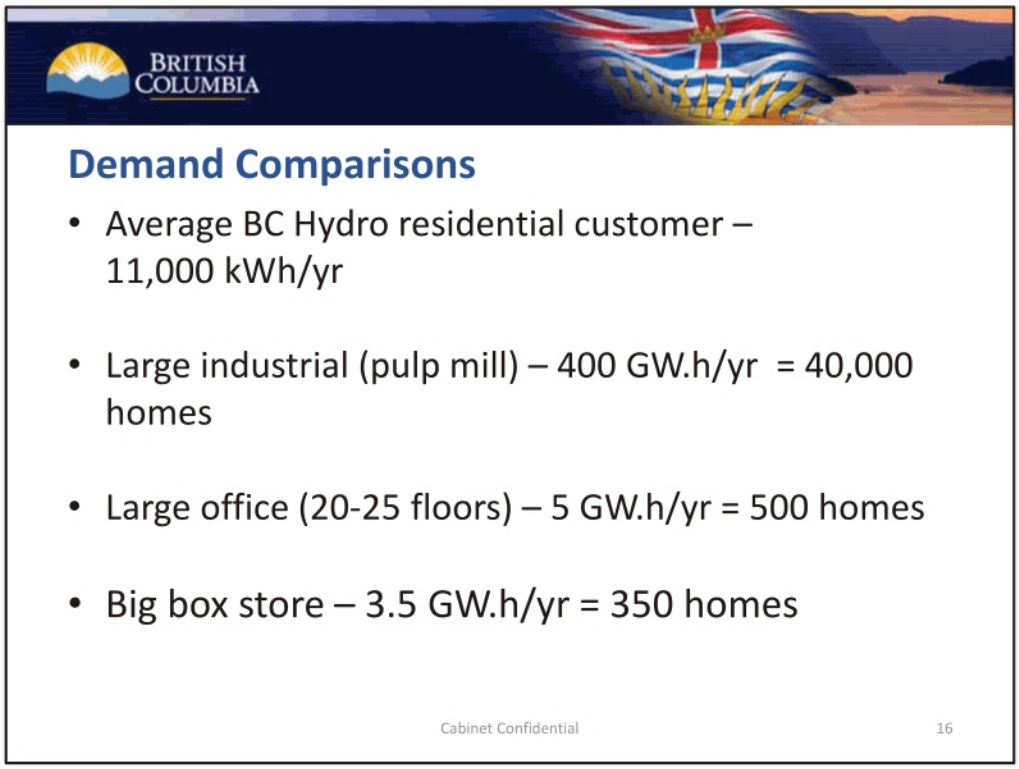
This balance needs to be maintained on the coldest day, through the driest seasons, when it is windy and when it is not.

If this balance is not maintained it can result in safety issues and can damage equipment.
With demand fluctuating constantly, utilities need enough electricity generation and transmission capacity to meet peak demand and sufficient fuel or energy to meet daily and annual needs.

The consequences of not having enough electricity to meet demand is much greater than the consequences of having too much electricity. A shortage leads to brownouts, an excess leads to trade.

If electricity demand is forecast to increase, the question for utilities is when and how to invest to meet it.

Utilities need enough generation and transmission to meet peak demand, sufficient fuel (energy) to meet daily and annual needs, and flexibility to respond to changes

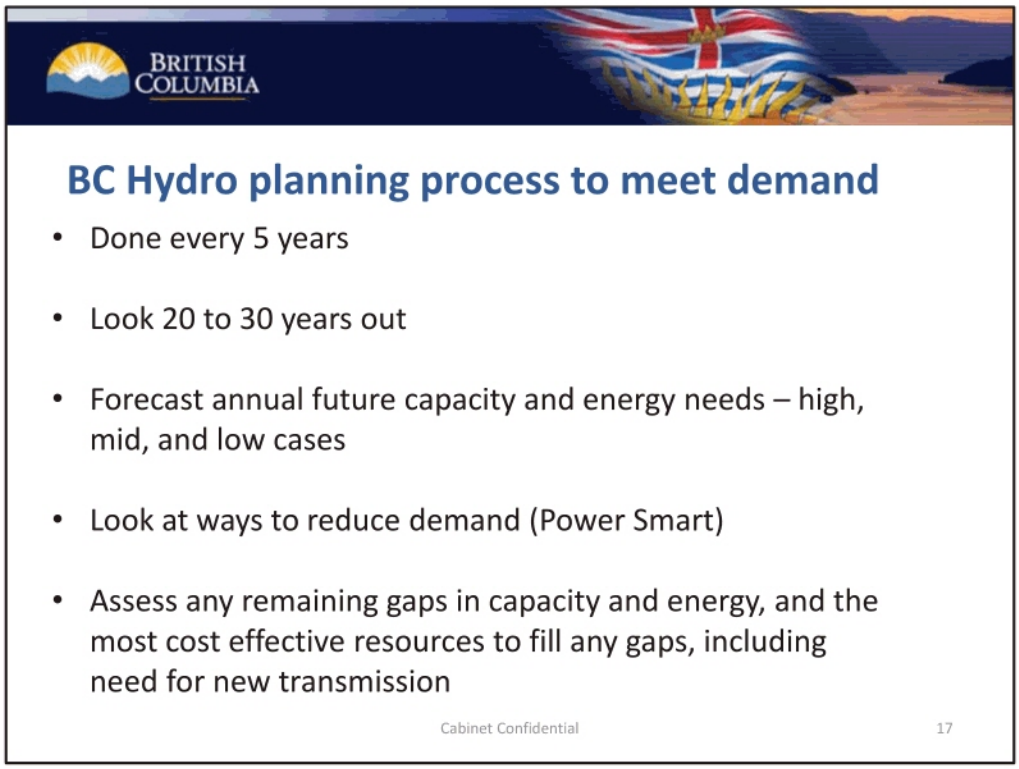


To illustrate the relative demand of different customers some average energy uses are listed here.

In short large industrial facilities use 40,000 the amount of energy than residential customers, a large office 500 times and a large commercial store 350 times.

Additional information on conversions if needed:

- 400 GWh/yr = 400 million kWh/yr
- 5 GWh/yr = 5 million kWh/yr
- 3.5 GWh/yr = 3.5 million kWh/yr



Utilities need to plan in order to keep their systems reliable and in order to ensure that they are well position to meet future electricity demand.

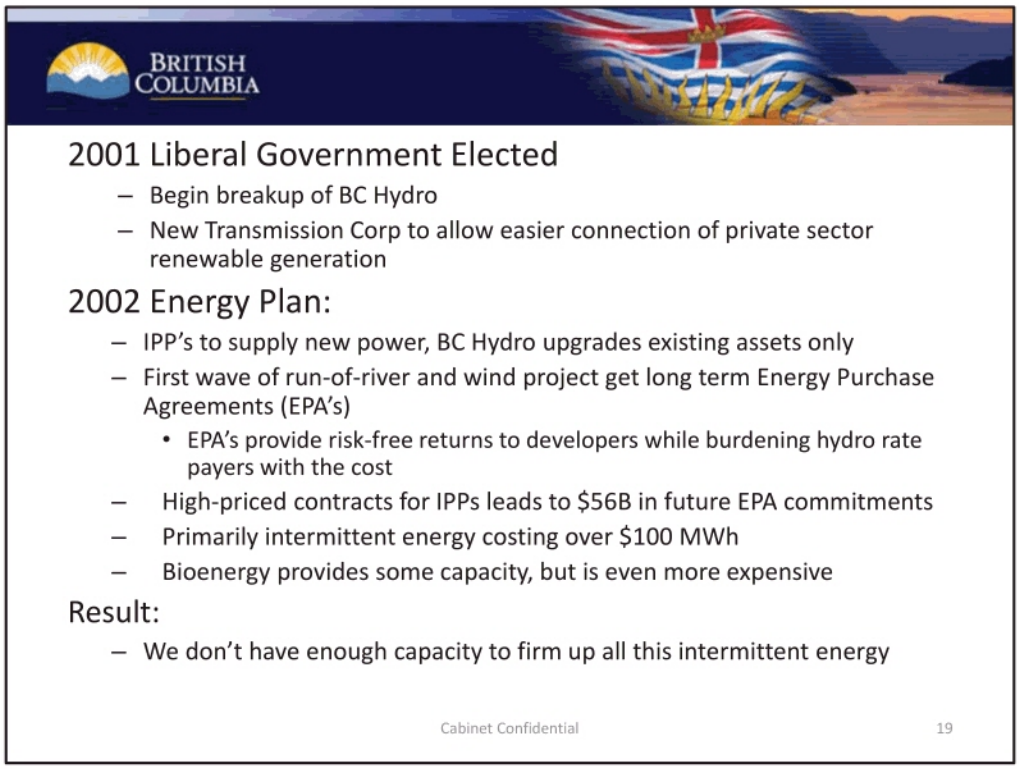
BC Hydro's plan is known as the Integrated Resource Plan or IRP.

Go to slide

Backstory

Chapter 3

How we got here



I would like to talk about the policy decisions since 2000 and how they affect the situation now.

s.13

In 2009, the BCUC rejected BC Hydro's 2008 Long Term Acquisition Plan, requiring more reliance on the Burrard Plant.

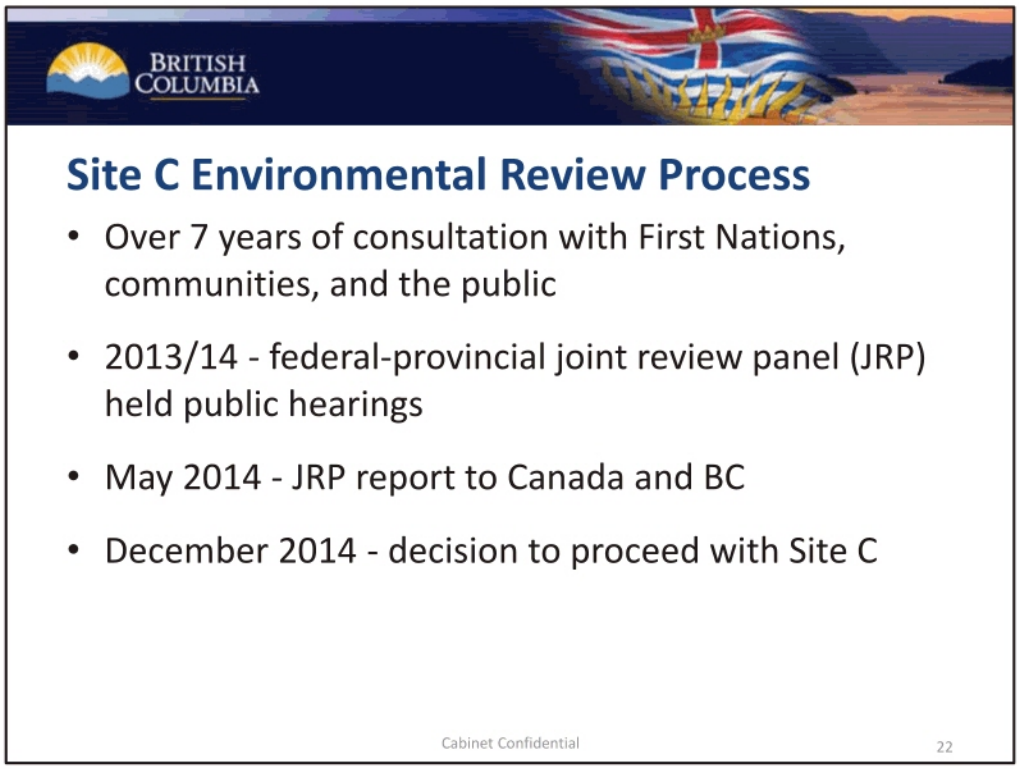
In response, Government drafted the 2010 Clean Energy Act, putting portions of the Climate Action Plan and Energy Plan into legislation and exempting a number of projects, including Site C, Smart Meters, and calls for IPP power from BCUC oversight.

s.13

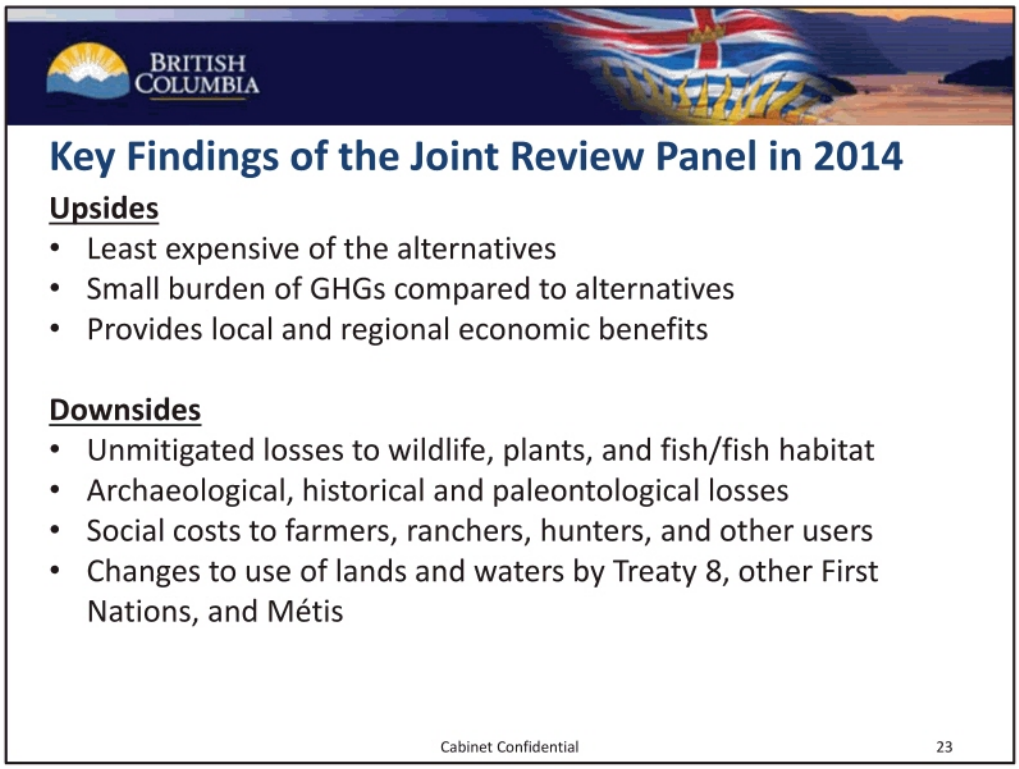
Site C was planned as a resource to meet BC Hydro's needs for capacity in the 2020s, and was approved in 2014.


BRITISH COLUMBIA
Why was Site C chosen?
s.12,s.13
Cabinet Confidential
21

s.12,s.13



Site C underwent a comprehensive environmental review with years of consultation, studies, and engineering work leading a joint Federal-Provincial Review Panel that held hearings and received almost 30,000 pages of evidence.

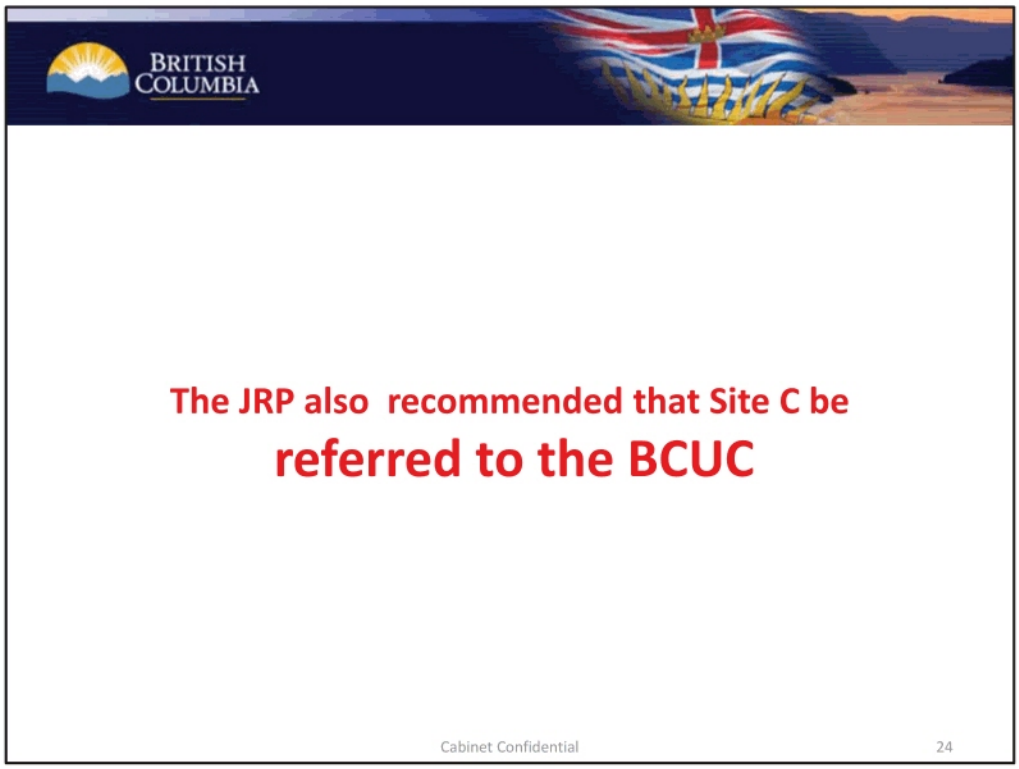


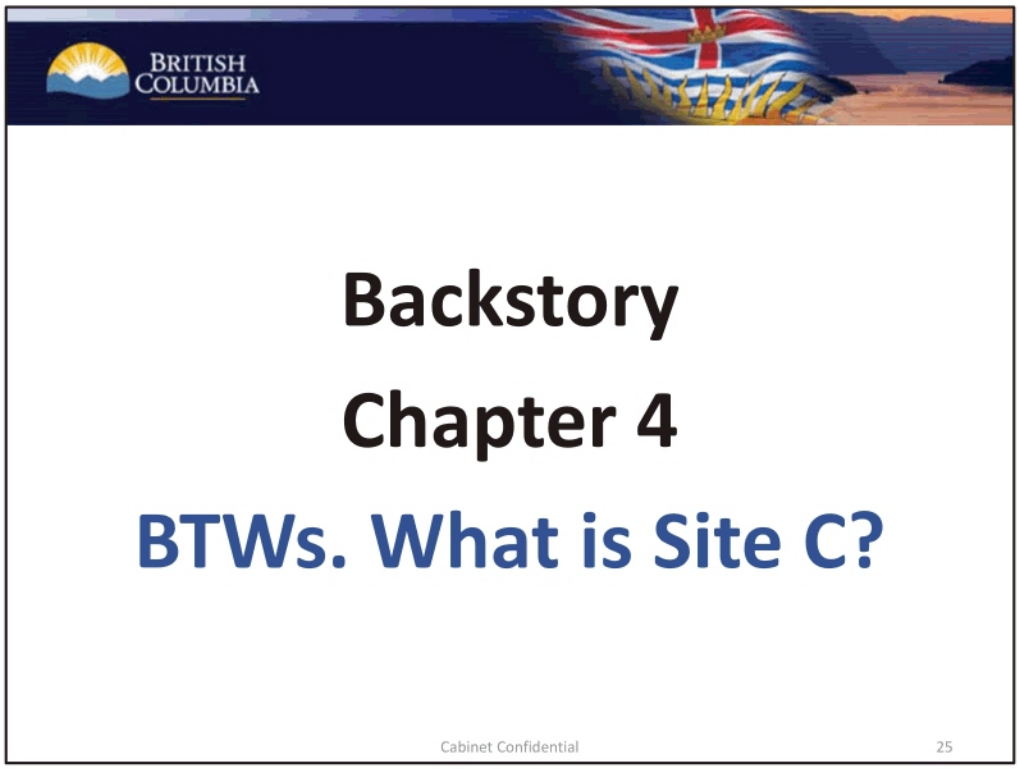
The JRP found that Site C was the least expensive of the generation options that BC Hydro was considering with the smallest amount of GHG emissions. In addition the construction and operation of the project would provide local and regional economic benefits.

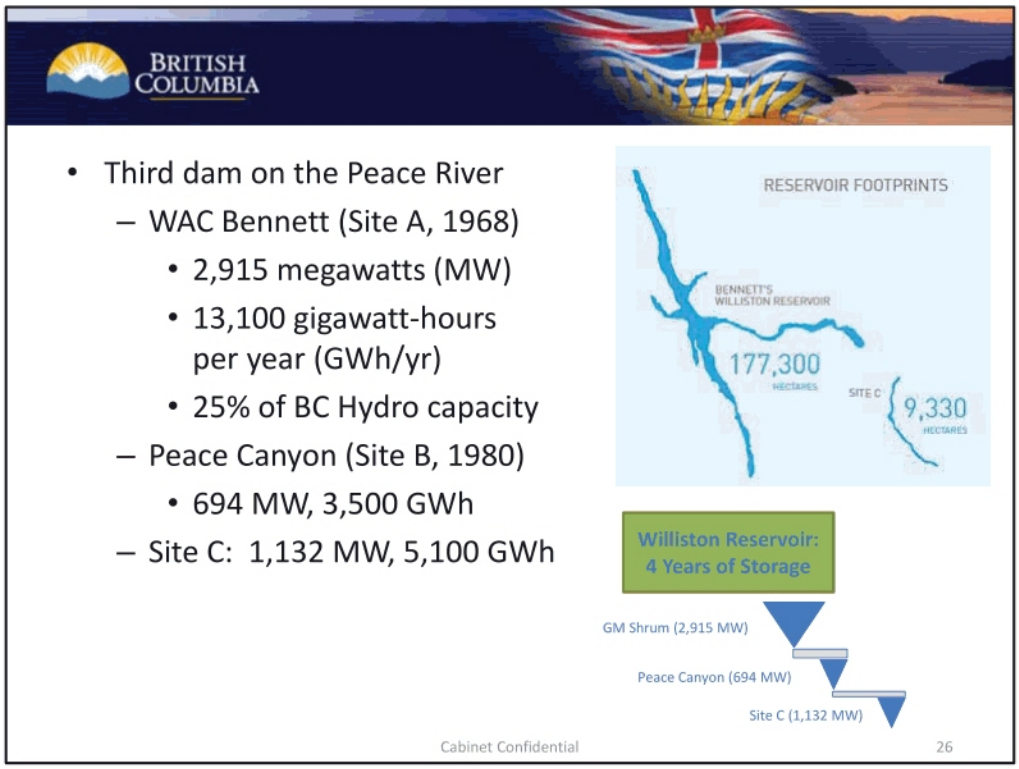
The JRP also pointed out the potential negative impacts of the project.

The JRP stated that the Project would result in significant cumulative effects on fish, vegetation and ecological communities, wildlife, current use of lands and resources for traditional purposes, and heritage.

The project would end agriculture on the Peace Valley bottom lands, and while that would not be significant in the context of B.C. or western Canadian agricultural production, it would highly impact the farmers who would bear the loss.


BRITISH COLUMBIA
The JRP also recommended that Site C be
referred to the BCUC
Cabinet Confidential
24


BRITISH
COLUMBIA
Backstory
Chapter 4
BTWs. What is Site C?
Cabinet Confidential
25



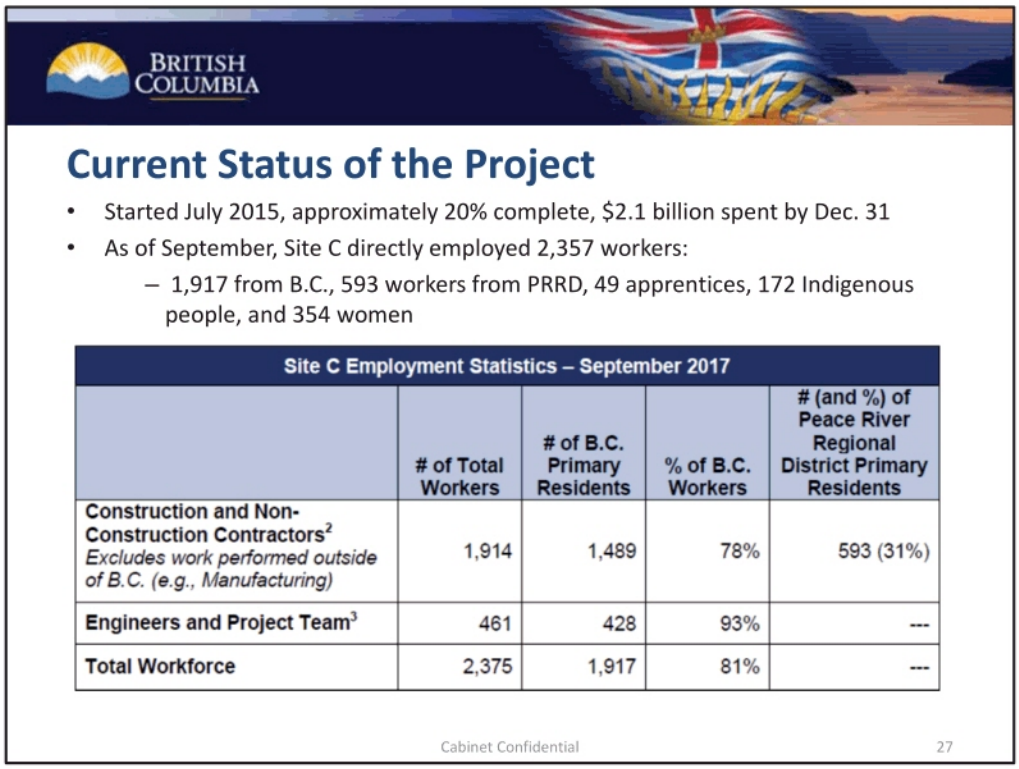
Site C will be the 3rd dam on an already regulated river system

Williston Reservoir, created by the WAC Bennett Dam, is the largest in the BC Hydro system,

It is 250 km long and 74 km3 storage (60 million acre feet) – or approximately 4 years of storage

Even though Site C reservoir is small it will provide firm power

The availability of fuel, or water, is from the upstream reservoir – just like for Peace Canyon below the Bennett Dam or Revelstoke below Mica, or all of the US dams on the main-stem of the Columbia River below the storage built in BC under the Columbia River Treaty

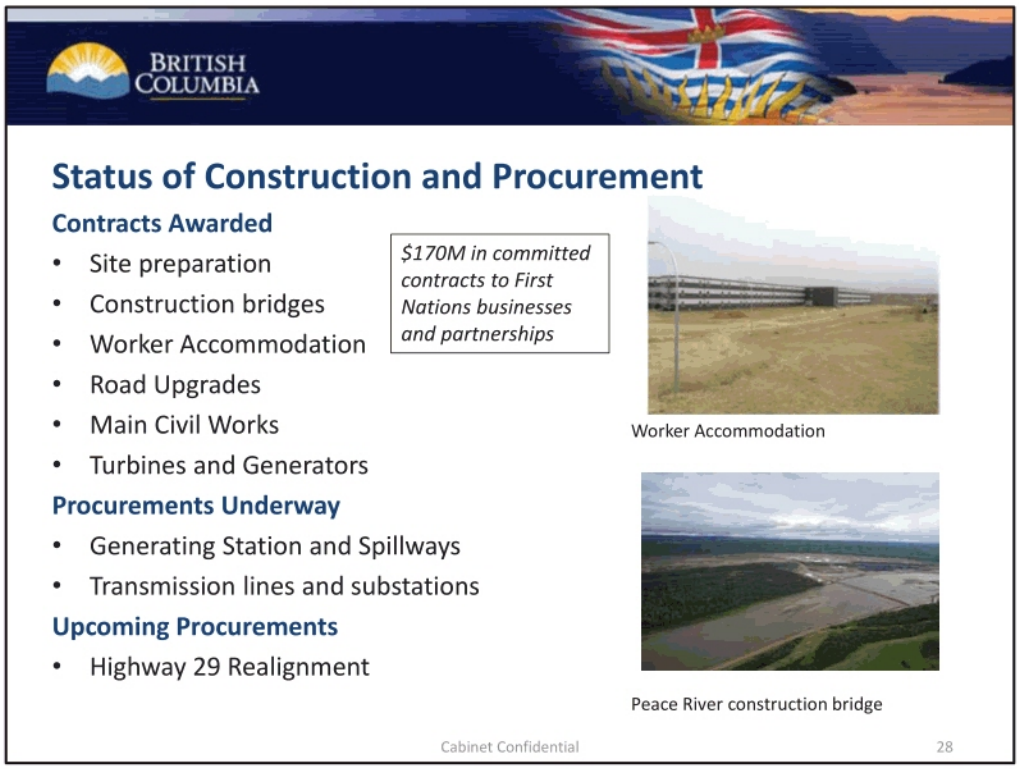


Construction of Site C started over two years ago, and sunk costs are project to be $2.1B by the end of next month

Current employment on the project is over 2,300, and you can see the breakdown on this slide. 81 per cent of Site C workers are from BC and 31 percent are from the Peace River Regional District.

These job numbers fluctuate depending on what work is being done, and by season

Consistently BC workers represent over 80% of the work force



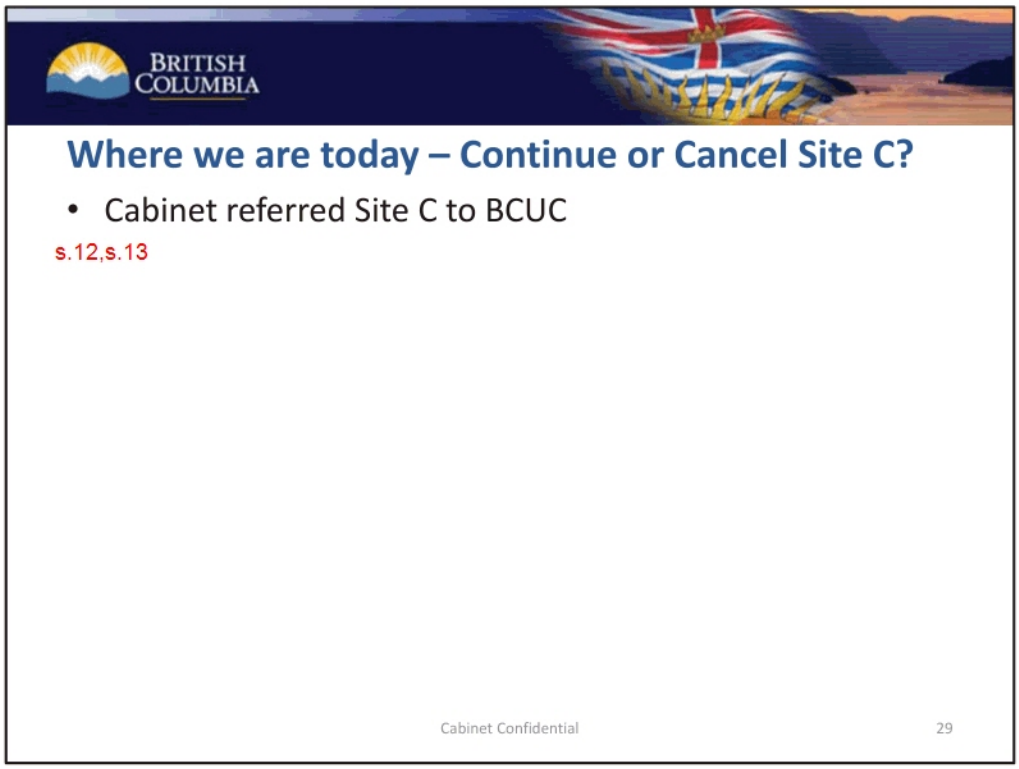
In terms of procurement, Site C was deigned with contracts sequenced throughout the project

The site preparation, bridges, worker accommodations and road upgrades were all early works

The Main Civil Works contract is the largest for the project and runs through the entire construction period

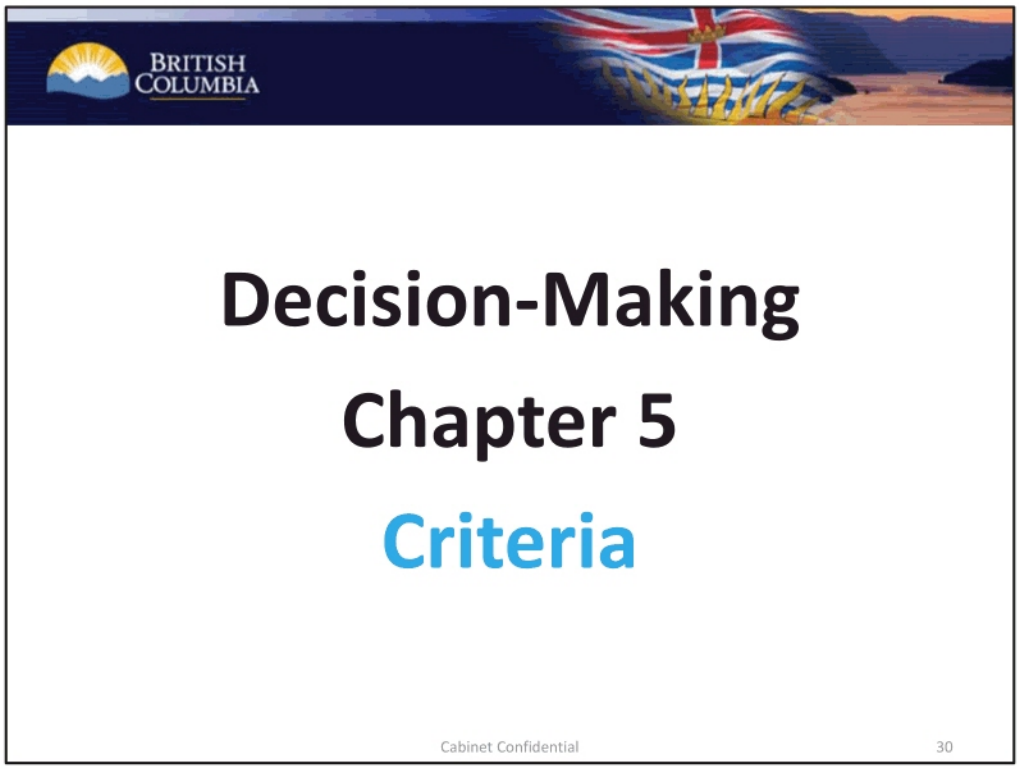
The turbines and generators contract needed to be completed before the powerhouse can be designed

Two large contracts are in procurement – Generating Station and Spillways and Transmission lines and substations - but no contracts will be awarded until a decision is made on the future of Site C



Four months ago, this Cabinet referred Site C to the BCUC.

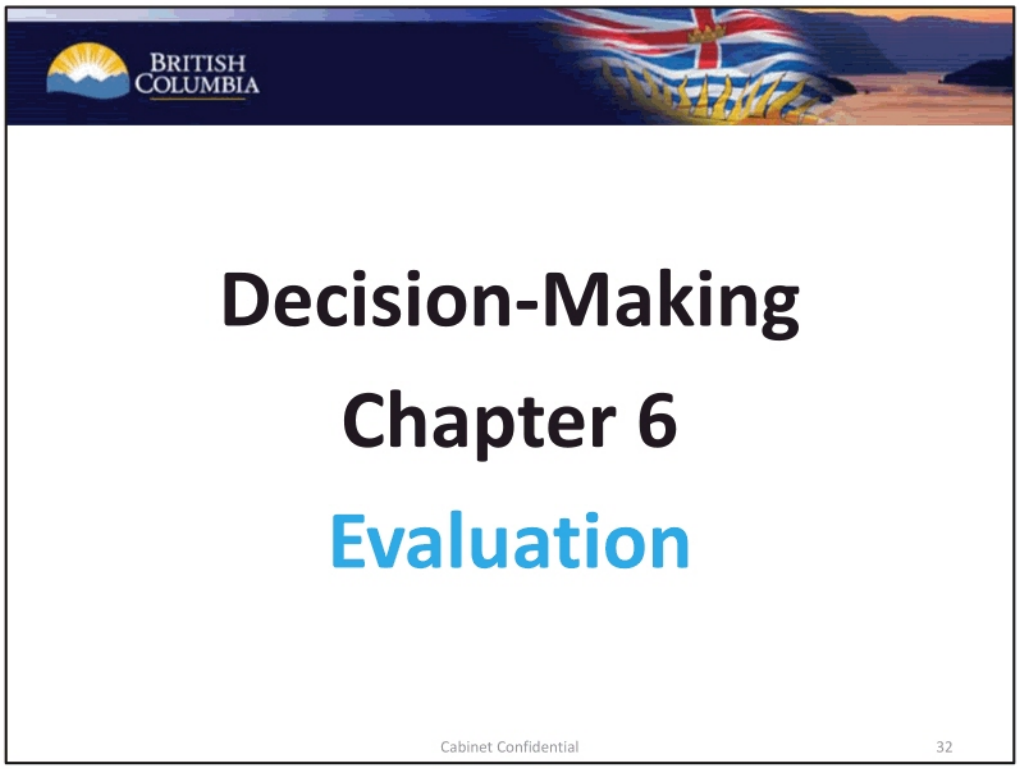
s.12,s.13


BRITISH
COLUMBIA
Decision-Making
Chapter 5
Criteria
Cabinet Confidential
30

Page 32

Withheld pursuant to/removed as

s.12;s.13


BRITISH
COLUMBIA
Decision-Making
Chapter 6
Evaluation
Cabinet Confidential
32

Page 34 to/à Page 49

Withheld pursuant to/removed as

s.12;s.13

Page 50 to/à Page 53

Withheld pursuant to/removed as

s.12;s.16;s.13

Page 54 to/à Page 66

Withheld pursuant to/removed as

s.12;s.13


BRITISH
COLUMBIA
QUESTIONS?
Cabinet Confidential
65