

# Performance Based Regulation Plan Overview

# Welcome and Introductions

# Purpose of Today

# Agenda

- BCUC Order G-388-21 on Performance Based Regulation
- Introduction to Typical PBR Frameworks
- Escalation factors
  - Inflation Factor
  - Productivity (X) Factor
  - Growth Factor
- Setting the Base Year & Term
- Controllable & Indexable Costs
  - Operating
  - Capital
- Y Factors
- Exogenous (Z) Factors
- Service Quality Indicators
- Off-Ramps and Re-Openers
- Filing Structure

# BCUC Order and Decision G-388-21

## Background:

- F17-F19 RRA Decision directed a Performance Based Regulation (PBR) Report (Dir. 28)
- Filed by BC Hydro as part of its F20-F21 RRA
- BCUC established a separate proceeding to review the PBR Report



# Performance Based Regulation - Primer

## Performance Based Regulation (PBR)

- An alternative method to setting revenue requirements
- Involves selecting a base year and applying a set of factors to set revenue requirements

$$\text{Revenue} = \text{Base Year} * (I - X + G) + Y + Z$$

I = Inflation

X = Productivity Adjustment

G = Growth Factor

Y = costs forecast & recovered from customers

Z = costs for one-time exogenous events

# BCUC Order and Decision G-388-21

**Per PBR Report Order G-388-21 issued on December 21, 2021, BC Hydro is to file, no later than December 31, 2023, a proposal for its next RRA that includes the following:**

1. A test period of at least five years;
2. A proposed formula for as much as possible of the utility's controllable operations and maintenance and capital expenditures, incorporating cost inflation and productivity indices;
3. A proposal for which, if any, of the years F2022–F2025 should be used as the base year;
4. Proposals for specific exclusions from the formula or index approach, if appropriate (including “Y factors” and “Z factors”);

# BCUC Order and Decision G-388-21

**Per PBR Report Order G-388-21 issued on December 21, 2021, BC Hydro is to file, no later than December 31, 2023, a proposal for its next RRA that includes the following:**

5. Consideration of whether a different approach is required for growth capital as compared to sustainment capital;
6. A proposal for the criteria and reasons, if any, to abandon the PBR approach during the test period (“Off-Ramps”); and
7. An assessment of whether annual reviews of BC Hydro’s performance and rates during the test period are appropriate and what they should encompass and exclude.



# BCUC Order and Decision G-388-21

## Panel Discussion (Order G-388-21):

- *Page 45:* a hybrid ARM with a revenue cap is the most appropriate approach for determining BC Hydro's revenue requirement;
  - to the extent possible, BC Hydro's revenue requirement should be determined using a formula;
    - the formula should use appropriate indices to account for changes in BC Hydro's costs over time and should also incorporate a productivity factor;
  - it is appropriate to use forecasts for determining some aspects of BC Hydro's revenue requirement.

# BCUC Order and Decision G-388-21

## Panel Discussion (Order G-388-21):

- *Page 51:* Specifically, there are two areas of BC Hydro's expenditures that the Panel considers should continue to be forecast rather than determined by an index:
  - Expenditures over which BC Hydro has limited control, and
  - Expenditures which are not easily linked to an available index.



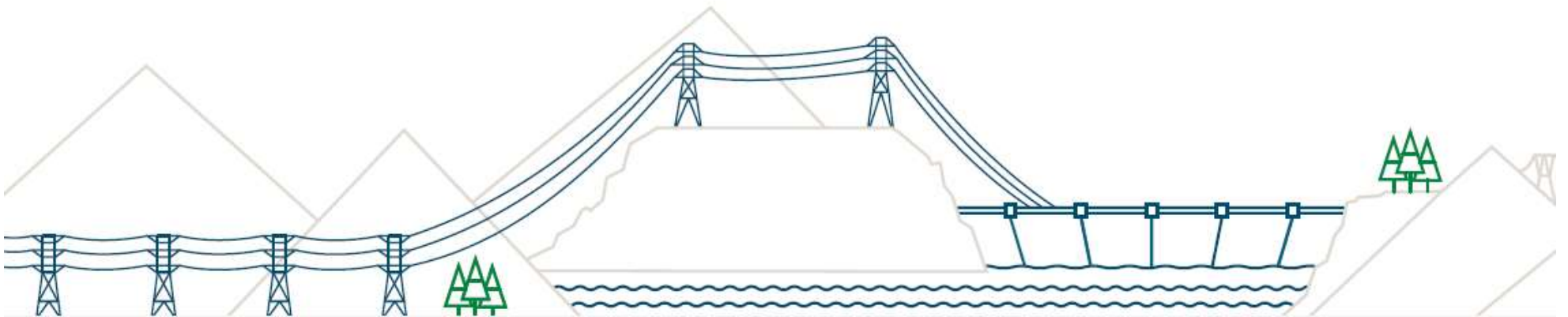
# Base Year

- A base year is needed to apply the indexing formula to
- **Order G-388-21** asked for:
  - A proposal for which, if any, of the years F2022–F2025 should be used as the base year;
- Two Options were Considered:
  1. Adjusted F2025 RRA plan; or
  2. Fiscal 2026 new bottom-up, top down plan

# Base Year

- We expect to propose a Fiscal 2026 base year based upon a new bottom-up, top-down plan due to factors such as:
  - Our cost profile has changed due to high inflation such as labour and fuel, Site C operating costs, and UNDRIP
  - Term is proposed until fiscal 2031 (six years) warranting a thorough review of base year costs
    - Our next revenue requirements application will include the level of evidence to support a Fiscal 2026 base year
- Index would then be applied to the base year starting in fiscal 2027 and through to fiscal 2031.

# Base Year – Any Questions or Comments?



# Controllable and Indexable Costs

Controllable and Indexable costs are the portion of Operating and Capital costs BC Hydro proposes is escalated annually by a formula (e.g., Inflation, Productivity and Growth Factor)

- **Order G-388-21** asked for:
  2. A proposed formula for as much as possible of the utility's controllable operations and maintenance and capital expenditures, incorporating cost inflation and productivity indices;
  4. Proposals for specific exclusions from the formula or index approach, if appropriate (including "Y factors" and "Z factors");
  5. Consideration of whether a different approach is required for growth capital as compared to sustainment capital.

# Controllable and Indexable Costs

- ***(Panel Discussion) Page 51:*** Specifically, there are two areas of BC Hydro's expenditures that the Panel considers should continue to be forecast rather than determined by an index:
  - Expenditures over which BC Hydro has limited control, and
  - Expenditures which are not easily linked to an available index.





# Controllable and Indexable Operating Costs

**Developed and applied three Guidelines to identify costs that are not controllable and/or indexable (i.e., not appropriate to be under formula):**

Not Controllable:

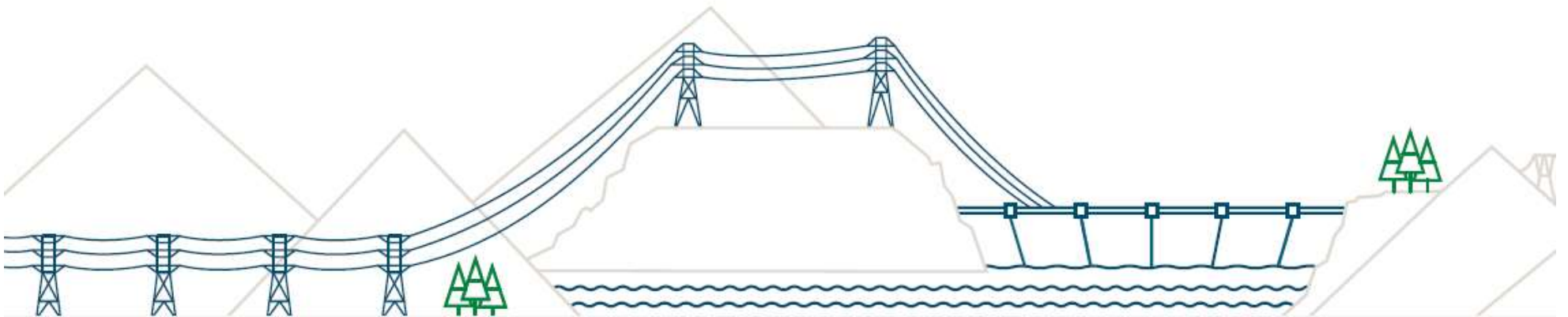
1. Items already with regulatory account treatment
2. Other, not controllable items such as:
  - Driven by third parties
  - Driven by external factors (e.g., routine trouble work)

Not Indexable:

3. Items with a known cost but the cost is not indexable during the term.



# Controllable and Indexable Operating Costs – Questions or Comments?



# Controllable and Indexable Capital

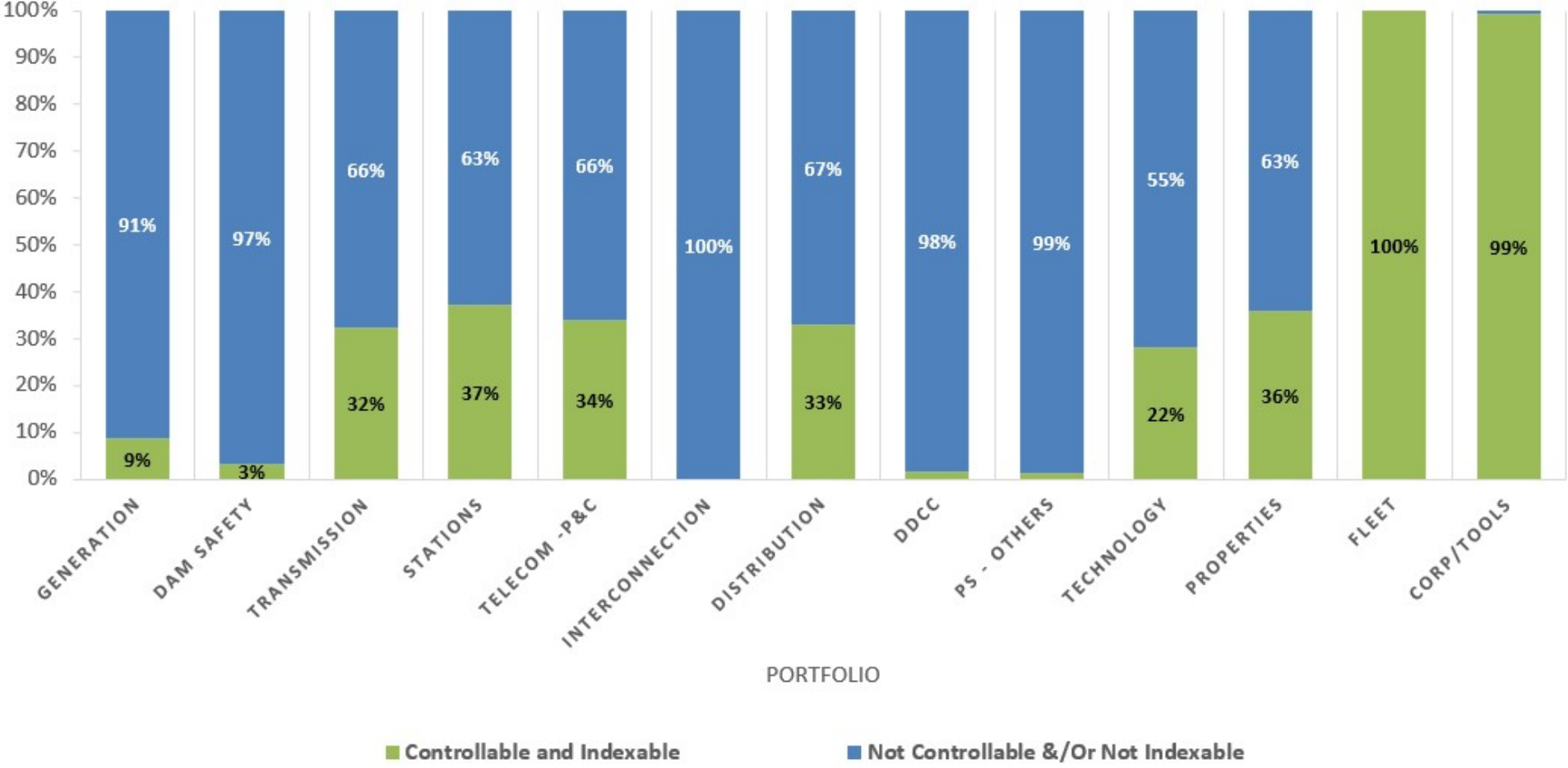
Our proposal includes as much as possible of BC Hydro's controllable and indexable capital expenditures.

Capital under PBR formula likely to include part or all of:

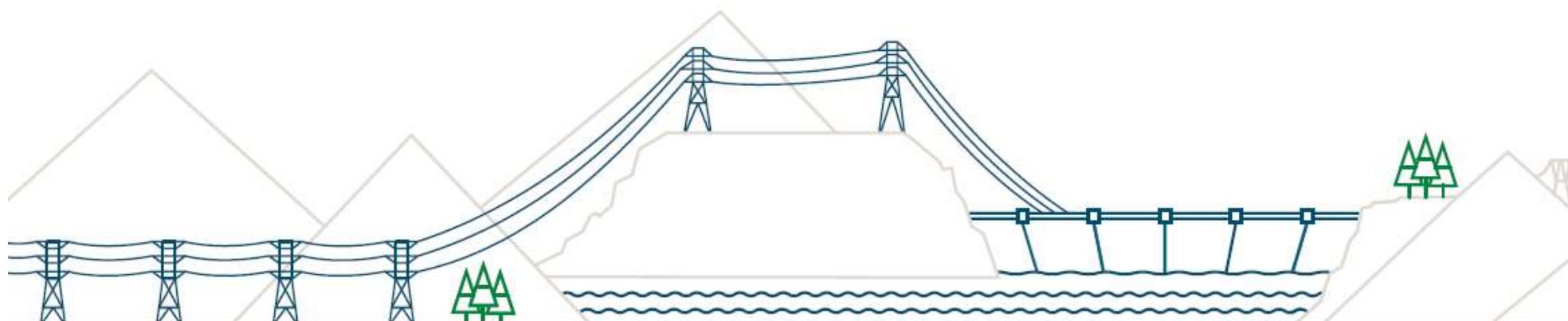
- Recurring Capital Programs – T, D & G
- Small Capital Projects - T, D & G
- Fleet vehicles
- Building Improvements
- Technology programs
- Tools and minor equipment

# Controllable and Indexable Capital

## Sample 10-year Capital Expenditures by Portfolio



# Controllable and Indexable Capital – Questions or Comments?



# Y Factors

Order G-388-21 asked for:

- 4. Proposals for specific exclusions from the formula or index approach, if appropriate (including “Y factors” and “Z factors”);
- Y Factors are costs we propose continue to be forecast.

## Costs to be Forecast:

Cost of Energy\*

Demand Side Management\*

Finance Charges\*

Continued amortization of  
Capital Additions from fiscal  
2025 and earlier\*

*\*Costs with current Regulatory  
Accounts*

Taxes

Return on Equity

Amortization of new Capital  
Additions excluded from formula

Operating Costs excluded from  
formula

# Y Factors

## Treatment of Variances to forecast:

- Variances with regulatory account treatment will be recovered or refunded to customers
- Variances without regulatory account treatment will be to the account of the shareholder



# Y Factors

## Forecasting Options considered:

- 1) Annually
- 2) Every Three Years
- 3) Every Six Years

# Y Factors

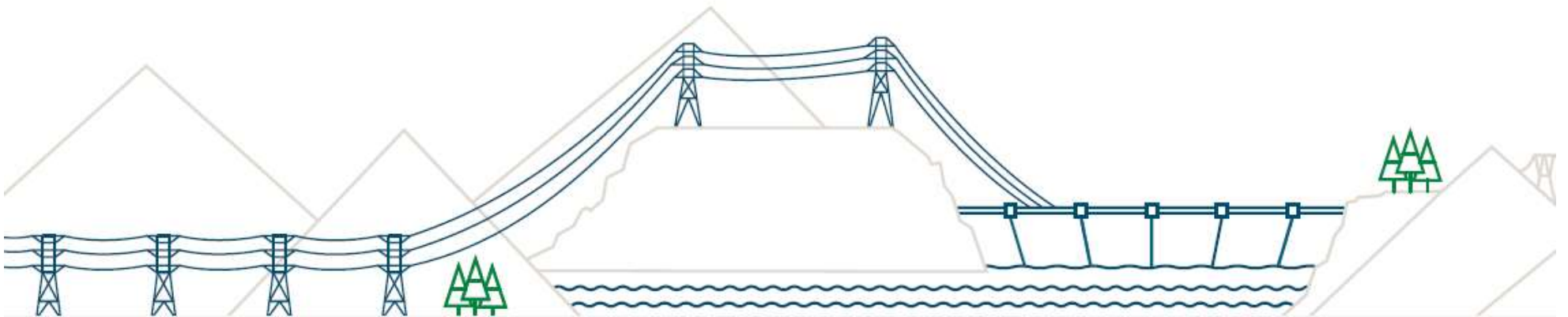
## Approach:

- We expect to submit a three-year forecast as part of the next RRA
- Mid-way through the term we will submit another three-year forecast (RRA)
- In both instances evidence will be provided to support the forecast

J-M	A-J	J-S	O-D	J-M	A-J	J-S	O-D	J-M	A-J	J-S	O-D	J-M	A-J	J-S	O-D	J-M	A-J	J-S	O-D	J-M	A-J	J-S	O-D	J-M	
F25	F26			F27			F28			F29			F30			F31									
	Six-Year PBR Term																								
F26-F28 Revenue Requirements Application								F29-F31 Revenue Requirements Application																	



# Y Factors – Questions or Comments?



# Defining Exogenous (Z) Factors

A Z factor is included in PBR plans to provide a mechanism for recovery for one-time, unforeseen, exogenous events

## Examples of exogenous events (not exhaustive):

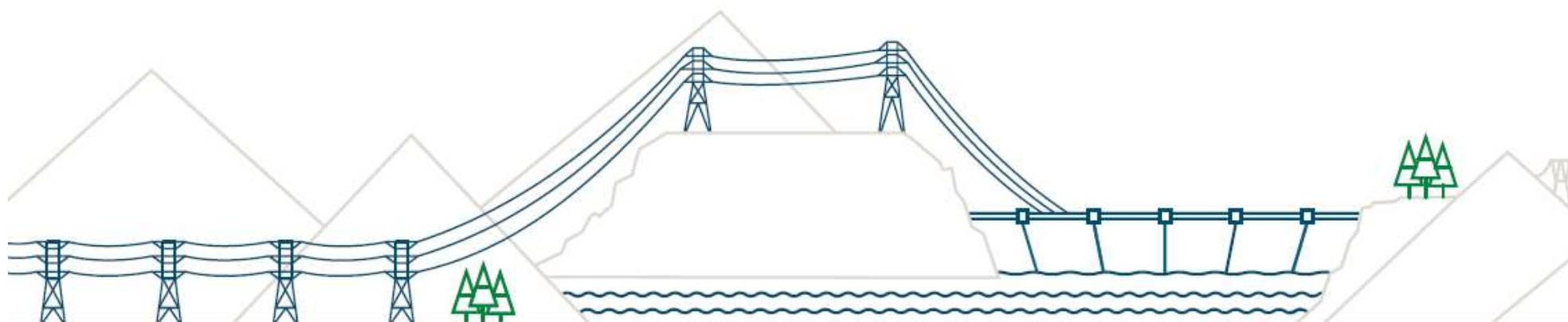
- Government policy;
- Judicial, legislative or administrative changes, orders or directions;
- Catastrophic events;
- A pandemic;
- A major seismic event;
- Acts of war, terrorism or violence;
- Changes in accounting treatment, standards or policies; and
- Changes in revenue requirements due to BCUC decisions.

# Defining Exogenous (Z) Factors

## Our Expected Criteria:

1. The costs/savings must be attributable entirely to events outside the control of a prudently operated utility;
2. The costs/savings must be directly related to the exogenous event and clearly outside the base upon which the rates were originally derived;
3. The impact of the event was unforeseen;
4. The costs must be prudently incurred; and
5. The costs/savings related to each exogenous event must exceed the BCUC-defined Materiality Threshold.

# Z Factors – Questions or Comments?



# PBR Service Quality Indicators (SQIs)

- SQIs are measures to monitor utility performance under PBR to determine if efficiencies, formula-based funding, or cost reductions are resulting in a deterioration in quality of service to customers
- BC Hydro will propose SQIs related to safety, reliability and customer satisfaction, and report our performance annually throughout the PBR term



# PBR Service Quality Indicators (SQIs)

- BC Hydro's preferred approach is to use existing performance measures (such as Service Plan measures)
- BC Hydro is considering SQIs which are:
  - Balanced
  - Simple and understandable
  - Consistent with peers

# PBR Service Quality Indicators (SQIs)

- Leading candidate SQIs (based on current Service Plan and peer consistency) under consideration include:
  - Safety – Incidence severity
  - Safety – Frequency
  - SAIDI (System Average Interruption Duration Index)
  - SAIFI (System Average Interruption Frequency Index)
  - Key Generating Facility Forced Outage Factor (%)
  - Customer Satisfaction (CSAT) Index (% of customers satisfied / very satisfied)

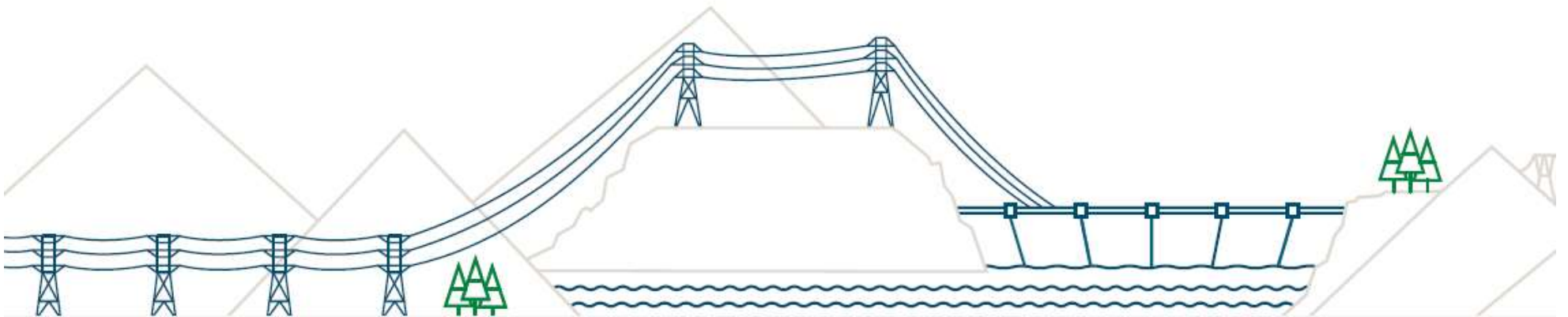
# Service Quality Indicators

As a frame of reference, below are the current SQIs for FortisBC

Safety	Customer Responsiveness	Reliability
All Injury Frequency Rate (AIFR)	Billing Index	SAIDI – Normalized
Emergency Response Time	First Contact Resolution	SAIFI – Normalized
	Meter Reading Accuracy	Generator Forced Outage Rate
	Telephone Service Factor	Interconnection Utilization
	Average Speed of Answer	
	Customer Satisfaction Index	



# Service Quality Indicators – Questions or Comments?

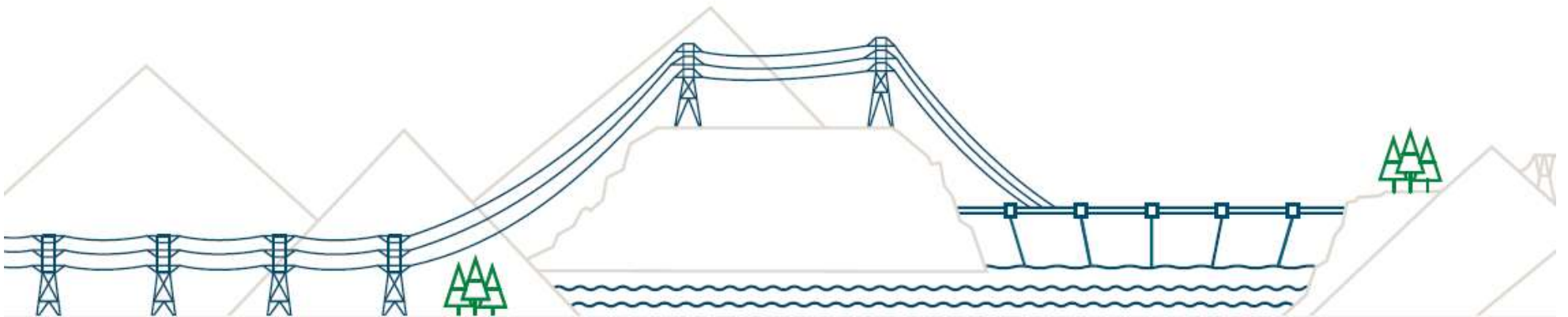


# Off-Ramps and Re-openers

**Order G-388-21:** A proposal for the criteria and reasons, if any, to abandon the PBR approach during the test period (“Off-Ramps”);

- In its decision on FortisBC’s most recent F20-F24 MYRP (PBR) Plan, the BCUC stated:
  - [t]he purpose of an off-ramp is to safeguard and protect the interests of both the ratepayer and Utility. Therefore, it is necessary to find a balance between ensuring the utility does not earn too high of a ROE and also ensuring the utility does not bear undue risk in not earning its allowed ROE.
- Off-Ramps are typically triggered when Return On Equity (ROE) in a single year varies by a set amount measured in basis points

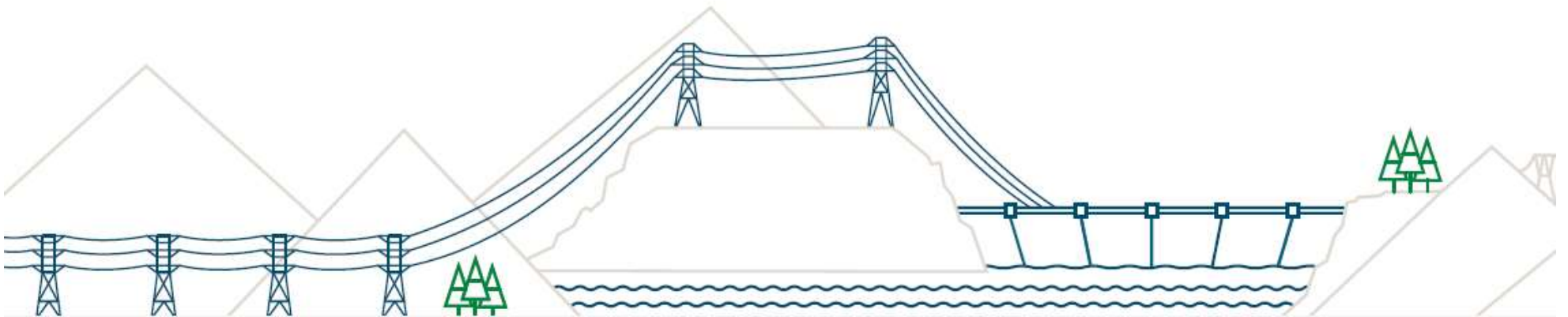
# Off Ramps – Questions or Comments?



# Filing Structure

J-M	A-J	J-S	O-D	J-M	A-J	J-S	O-D	J-M	A-J	J-S	O-D	J-M	A-J	J-S	O-D	J-M	A-J	J-S	O-D	J-M	A-J	J-S	O-D	J-M
F25	F26			F27			F28			F29			F30			F31								
Six-Year PBR Term																								
F26-F28 Revenue Requirements Application						F29-F31 Revenue Requirements Application																		
Annual Review to set F27 Rates			Annual Review to set F28 Rates			Annual Review to set F29 Rates			Annual Review to set F30 Rates			Annual Review to set F31 Rates												
																					Next PBR Plan Application			

# Filing Structure – Questions or Comments?



# Thank you



 **BC Hydro**  
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