2022 Capital Budget Application

Overview Presentation

September 10, 2021

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Agenda

1. Capital Investment Strategy and Historical Spends
2. 2022 Capital Budget Overview
3. Five-Year Capital Plan
4. Specific Investment Highlights and Customer Impacts
5. Future System Resource Requirements
6. Question & Answer Session

Capital Investment Strategy

Invest responsibly in the electrical system to the benefit of customers

Balance system reliability and customer cost

Evidence-based decision making reflecting asset performance and operational and system requirements

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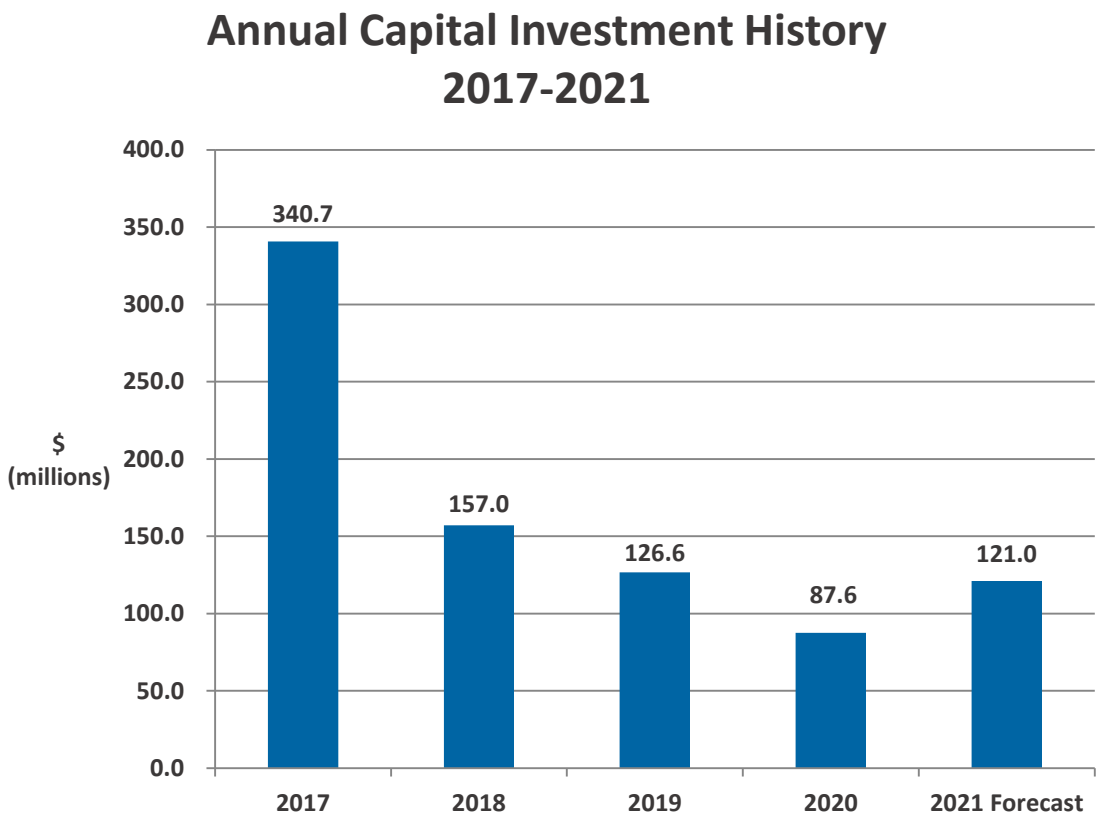
Historical Capital Spends



Hydro's Focus

- Manage costs while ensuring appropriate level of capital investment and responsiveness to customer growth needs.
- Monitor the effects of reduced investment to ensure the continued provision of safe and reliable service

- 2021 Forecast reflects estimated expenditures to year-end (includes CIAC investments).
- 2020 reflects lower level of investment due to impacts of pandemic on work execution.
- 2017–2019 reflects impact of major capital investments associated with TL 267 and TL 266 projects.

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2022 Capital Budget Application Overview

~49% New Projects

- $41.5 million
- Includes $7.1 million associated with life extension of the Holyrood Thermal Generating Station

~51% Continuing Projects

- $43.2 million
- Reflects multi-year projects continuing from prior years

- Concerted effort to reduce investment request recognizing rate pressures in current operating environment and other major investments required, i.e., southern Labrador ($15.8 million), Bay d'Espoir penstocks ($1.9 million), and Ramea Diesel ($2.0 million).
- Total planned 2022 capital expenditures to be recovered through customer rates is $102.9 million.

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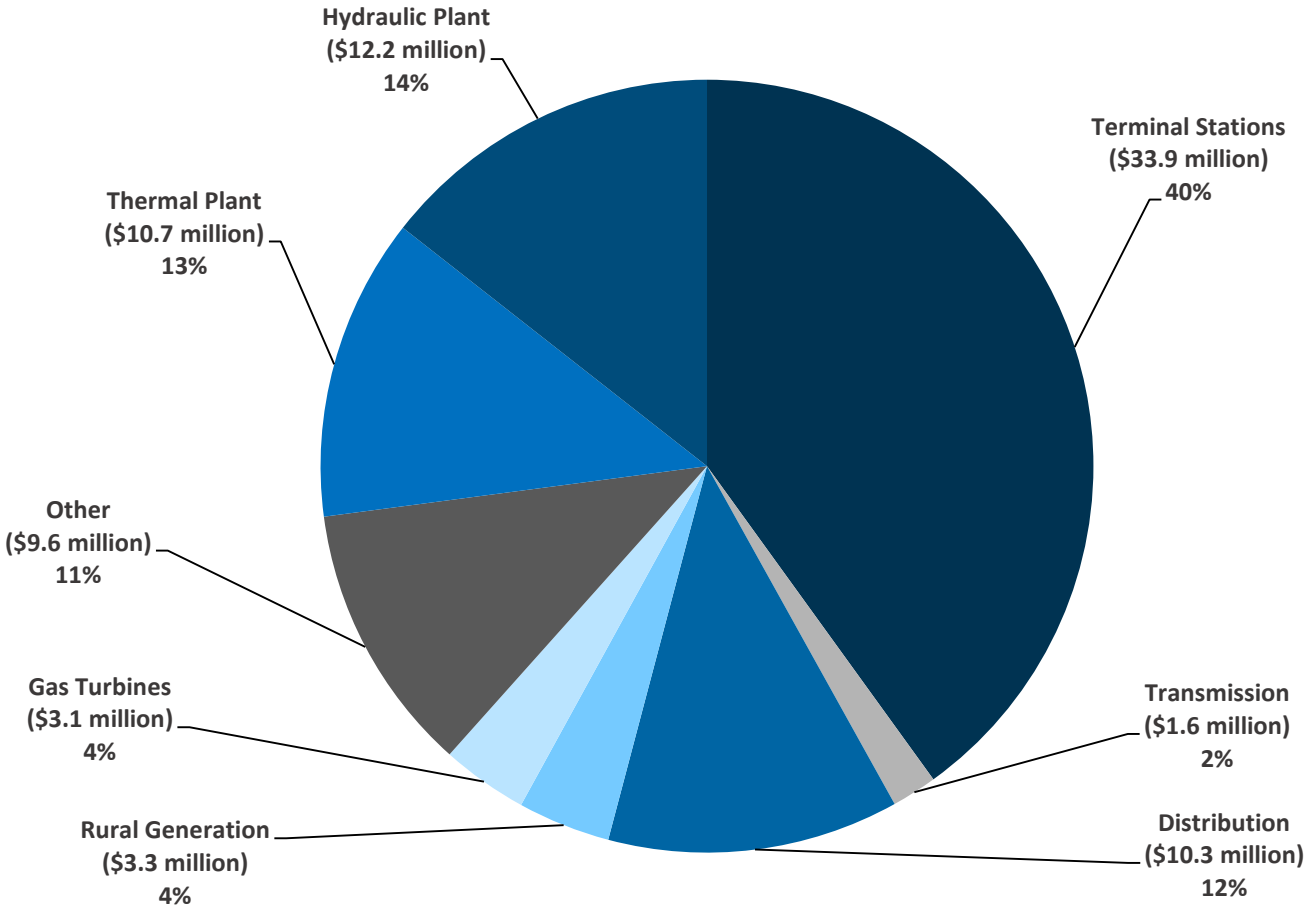
2022 Investment Management Considerations

- **Deferral**
  - Deferral considered for each project identified.
  - To balance cost and reliability; low-risk impact projects deferred.
  - Hydro deferred or cancelled projects totaling approximately $9 million in 2022.

- **Estimate Refinement**
  - Focus on refinement of estimates based on historical experience, scope refinement, vendor quotes, and refinement of contingency, often resulting in reductions in project estimates.

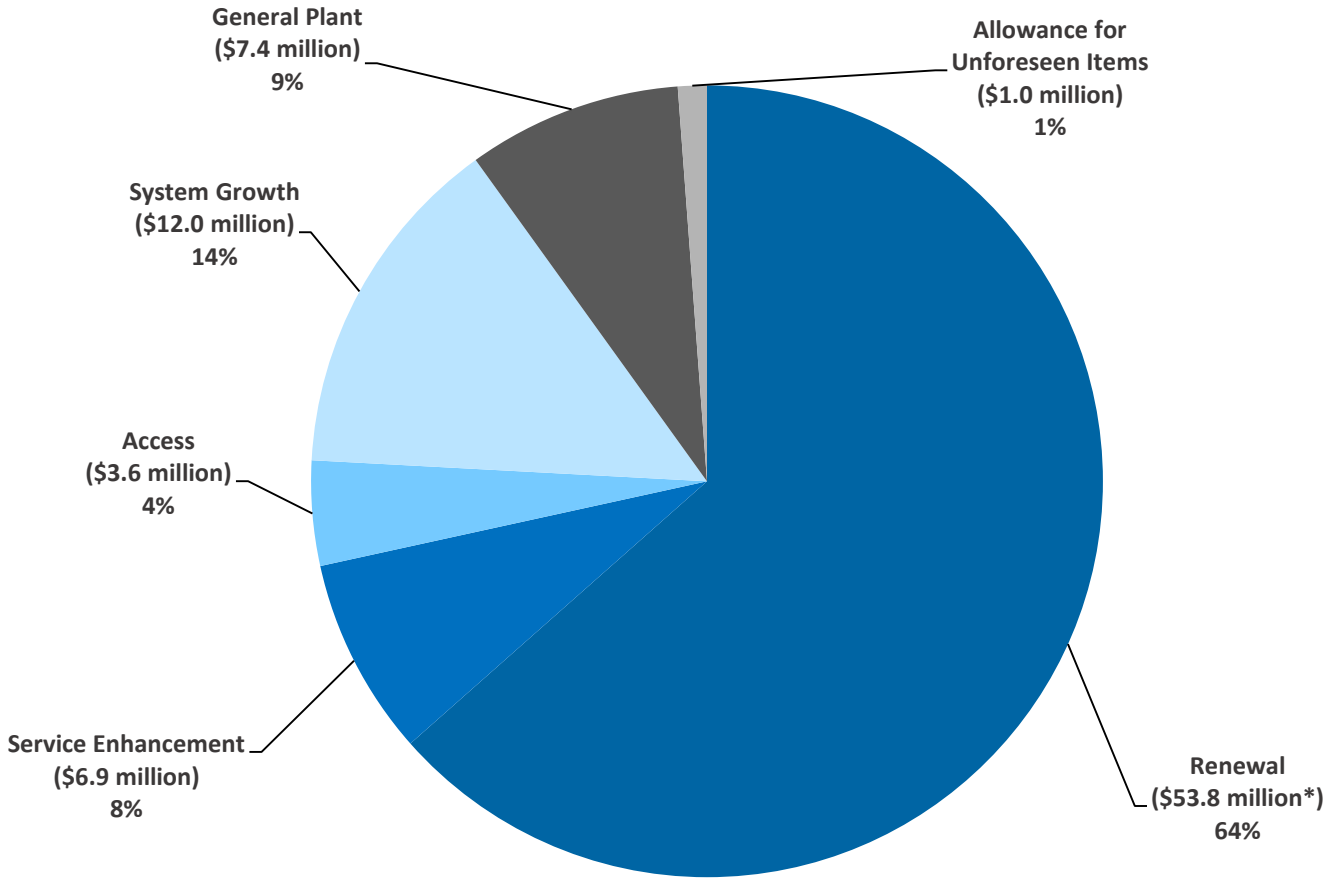
- **Budget Refinement of Previously-Approved Projects**
  - Review of previously-approved, multi-year projects to identify opportunities for budget refinement.
  - Reduction of $6.0 million for six previously approved projects.

2022 Capital Budget by Asset Class



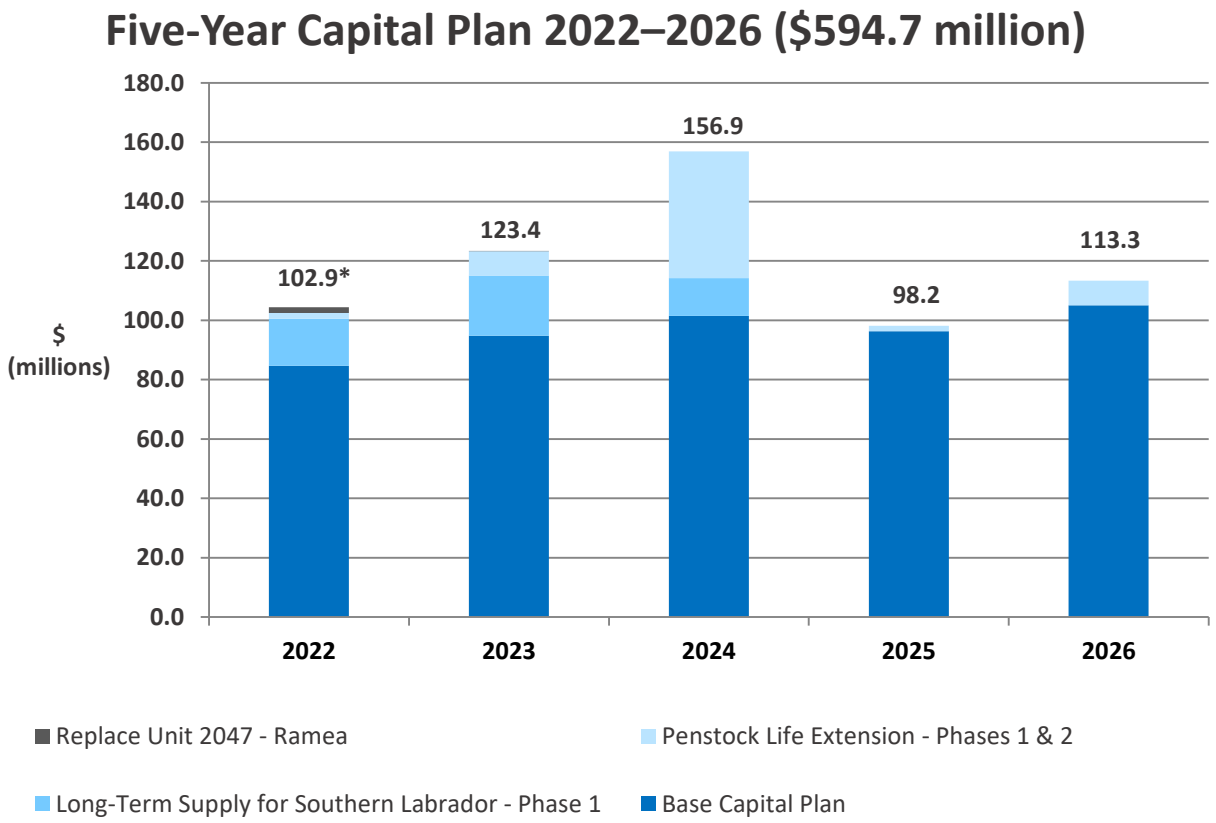
*Other includes Properties, Metering, Tools and Equipment, Information Systems, Network Services, Transportation, Administration Buildings, and Allowance for Unforeseen.

2022 Capital Budget by Investment Classification



*Includes $7.1 million associated with life extension of the Holyrood Thermal Generating Station

Five-year Capital Plan Outlook: 2022–2026



- 2023 and 2024 expenditures reflect expenditures related to proposed interconnection of southern Labrador and anticipated Bay d'Espoir Penstock Life Extension Program.
- Continued focus on cost management while managing operational risk.

*Excludes fully-contributed investments: $12.3 million in transmission capital investment related to the specifically-assigned assets for the Valentine Gold Interconnection project and $1.5 million in terminal station asset renewal expenditures specifically assigned to the Iron Ore Company of Canada.

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Specific Investment Highlights

Labrador

- **Transmission and Terminal Station Investments**
  - Continuation of Upgrades to the Wabush Terminal Station and Wabush Substation of $22.1 million over a three-year period to address load growth and reliability in Labrador West ($11.2 million in 2022).

- **Distribution Investments**
  - 2022 forecast spend of $2.2 million in Labrador for service extensions/customer access and reliability-related capital.
  - Voltage conversion of L22 in Labrador City forecast to cost approximately $1.5 million ($500,000 in 2022).
  - Additions for load in Mary's Harbour forecast to cost approximately $1.1 million ($550,000 in 2022).

Specific Investment Highlights

Labrador *continued*

- **Labrador Isolated Diesel Systems**
  - 2022 forecast spend of $2.7 million for the Labrador isolated diesels.
  - Overall provincial rural generation (Newfoundland and Labrador) spend is forecast to be $5.3 million for 2022 (excludes proposed southern Labrador interconnection investments).
  - Replacement of obsolete genset in L'Anse-Au-Loup:
    - $3.0 million of investment 2022–2024, $340,000 in 2022.
    - Unit is obsolete (replacement parts no longer available). Four overhauls to date.
    - Required for firm capacity for community due to interruptible nature of supply from Hydro-Québec.
    - Larger size replacement to achieve cost savings and efficiencies over the long term.
    - Cost-benefit analysis demonstrated ~$700,000 in operational savings associated with least-cost option.
  - Investment related to southern Labrador communities (see next slide)

Specific Investment Highlights

Labrador *continued*

- **Southern Labrador Communities (impacted by proposed future interconnection)**
  - 2022 CBA proposals driven by load growth related to a new fish plant in the community ($1.5 million):
    - Mary's Harbour Diesel Generating Station service conductor ($0.4 million).
    - Mary's Harbour voltage conversion ($1.1 million).
  - 2022 CBA proposals driven by asset renewal ($2.9 million):
    - St. Lewis diesel genset replacement ($2.1 million).
    - Mary's Harbour fuel storage tanks replacement ($0.5 million).
    - Mary's Harbour diesel unit overhaul ($0.3 million).
  - All scope of work considered in light of proposed interconnection. If proposed interconnection not approved, scope for Mary's Harbour voltage conversion will be revisited.
  - Separate Supplemental Application – Interconnection of Southern Labrador communities ($49.9 million), Phase 1
    - Interconnection of 4 communities in southern Labrador—Charlottetown, Mary's Harbour, Port Hope Simpson, and St. Lewis—in a phased approach.
    - Phase 1 involves interconnection of Charlottetown to a regional diesel generating station in Port Hope Simpson.
    - Long-term supply solution focused on safe, least-cost, reliable service for customers in this region.

Specific Investment Highlights

Island

- **Transmission and Terminal Station Investments**
  - 2022 forecast spend of approximately $14 million on renewal-related capital for Island terminal stations.
  - Continuation of capital investment of $6.9 million ($5.3 million in 2022) for upgrades at the Bottom Brook Terminal Station to accommodate the retirement of the Stephenville Gas Turbine.

  Wood Pole Line Management Program
  - Transmission investment of $1.6 million for the Wood Pole Line Management ("WPLM") Program.
  - 2022 forecast spend approximately $1.3 million less than 2021 CBA budget due to introduction of "gap year."
  - Gap year deemed appropriate for work not requiring immediate attention but still considered priority refurbishment.
  - Gap year allows for analysis completion, refinement of scope of work, accommodation of outage requirements, procurement process and materials delivery requirements, and environmental regulatory requirements.
  - WPLM second-cycle reporting scheduled to be complete end of 2022. Program update report anticipated to be filed with Board early in 2023.

- **Distribution Investments**
  - 2022 forecast spend of $7.1 million on the Island is primarily focused on service extensions/customer access and sustaining capital.
  - Includes continuation of LED Street Light Modernization, which will reduce street and area lighting rates.

- **Island Isolated Diesel Systems**
  - 2022 forecast spend of $200,000 in CBA.
  - Additional investment related to an approved supplemental application to purchase a diesel generating unit for use in Ramea ($2.0 million in 2022).

Specific Investment Highlights

Metering

- **Metering System Upgrades**
  - 2022 CBA includes replacement of Hydro's metering system, forecast to cost $5.4 million over three years ($500,000 in 2022).
  - Introduction of drive-by automated metering to Hydro's service areas:
    - Justified based on cost savings.
    - Additional benefits of enhanced efficiencies through reduction of manual processes related to meter reading and billing.
    - Safer work environment for employees.
  - Hydro collaborated with Newfoundland Power on pilot project in assessing viability of AMR for its customers.
  - Two-phased approach supports least-cost service for customers.
    - Replace all manual-read meters and TS1 meters (approximately 31,000 meters).
    - Monitor performance of PLX meters (still supported by manufacturer) to determine optimal time for replacement (approximately 7,800 meters).

Specific Investment Highlights

Generation

- **Hydraulic Generation**
  - Hydraulic Refurbishment and Modernization Project
    - Capital investment of $8.0 million, includes 2021–2022 projects.
  - Ebbegunbaeg Hydraulic Structure
    - Continuing four-year project, approved in 2021 CBA.
    - $3.2 million in investment for 2022. Project supports refurbishment of the control structure which allows for movement of water from one of Hydro's largest reservoirs (Meelpaeg Reservoir).
  - Penstock Life Extension
    - Five-year plan reflects preliminary capital estimate of $63 million.
    - Strategy to address previous penstock failures and long-term plan for life extension.
    - Front-end engineering design ("FEED") for the Bay d'Espoir Penstock Life Extension Program will be completed in 2021.
    - Future supplemental capital application anticipated to be submitted 2022.

Specific Investment Highlights

Generation *continued*

- **Holyrood Thermal Generating Station**
  - 2022 forecast spend of $10.7 million:
    - $7.1 million for generation-related (steam) expenditures.
    - $3.6 million for synchronous condenser-related (post-steam) expenditure.
    - Capital investment plan reflects March 31, 2023 retirement of the Holyrood Thermal Generating Station.

- **Gas Turbines**
  - 2022 forecast spend of $3.1 million is primarily sustaining capital for the Holyrood and Happy Valley Gas Turbines.

Specific Investment Highlights

Information Systems

- **Software Upgrades**
  - Replacement of Short-Term Load Forecasting Software ($440,000).
  - Hydro Command Centre Upgrade ($76,000).
  - Perform Software Upgrades and Minor Enhancements for 2022 ($622,000).

- **Infrastructure Upgrades**
  - Upgrade Energy Management System ($293,000).
  - Upgrade Core IT/OT Infrastructure for 2022 ($308,000).
  - Refresh Cyber Security Infrastructure for 2022 ($222,000).
  - Purchase Personal Computers 2022 ($477,000).
  - Replace Peripheral Infrastructure for 2022 ($193,000).

Revenue Requirement Impact

- 2022 capital investments, on a *pro-forma* basis, expected to result in increases of **approximately $2 million and $6 million in revenue requirement** for 2022 and 2023, respectively.

- Relative to 2019 Test Year, represents an increase in Hydro's total revenue requirement of **approximately 0.4% and 1%** in 2022 and 2023, respectively.

- Estimates do not reflect any potential reductions in operating and maintenance costs associated with the capital projects proposed.

Estimated Customer Impacts

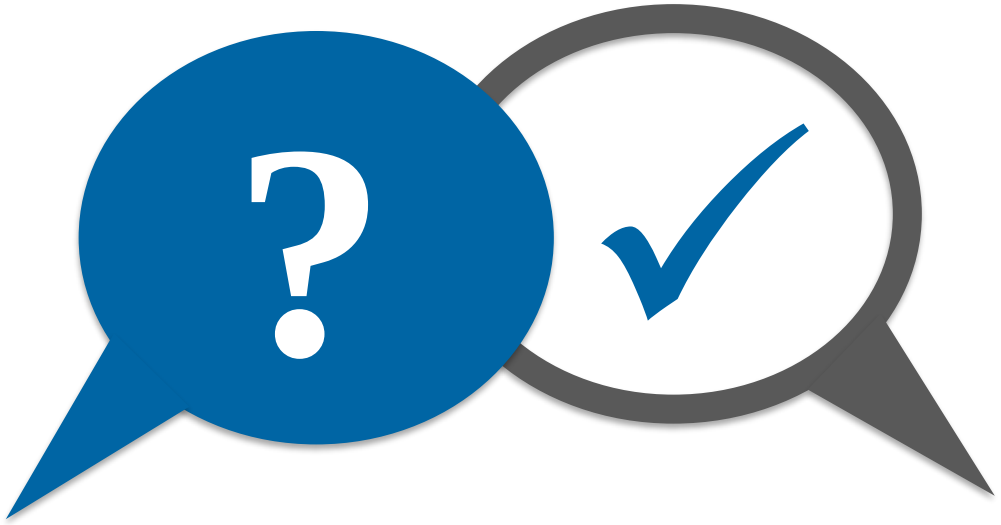
System	2022	2023
Island Interconnected	0.3%	0.8%
Labrador Interconnected - Rural	1.0%	2.7%
Labrador Industrial - Regulated	5.8%	15.4%
Labrador Industrial – Total Billings	0.5%	1.4%

- Impacts are relative to 2019 Test Year revenue requirements.
- Estimated impact on Island Interconnected System customers reflects investments in that system and rural deficit areas.
- Labrador Industrial impacts shown relative to transmission (demand) and total billings.
- Estimates do not reflect potential reductions in operating and maintenance costs associated with the capital projects proposed.

Future System Resource Requirements

- Matter being addressed through ongoing the *Reliability and Resource Adequacy Study Review* proceeding
  - Labrador-Island Link reliability assessment may result in recommendation for additional generation to partially mitigate reliability concerns – to be determined.
  - Considerations are ongoing to ensure such additions, if required, are right-sized and right-timed for provincial needs.
  - Outcomes of additional Labrador-Island Link reliability considerations (from Haldar & Associates assessment) expected end of 2021 with recommendations regarding long-term supply requirements expected summer 2022.
  - Long-term suitability of the Holyrood Thermal Generating Station as a backup facility – assessment ongoing with outcomes of assessment expected early 2022.
  - Additional capital investment will be required if it is determined the Holyrood Thermal Generating Station is to be maintained as a backup facility.

Questions?



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