2021 Capital Budget Overview

Presentation to Board of Commissioners of Public Utilities and Intervening Parties

September 16, 2020

newfoundland labrador hydro
a nalcor energy company

Agenda

1. Capital Investment Strategy and Historical Spends
2. 2021 Capital Budget Overview
3. Five-Year Capital Plan
4. Specific Investment Highlights
5. Revenue Requirement/Customer Impacts
6. Questions

newfoundland labrador hydro
a nalcor energy company

Capital Investment Strategy

Responsibly steward the management of Hydro's electrical system and investments therein to the benefit of customers

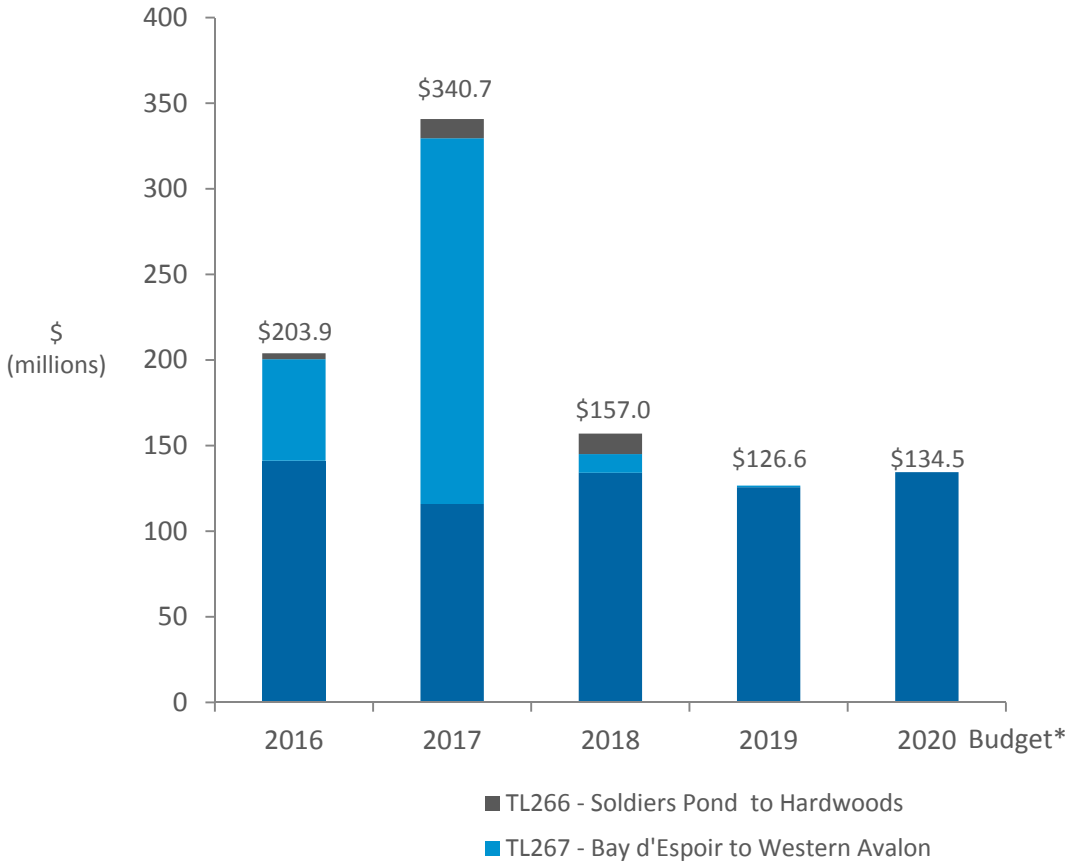
Provide reliable service at the lowest possible cost

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

newfoundland labrador hydro
a nalcor energy company

Historical Capital Spends

Annual Capital Investment History
2016–2020



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

*2020 Budget is Net of Contribution in Aid of Construction

newfoundland labrador hydro
a nalcor energy company

2021 Capital Budget Overview

≈70% New Projects

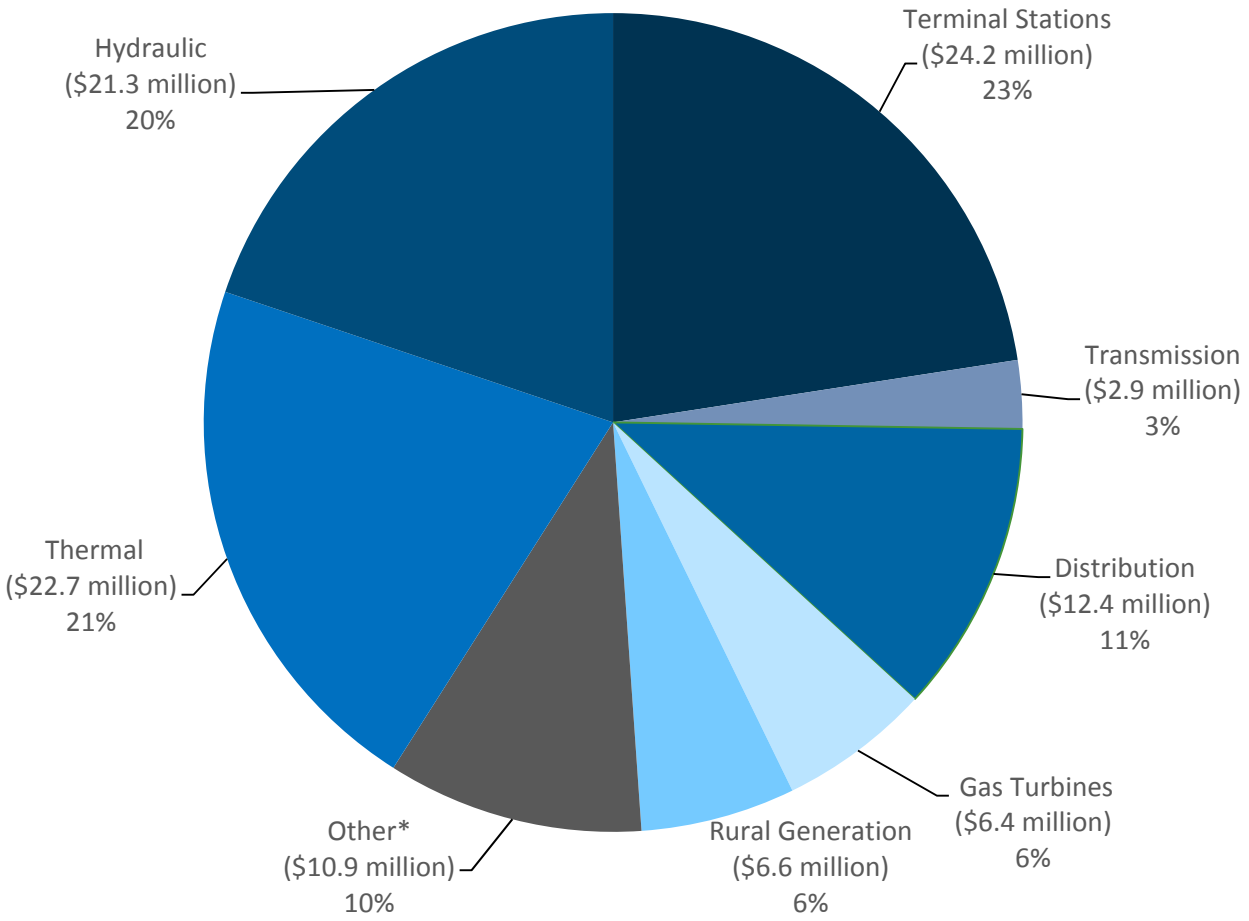
- $72.7 million
- Includes $11.4 million associated with life extension of Holyrood Thermal Generating Station

≈30% Continuing Projects

- $34.8 million
- Reflects multi-year projects continuing from prior years

newfoundland labrador hydro
a nalcor energy company

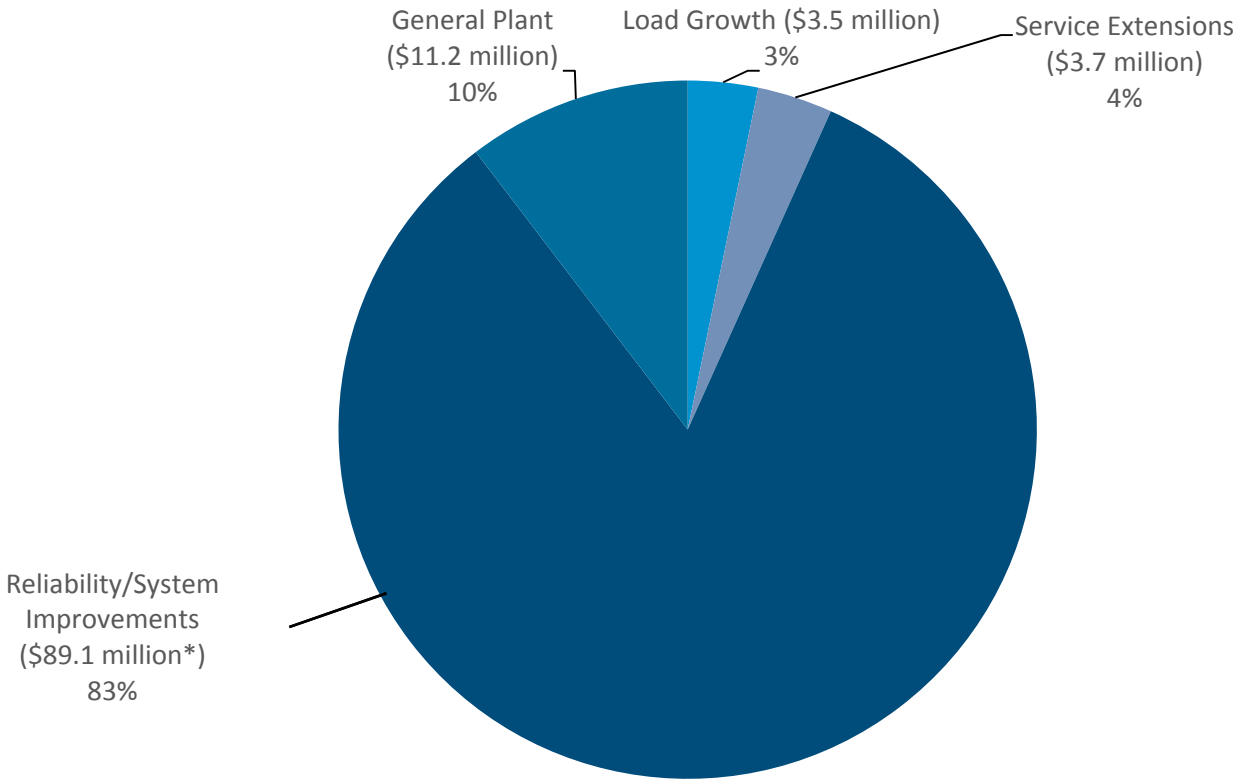
2021 Capital Budget by Asset Class



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

newfoundland labrador hydro
a nalcor energy company

Primary Drivers 2021 Capital Budget

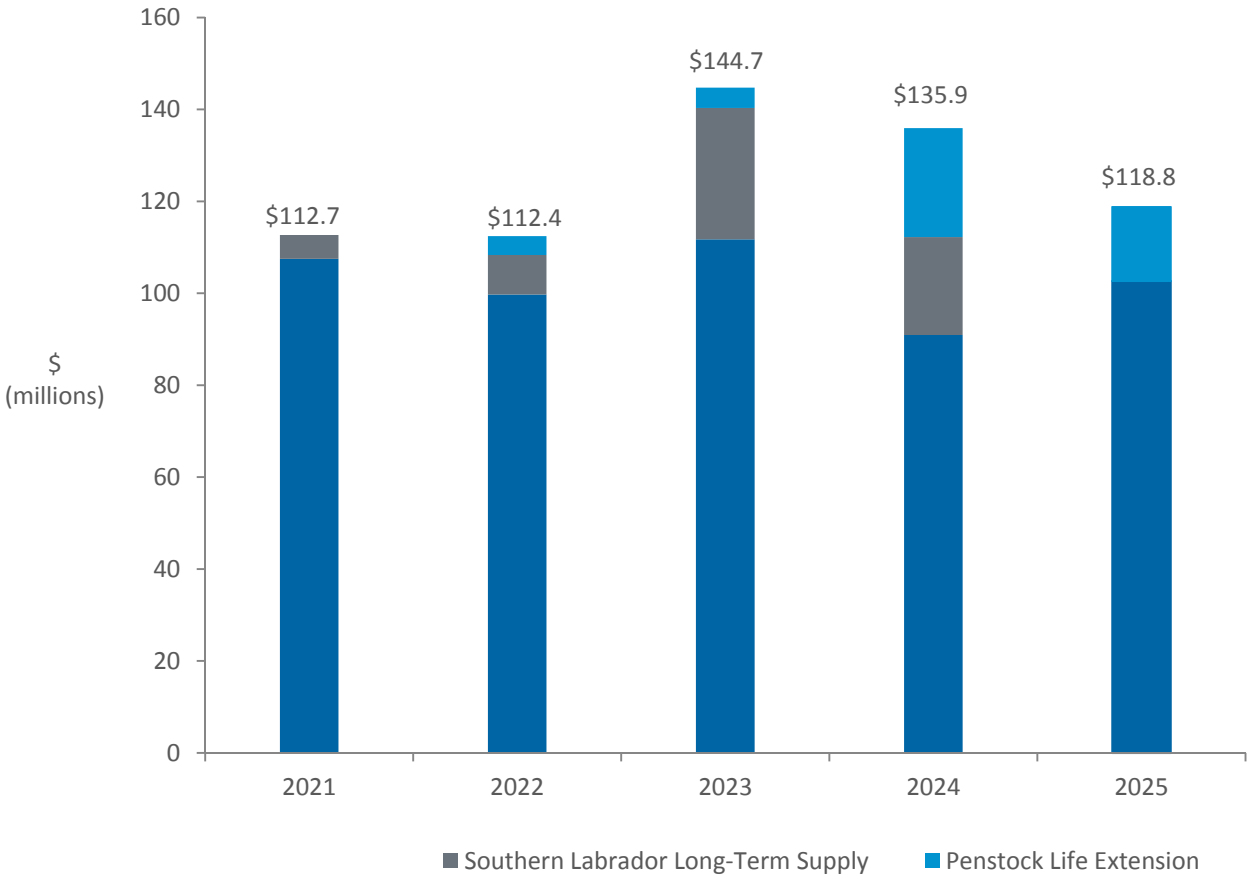


*Includes $11.4 million associated with life extension of Holyrood Thermal Generating Station

newfoundland labrador hydro
a nalcor energy company

Five-year Capital Plan Outlook: 2021–2025

Capital Budget and Major Capital Projects
2021–2025 ($624.5 million)



- 2023 and 2024 showing an increase in expenditures due to the larger level of anticipated investment related to the Southern Labrador Long-Term Supply Solution and Bay d'Espoir Penstock Life Extension Program
- In consideration of these pending larger level investments in the five-year capital plan, Hydro has focused on minimizing investment while not introducing operational risk

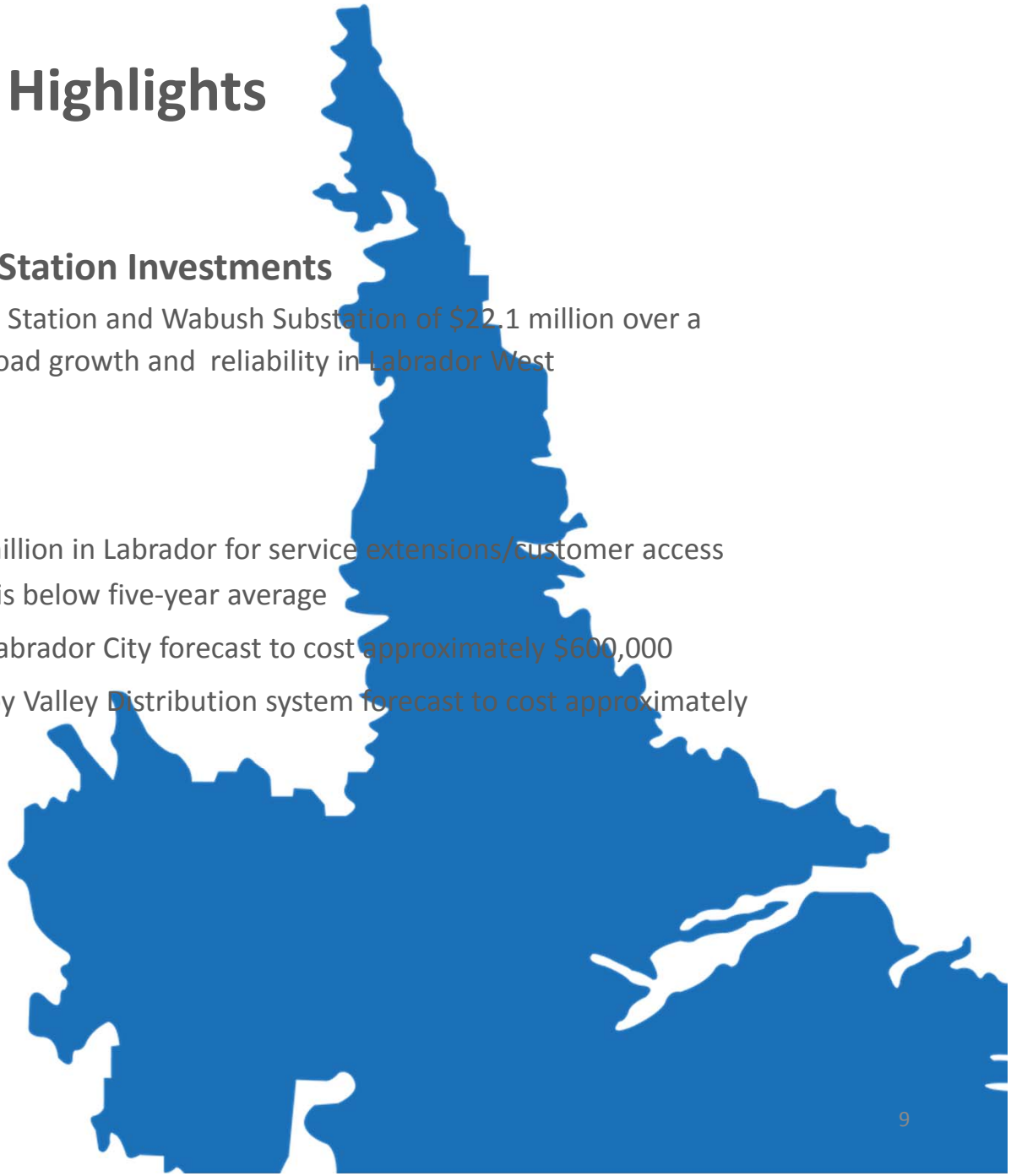
newfoundland labrador hydro
a nalcor energy company

Specific Investment Highlights

Labrador

- **Transmission and Terminal Station Investments**
  - Upgrades to Wabush Terminal Station and Wabush Substation of $22.1 million over a three year period to address load growth and reliability in Labrador West

- **Distribution Investments**
  - 2021 forecast spend of $2.0 million in Labrador for service extensions/customer access and reliability related capital, is below five-year average
  - Voltage conversion of L22 in Labrador City forecast to cost approximately $600,000
  - Modification to Line 7 in Happy Valley Distribution system forecast to cost approximately $600,000



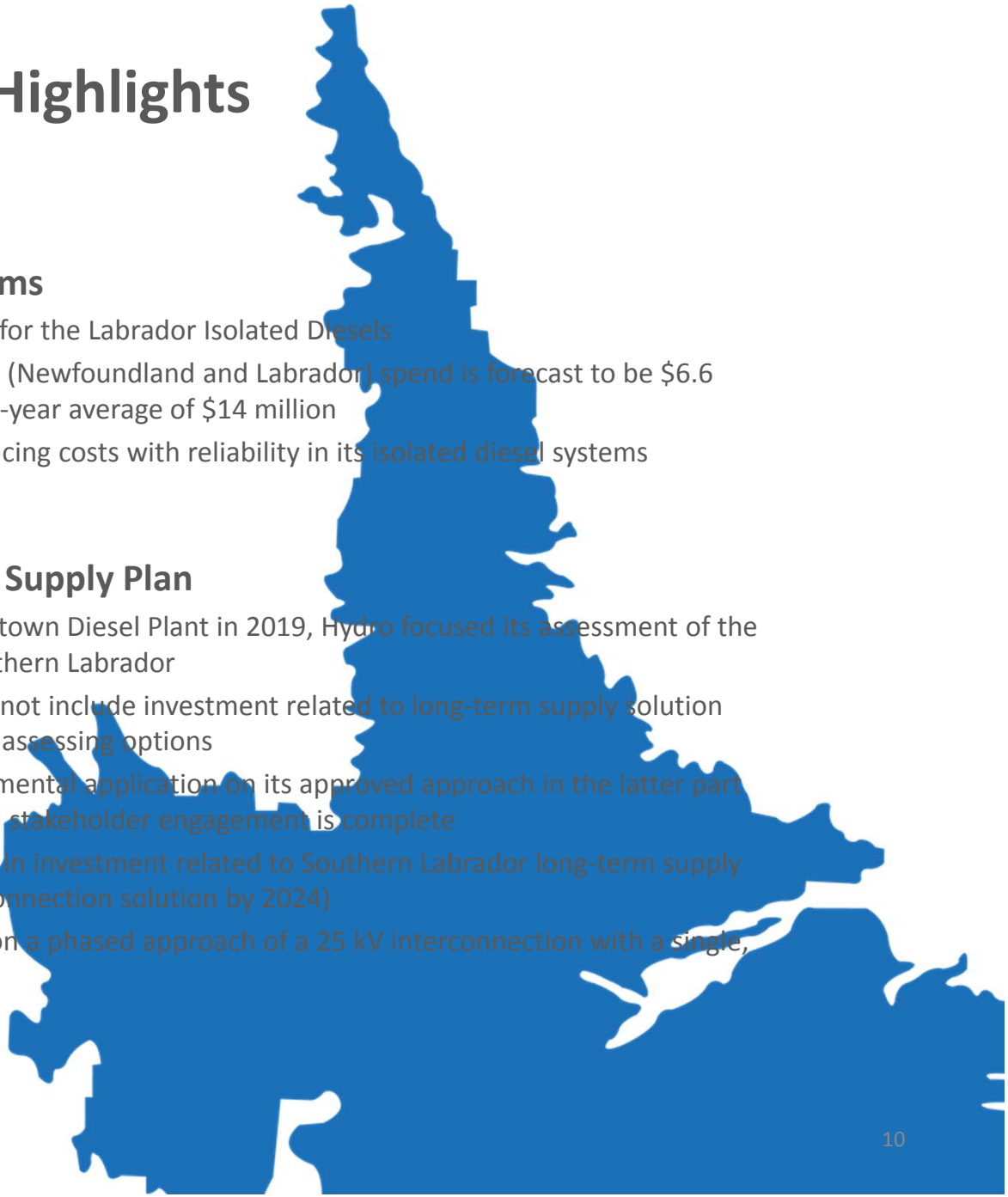
newfoundland labrador hydro
a nalcor energy company

Specific Investment Highlights

Labrador *continued*

- **Labrador Isolated Diesel Systems**
  - 2021 forecast spend of $5 million for the Labrador Isolated Diesels
  - Overall provincial rural generation (Newfoundland and Labrador) spend is forecast to be $6.6 million for 2021, down from a five-year average of $14 million
  - Hydro continues to focus on balancing costs with reliability in its isolated diesel systems

- **Southern Labrador Long-Term Supply Plan**
  - Following the fire at the Charlottetown Diesel Plant in 2019, Hydro focused its assessment of the long-term supply solution for Southern Labrador
  - 2021 capital budget request does not include investment related to long-term supply solution for Southern Labrador as Hydro is assessing options
  - Hydro expects to submit a supplemental application on its approved approach in the latter part of 2020, once our assessment and stakeholder engagement is complete
  - Five-year plan reflects $64 million in investment related to Southern Labrador long-term supply solution (reflective of a full interconnection solution by 2024)
  - Currently the solution is focused on a phased approach of a 25 kV interconnection with a single, large regional diesel plant



newfoundland labrador hydro
a nalcor energy company

Specific Investment Highlights

Island

Transmission and Terminal Station Investments

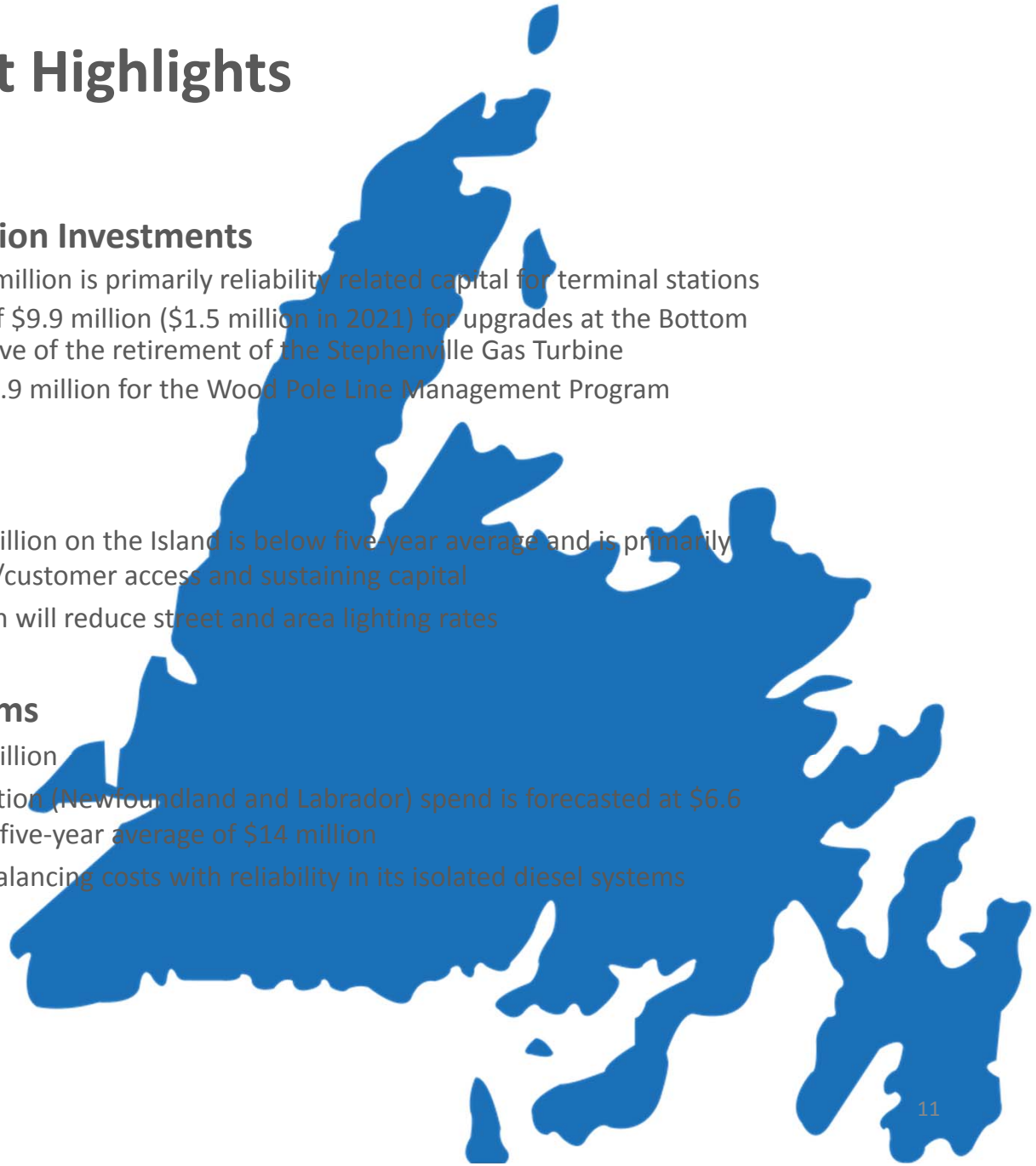
- 2021 forecast spend of $18.9 million is primarily reliability related capital for terminal stations
- Two-Year capital investment of $9.9 million ($1.5 million in 2021) for upgrades at the Bottom Brook Terminal Station reflective of the retirement of the Stephenville Gas Turbine
- Transmission investment of $2.9 million for the Wood Pole Line Management Program

Distribution Investments

- 2021 forecast spend of $8.9 million on the Island is below five-year average and is primarily focused on service extensions/customer access and sustaining capital
- LED Street Light Modernization will reduce street and area lighting rates

Island Isolated Diesel Systems

- 2021 forecast spend of $1.5 million
- Overall provincial rural generation (Newfoundland and Labrador) spend is forecasted at $6.6 million for 2021, down from a five-year average of $14 million
- Hydro continues to focus on balancing costs with reliability in its isolated diesel systems



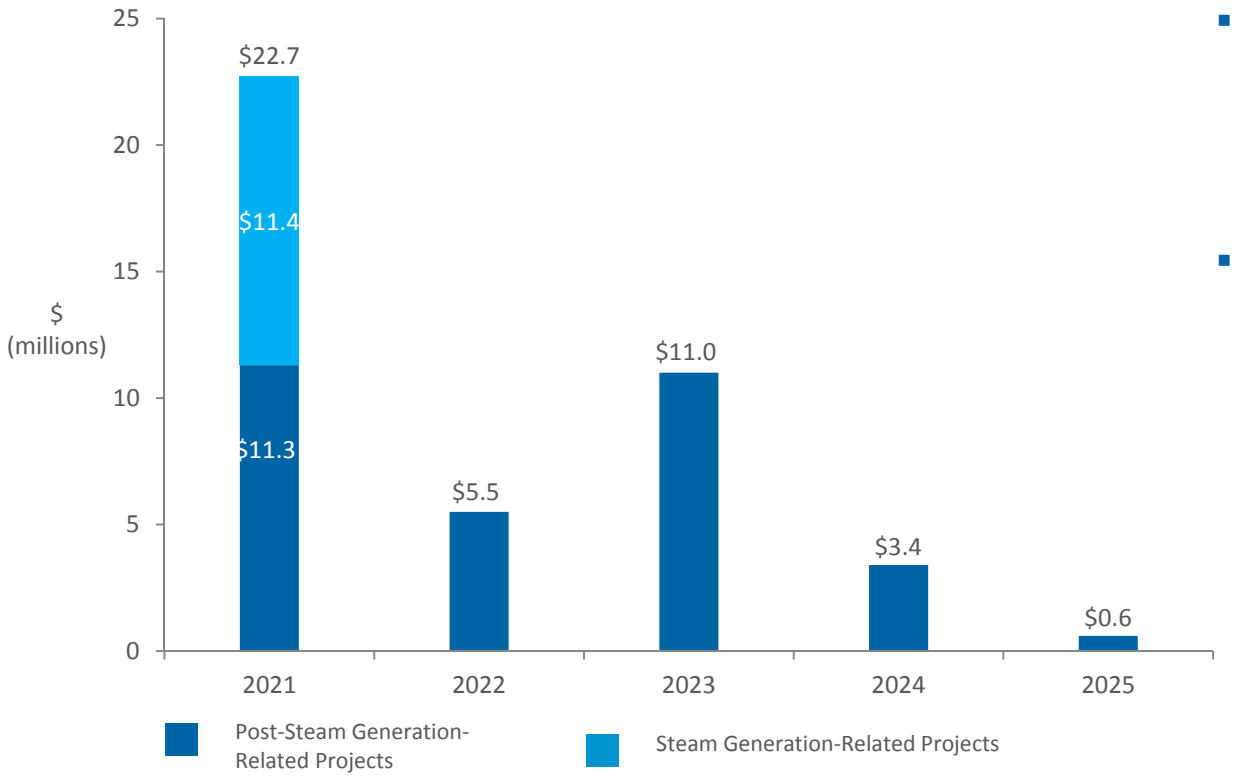
newfoundland labrador hydro
a nalcor energy company

Specific Investment Highlights

Generation

Holyrood Thermal Generating Station

Annual Capital Plan 2021–2025



- $11.4 million is associated with having Holyrood Thermal Generating Station fully available for generation until March 31, 2022
- Hydro will monitor the performance of the Muskrat Falls assets and, based on the demonstrated reliability of the assets, will determine (i) the degree to which the Holyrood units are required to be operated or maintained in standby mode and (ii) the level of capital investment to be incurred

newfoundland labrador hydro
a nalcor energy company

Specific Investment Highlights

Generation *continued*

- **Hydraulic Generation**

  - Ebbengunbaeg Hydraulic Structure
    - Capital investment of $13.6 million over four years with $3.2 million million forecast for 2021
    - The Ebbegunbaeg Control Structure was constructed in 1967 and is critical to Hydro's ability to optimize water management within its system and maximize value for customers

  - Hydraulic Refurbishment and Modernization Project
    - Capital investment of $16.8 million, includes 2020–2021 projects

  - Penstock Life Extension
    - Five-year plan reflects $47 million in investment related to Penstock Life Extension
    - Front End Engineering and Design ("FEED") for the Bay d'Espoir Penstock Life Extension Program will be executed in 2020–2021 with anticipated application to the Board as part of the 2022 Capital Budget Application

- **Gas Turbines**
  - 2021 forecast spend of $6.4 million is primarily sustaining capital for the Holyrood and Happy Valley Gas Turbines

Project Prioritization

Hydro's two-pronged approach to prioritizing capital investments

Project Justification

- Qualitative
- Justification review
- Deferral considered
- Occurs early in FEED

Prioritization Matrix

- Quantitative
- 14 Categories
- Scoring by Asset Planners
- Occurs at end of FEED

newfoundland labrador hydro
a nalcor energy company

Project Prioritization

- If a project is mandatory, load driven, or is considered extreme safety it is automatically priority one

- 14 Categories
- Qualified by confidence or likelihood
- Scored by Long-Term Asset Planners
- Algorithm produces priority list based on scores

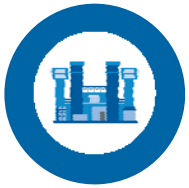
- List is reviewed for quality
- Are similar projects ranked the same?
- Does the overall list reflect investment priorities?
- Final list included in application

newfoundland labrador hydro
a nalcor energy company

Project Prioritization

Overhaul Unit 1 Turbine and Valves – Holyrood

Priority Rank: 6



Terminal Station In-Service Failures

Priority Rank: 10

Wood Pole Line Management Program

Priority Rank: 15

Computer Technology System Support

Priority Rank: 25

newfoundland labrador hydro
a nalcor energy company

Revenue Requirement Impact

- 2021 capital investments, on a pro forma basis, expected to result in increases of **approximately $3 million and $10 million in revenue requirement** for 2021 and 2022, respectively

- Relative to 2019 Test Year, represents an increase in Hydro's total revenue requirement of **approximately 0.5% and 1.6%** in 2021 and 2022, respectively

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

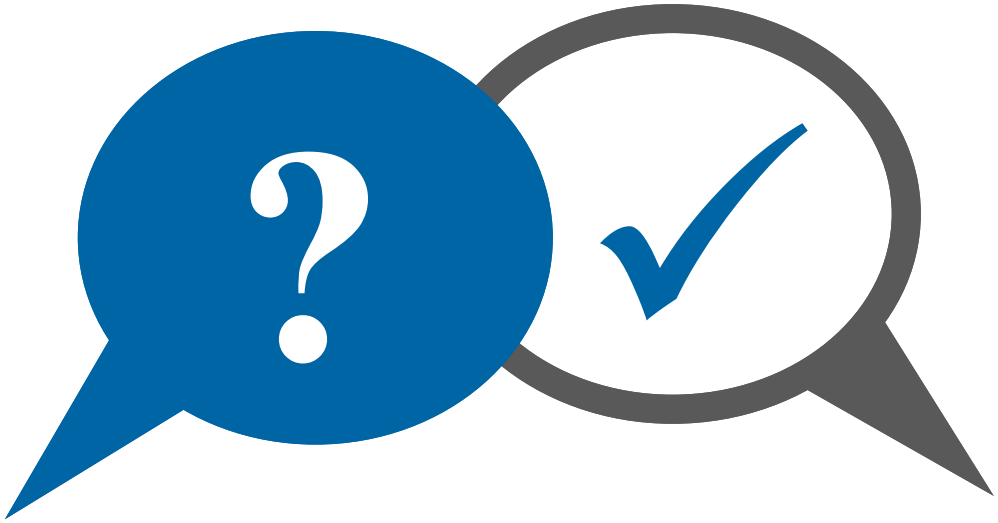
Estimated Customer Impacts

System	2021	2022
Island Interconnected System	0.5%	1.5%
Labrador Interconnected – Rural	0.7%	2.2%
Labrador Industrial - Regulated	4.1%	12.5%
Labrador Industrial – Total Billings	0.4%	1.3%

- 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 regulated (demand) and total billings
- Estimates does not reflect potential reductions in operating and maintenance costs associated with the capital projects proposed

newfoundland labrador hydro
a nalcor energy company

Questions?




newfoundland labrador
hydro
a nalcor energy company