51956

6P Mobile Substation Rewind

FIN

NON-CONFIDENTIAL

December 1, 2025

Nova Scotia POWER
An Emera Company

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NSEB APPROVAL SHEET

Project Title: 6P Mobile Substation Rewind

CI Number: 51956

Date: December 1, 2025

Expenditure Profile		
Year	Budget Amount	Project Estimate
2017	410,740	231,679
2018	1,105,381	49,897
2019		354,394
2020		(194)
2021		
2022		
2023		
Total	$1,516,121	$635,776

Type of Filing

- [ ] Capital Project Authorization
- [ ] Unforeseen and Unbudgeted (U&U)
- [ ] Planned & Advanced (P&A)
- [ ] Subsequent Approval Item
- [ ] Authorization to Overspend (ATO)
- [ ] Scope Change
- [X] Final Cost (FIN)

COMMENTS

Approved	$1,516,121
Current Submission	$635,776
Variance	(880,345)

Submitted on behalf of NOVA SCOTIA POWER INCORPORATED

Authorized Signatory
Dave Pickles
Chief Operating Officer

DATE
November 27, 2025

Approved on behalf of NOVA SCOTIA ENERGY BOARD

DATE

CI Number: 51956

Title: 6P Mobile Substation Rewind

Start Date: 2017/12
In-Service Date: 2019/01
Final Cost Date: 2025/12
Function: Transmission
Forecast Amount: $635,776

DESCRIPTION:

This project is for the rewind of the 6P mobile transformer. 6P experienced two faults during installation at 108H Burnside Substation in April 2017, resulting in damage to the low voltage winding. After the failure, the transformer was sent for evaluation to determine what was required to return the unit to service. The 6P, along with the 5P, mobile substations, provide contingency for unplanned outages and alternate supply to customers during transformer and substation maintenance. These assets are critical to the reliable operation of the transmission system. 6P was manufactured in 1991 and has been in service for 26 years.

Summary of Related CIs +/- 2 years:

2018 - CI 51975 New Mobile Substation (Replacement for 5P) - $4,744,925

Depreciation Class: Transmission – Substation

Equipment **Estimated Life of the Asset:** 10 Years

JUSTIFICATION:

Justification Criteria: Transmission Plant

Why do this project?

The 6P mobile transformer is out of service due to damage to the low voltage winding. Mobile substations provide contingency for unplanned outages and alternate supply to customers during planned transformer and substation maintenance. It is NS Power's practice to have either the 5P or 6P mobile available, and standard industry practice to have available mobile substations for contingencies. While one mobile is deployed for maintenance and/or capital work, another mobile is available on standby for contingency events (i.e. outages). If only one mobile is operational, then maintenance or capital work must be put on hold, or risk prolonged outages in the event that the spare is deployed for work. Two operational mobiles allow for both the completion of planned work and back-up for contingency.

With 6P out of service due to the damaged winding, 5P is only available for emergency use and cannot be used for maintenance activities.

Why do this project now?

If 5P is required to be installed for an emergency situation it would leave several transformers without an available spare that can be quickly installed, therefore it is essential that the 6P mobile transformer be repaired in a timely manner. Furthermore, 5P is coming to the end of its useful life, increasing the risk of failure and resulting in a lack of available back-up mobile substations. 5P is forecast to be replaced as part of the 2018 ACE Plan.

Why do this project this way?

Two options were evaluated: (1) replacement of 6P with a new mobile substation with a rewind after 25 years and (2) rewind the existing 6P mobile substation and replace after 10 years. The attached economic analysis model (EAM) shows that the rewinding of 6P is the lowest cost option. Rewinding of 6P has the additional benefit of a shorter lead time, Q1/Q2 of 2018 for refurbishment, versus Q3/Q4 of 2018 for purchase of a replacement.

Reason for Variance

The decrease of $880,345 from the approved budget of $1,516,121 is primarily due to the results of the RFP for the materials and contracts portion of the rewind and refurbishment coming in approximately 60% lower than the original estimate amount included in the original application.

NS Power acknowledges the delay of this FIN application and endeavors to provide timely capital work order submissions to the NSEB, and to provide notice of outstanding FINs through its capital quarterly reporting, as it did with this project. The final work on this project was completed in October 2019. This application was further delayed as resources that would otherwise complete this work were prioritized towards critical, active substation capital execution, then further delayed to allow for file recovery as a result of the 2025 cyber incident.

Please refer to the variance sheet for more detail.

51956 - 6P Mobile Substation Rewind				
Account	**Approved**	**Current Submission**	**Variance**	**Reason for Variance**
Regular Labour	21,414	38,366	16,952	Increased amount of labour required for techs to trace out the wiring and commission the new low side breaker due to quality of documentation and lack of drawing markups from service provider.
Overtime Labour		6,950	6,950	
Term Labour		7,983	7,983	
Term Labour-Overtime		196	196	
Travel Expense	5,000	2	(4,998)	Intended for Factory Acceptance test visit which did not occur due to vendor missing multiple milestone dates.
Materials	444,800	160,105	(284,695)	Vendor bid for the materials portion of the rewind and refurbishment came in significantly under the original estimate amount.
Contracts	705,400	283,644	(421,756)	Vendor bid for the contract portion of the rewind and refurbishment came in significantly under the original estimate amount.
Office Supplies		44	44	
Consulting	30,000	686	(29,314)	Intended for Factory Acceptance test witnessing from expert consultant which did not occur due to vendor missing multiple milestone dates.
Comp Hardware & Op Software		79	79	
Meals	500	105	(395)	
Rent		4,000	4,000	Rental not included in original estimate.
Other Goods and Services	115,020	-	(115,020)	Unused contingency offset by increase in labour, admin overheads, and vehicle allocated costs.
Vehicle Allocated Costs	11,057	18,221	7,164	Increased labour cost and overtime resulted in increased vehicle overhead.
Admin Overheads	16,379	40,914	24,535	Increased labour cost and overtime resulted in increased admin overhead.
Contractor Admin Overhead	141,214	57,896	(83,318)	Reduced contract spend resulted in a reduction of contract overhead.
AFUDC Interest	25,337	18,212	(7,125)	
Other Income-Salvage		(1,625)	(1,625)	
Total	1,516,121	635,776	(880,345)	