

CI C0082085

67C-T64 Reactive Transformer Replacement

REDACTED

June 11, 2026





NSEB APPROVAL SHEET

Project Title: 67C-T64 Transformer Replacement

CI Number: C0082085

Date: June 11, 2026

Expenditure Profile			Type of Filing
Year	Budget Amount	Project Estimate	☐ Capital Project Authorization ☒ Unforeseen and Unbudgeted (U&U) ☐ Planned & Advanced (P&A) ☐ Subsequent Approval Item ☐ Authorization to Overspend (ATO) ☐ Scope Change ☐ Final Cost (FIN)
2025		2,418,415	
Total	\$0	\$2,418,415	

COMMENTS

Submitted on behalf of NOVA SCOTIA POWER INCORPORATED

Approved on behalf of NOVA SCOTIA ENERGY BOARD

Authorized Signatory
Dave Pickles
Chief Operating Officer

DATE
June 11, 2026

DATE

CI Number: C0082085

Title: 67C-T64 Transformer Replacement

Start Date: 2025/07
In-Service Date: 2025/10
Final Cost Date: 2026/12
Function: Transmission
Forecast Amount: \$2,418,415

DESCRIPTION:

This project was for the replacement of the failed 67C-T64 transformer at the 67C Whycocomagh Substation. As the sole electrical supply for the Whycocomagh area, the existing 67C-T64 138–26.4 kV, 15/20/25 MVA transformer was replaced with an equivalent like-for-like unit to maintain service reliability.

The failure of the asset occurred due to an internal phase-to-phase fault between the A and B phases. The severity of the damage to the transformer resulting from the phase-to-phase fault was deemed non-repairable and required immediate replacement. As a result, a mobile transformer was installed as a temporary measure to supply customers.

A new transformer, originally procured for a future project (CI C0011358 – New Bridgewater Substation) and already in transit, was available for use as a replacement for the failed transformer at 67C Whycocomagh. CI C0011358 was not impacted by this decision, as the updated construction timeline due to a land acquisition delay for the new substation significantly exceeded the lead time required to procure a new transformer. This allowed the project to be executed quickly without waiting for procurement of a new transformer. The unit was successfully commissioned and placed in service in October 2025, ensuring readiness for winter load and enabling the release of the mobile transformer that had been temporarily supplying customers. This approach minimized service disruption and leveraged available resources efficiently.

Summary of Related CIs +/- 2 years:

Pursuant to Section 11.2 of the CEJC, related CIs for Transmission include “Work completed on the same asset class (Padmount transformers, Breakers, etc.) or in the same location (feeder, Transmission Line).”

- No other projects in 2024, 2025, 2026, 2027 or 2028

Depreciation Class: Transmission Plant – Station Equipment

Retirement Information:

- Categorization of Retirement: Accounting Policy 6420 - Retirement and Disposal of Capital Assets
- Percentage of Asset Pool: 0.32%

Estimated Life of the Asset: 50 Years

JUSTIFICATION:

Justification Criteria: Transmission Plant

Why do this project?

67C-T64 experienced an unexpected failure, leaving the substation without a permanent source of supply. The unit was assessed and determined to be beyond repair, making full replacement the only viable option to restore long-term reliability and maintain system integrity.

Why do this project now?

67C-T64 experienced an unexpected failure, leaving the substation without a permanent source of supply requiring immediate replacement. The replacement was prioritized because winter load was approaching and mobile transformer availability is critical across the system. Leaving the mobile in place would have reduced flexibility for other potential, emergent needs. Completing the work in October 2025 ensured asset readiness for winter.

This project was deemed in-service when the work was completed (October 2025). The Final Cost Date (December 2026) is beyond the normal six months to allow for the final project financial reconciliation to be completed. As this project was completed while systems were being restored following the cyber event, more time was required to validate and confirm NS Power's actual expenditures for this project.

Why do this project this way?

A new transformer matching the required specifications was already in transit for a future project. Using this unit allowed the team to proceed immediately without waiting for procurement of a new transformer. A replacement transformer has been procured to backfill the unit diverted to 67C to ensure availability of another transformer for CI C0011358.

Contingency Statement

Consistent with the maturity matrix, this project is being filed as a Class 0 estimate with no contingency. The project has been completed, and all project deliverables have been defined and the costs are known.



Instructions: Select option in Column B.
Columns C through G will auto-populate.

Document No: XXX-XX-XXXX-XXXX

Project Cost Estimate Input Checklist and Maturity Matrix						
Transmission Line Infrastructure		Required fields:		Estimate Classification		
Project Name: 67C-T64 Transformer Replacement		Started or Preliminary		Class 5	Class 4	Class 3
Maturity Level of Project Definition Deliverables		Defined or Complete		Class 2	Class 1	
General Project Data						
A. Scope						
Project Scope of Work Description	Defined (D)	P	P	D	D	D
Site Infrastructure (Access, Construction Power, Camp, etc.)	Defined (D)	NR	P	D	D	D
B. Capacity						
Voltage (kV) and Circuits	Defined (D)	P	P	D	D	D
C. Project Location						
Not Applicable						
D. Requirements						
Codes and/or Standards	Defined (D)	NR	P	D	D	D
Environmental Monitoring	Defined (D)	NR	NR	P	P	D
E. Technology Selection						
Not Applicable						
F. Strategy						
Right-of-Way (ROW)	Defined (D)	P	P	D	D	D
Contracting/Sourcing	Defined (D)	NR	P	D	D	D
Escalation	Not Applicable (NA)	NR				
G. Planning						
System/Grid Planning (including substation and interconnect locations)	Defined (D)	P	P	D	D	D
Logistics Plan	Defined (D)	P	P	P	D	D
Integrated Project Plan	Defined (D)	NR	P	D	D	D
Project Code of Accounts	Defined (D)	NR	P	D	D	D
Project Schedule	Defined (D)	NR	P	D	D	D
Regulatory Approval & Permitting	Defined (D)	NR	P	D	D	D
Risk Register	Not Applicable (NA)	NR				
Stakeholder Consultation/Engagement/Management Plan	Not Applicable (NA)	NR				
Work Breakdown Structure (WBS)	Not Applicable (NA)	NR				
Start-up & Commissioning Plan	Defined (D)	NR	P	P/D	D	D
H. Studies						
Routing Options	Not Applicable (NA)					
Topography & Bathymetry	Not Applicable (NA)					
Environmental Impact/Sustainability Assessment	Not Applicable (NA)	NR				
Environment/Existing Conditions	Defined (D)	NR	P	D	D	D
Meteorology and/or Oceanographic/Subsea	Not Applicable (NA)	NR				
Soils & Hydrology	Not Applicable (NA)	NR				
Technical Deliverables (Specifications and/or Drawings)						
Conductor, Insulator, Grounding, Joint Design (including protection for buried or subsea)	Complete (C)	S	P	C	C	C
Foundation/Structure (Tower) Design	Not Applicable (NA)					
Route Mapping/Survey	Not Applicable (NA)					
Design Specifications	Complete (C)	NR	S/P	C	C	C
Instrument List	Complete (C)	NR	S/P	C	C	C
Construction Permits	Not Applicable (NA)	NR				
Geometric Layout, Alignment, Profile, Cross Section	Not Applicable (NA)	NR				
Land/ROW Title Negotiation	Not Applicable (NA)	NR				
Civil/ Site/Structural/Architectural Discipline Drawings	Complete (C)	NR	S/P	P	C	C
Crossings and Borings Designs and Drawings	Not Applicable (NA)	NR				
Demolition Plans and Drawings	Complete (C)	NR	S/P	P	C	C
Erosion Control Plan & Drawings	Not Applicable (NA)	NR				
Foundation/Structure (Tower) Discipline Drawings	Not Applicable (NA)	NR				
Tower/Structure Location/Spotting	Not Applicable (NA)	NR				
Instrument Datasheets	Complete (C)	NR	NR/S	P	P/C	C
Electrical Discipline Drawings	Complete (C)	NR	NR	S/P	P/C	C
Instrumentation/Control System Discipline Drawings	Complete (C)	NR	NR	S/P	P/C	C
Total # Deliverables for this Project		6	19	23	23	23
% Defined/Complete towards Class Estimate		100%	100%	100%	100%	100%

Comments:

This project is already complete, which allows the Maturity Matrix to be fully defined. Specific documents and tasks are not required as there were no civil construction or surveys required.

Legend:

The maturity level is an approximation of the completion status of the deliverable. The completion is indicated by the following descriptors:

General Project Data:

- Not Required (NR): May not be required for all estimates of the specified class, but specific project estimates may require at least preliminary development.
- Preliminary (P): Project definition has begun and progressed to at least an intermediate level of completion. Review and approvals for its current status has occurred.
- Defined (D): Project definition is advanced, and reviews have been conducted. Development may be near completion with the exception of final approvals.

Technical Deliverables:

- Not Required (NR): Deliverable may not be required for all estimates of the specified class, but specific project estimates may require at least preliminary development.
- Started (S): Work on the deliverable has begun. Development is typically limited to sketches, rough outlines, or similar levels of early completion.
- Preliminary (P): Work on the deliverable is advanced. Interim, cross-functional reviews have usually been conducted. Development may be near completion except for final reviews and approvals.
- Complete (C): The deliverable has been reviewed and approved as appropriate.

Inclusions:

For the purposes of this document, the term *power transmission line infrastructure industries* is assumed to include greenfield or brownfield sites for overhead, buried and submarine transmission of electrical power in the infrastructure industries. High voltage is typically >100kV but may be less (e.g., 33 or 66kv) if long distance with light electrical loads. This excludes power supply and distribution scope within a process plant, mining facility, building complex or other facility site. It also excludes power generation facilities and substations. The defining deliverables of those excluded project scopes are covered in other RPs (e.g., 18R-97 for process plants [2]).

Power transmission is considered an element of the infrastructure industry. The Construction Industry Institute has provided a good definition of infrastructure in its Project Definition Rating Index for Infrastructure Projects as follows [3]:

“A capital project that provides transportation, transmission, distribution, collection or other capabilities supporting commerce or interaction of goods, services, or people. Infrastructure projects generally impact multiple jurisdictions, stakeholder groups and/or a wide area. They are characterized as projects with a primary purpose that is integral to the effective operation of a system. These collective capabilities provide a service that is made up of nodes and vectors into a grid or system.”

Using this definition, power transmission lines are a vector or linear scope element that connects substation or other facility nodes at its terminations. The substation nodes may be part of or associated with a generation, consuming or interconnection facility. As such, transmission projects are often executed as part of a program that also involves node project scope or facility operational changes (or at least considerations for integrated system commissioning and startup). As the definition states, a distinguishing feature of these projects is that they often traverse wide areas, cross country or subsea, which puts an emphasis on the definition of routing, land ownership and conditions, and establishing right-of-way (ROW). Associated scope definition challenges include defining stakeholder, permitting and regulatory requirements. Buried and submarine installations increase the focus on the protection philosophy and strategies affecting cable selection, armoring and joint considerations. While many distinguish power transmission (higher voltage, long distances) from power distribution (short distance, lower voltage connections to retail customers), the principles of estimating these elements are similar; i.e., the RP applies to both.

The main physical power transmission line scope elements are conductors and their support structures if installed overhead. Main installation elements include land clearing if over land (including forestry if applicable), foundation and structure erection and conductor stringing if overhead, or trenching, laying and horizontal boring if subsurface or subsea. Special scope elements are involved with crossings of water, road, rail and so on and at terminations. Because conductor (e.g., aluminum) and structure (e.g., steel) material costs are usually a significant cost element, these project estimates are particularly sensitive to escalation uncertainty. In general, the more developed the route, the more complex the installation will be. In urban areas, visual appeal and concern for safety and health can be major issues. Installation in remote location and/or difficult or environmentally sensitive terrain creates its own challenges. Subsea installation adds the need for bathymetry¹ and metocean² studies and specialized installation equipment and vessels. Before any installation work can begin in an area, stakeholder consultation must be advanced (sometimes requiring agreements with local populations with rights), and appropriate land and ROW must be acquired which creates unique scheduling as well as cost challenges.

For the purpose of estimate classification then, the main scope definition deliverables are associated with defining the power requirements (i.e., kV), the conductors and structure, and the routing. Conductors can vary widely in content (copper, aluminum, etc.) and insulation. Overhead structures may be wood, concrete, composite or steel in various configurations with various foundation designs including pilings, concrete and so on. The route's land or subsea characteristics and the nature of developments drive the need for special design features and execution strategies. Operability and maintainability considerations may also affect ROW and access design. Brownfield and revamp projects add their own concerns for interface with existing elements, crowded working conditions, etc. For each scope definition decision, stakeholder requirements need to be considered.

Power substation projects are usually associated with transmission projects. However, substations being equipment-centric and located on a facility site have physical and defining characteristics similar to process plant projects (e.g., reliance on one-line diagrams, plot plans, etc.).



SHIHLIN ELECTRIC & ENGINEERING CORP.

16F,NO.88, Sec.6, Chung-Shan N.Rd, Shihlin, 111, Taipei, Taiwan

Tel : 02-2834-2662

Fax : 02-2835-9250

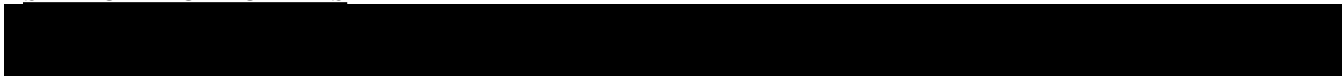
INVOICE

MESSRS	Nova Scotia Power Inc. - OU	Ref. No.	ODN25055
	C/O ACCOUNTS PAYABLE PO BOX 910		
	HALIFAX, NS B3J 2W5, Canada	Date:	18-Sep-2025
Supplier No.:		PO No:	PO # 2139431
Project Name:	73W-T1 changed to 113W-T61	Payment :	NET 35 Days

No.	Description	Q'TY	Unit Price	AMOUNT
	"Shihlin" Power Transformer			<u>DAP</u>
	Nova Scotia Power Inc. - OU			
1	3P, 60Hz, 15/20/25 MVA, 138-26.4kV, LV OLTC	1		
2	Freight	1		
3	Installation	1		
4	Spare Parts	1		

TOTAL AMOUNT: CAD XXXXXXXXXXXX
 VVVVVVVVVVVVVV

SAY TOTAL CA DOLLARS



Bank Information :

Beneficiary :

SHIHLIN ELECTRIC & ENGINEERING CORPORATION

16F, No.88, Sec.6 , Chung-Shan N. Rd., Taipei 111, Taiwan R.O.C.

Beneficiary bank :

MEGA INTERNATIONAL COMMERCIAL BANK LAN-YA BRANCH

126, CHUNG SHAN N. RD. SEC.6, TAIPEI TAIWAN R.O.C.

Bank Account : 010-53-01111-1

SWIFT# ICBCTWTP010

Shihlin Electric & Engineering Corp.

Paisy Lin

Authorized Signature



CONNECT ATLANTIC UTILITY SERVICES
201-205 BLUEWATER ROAD
BEDFORD NS B4B 1H1
CANADA
 Phone: 902-832-4565
 Fax: 902-832-6480
 www.causltd.com

INVOICE

#INV029054

Date: 08/31/2025

Bill To

Nova Scotia Power Incorporated
 1223 Lower Water St
 Halifax NS B3J 3S8
 Canada

Ship To

Nova Scotia Power Incorporated
 1223 Lower Water St
 Halifax NS B3J 3S8
 Canada

TOTAL

Due Date: 10/05/2025

8672 Nova Scotia Power Incorporated : 67 C Baddeck WO# 8599744

Terms	Due Date	Customer PO #	Project (Header)
Net 35	10/05/2025	2149455	8672 Nova Scotia Power Incorporated : 67 C Baddeck WO# 8599744

Item	Quantity	Rate	Amount
LABOUR & EQUIPMENT	1		

Tax Number

774455877
RT0001

Subtotal

Tax (%)

Total



INV029054



CONNECT ATLANTIC UTILITY SERVICES
201-205 BLUEWATER ROAD
BEDFORD NS B4B 1H1
CANADA
 Phone: 902-832-4565
 Fax: 902-832-6480
 www.causltd.com

INVOICE

#INV029209

Date: 09/15/2025

Bill To

Nova Scotia Power Incorporated
 1223 Lower Water St
 Halifax NS B3J 3S8
 Canada

Ship To

Nova Scotia Power Incorporated
 1223 Lower Water St
 Halifax NS B3J 3S8
 Canada

TOTAL

Due Date: 10/20/2025

8672 67 C Baddeck WO# 8599744 - Traffic Control & Hydrovac Service

Terms	Due Date	Customer PO #	Project (Header)
Net 35	10/20/2025	2149455	8672 Nova Scotia Power Incorporated : 67 C Baddeck WO# 8599744

Item	Quantity	Rate	Amount
AWP Safety Invoice 144965			
GFL Invoice LQ02989799			

Tax Number

774455877
RT0001

Subtotal

Tax (%)

Total



INV029209



CONNECT ATLANTIC UTILITY SERVICES
201-205 BLUEWATER ROAD
BEDFORD NS B4B 1H1
CANADA
 Phone: 902-832-4565
 Fax: 902-832-6480
 www.causltd.com

INVOICE

#INV029977

Date: 12/31/2025

Bill To

Nova Scotia Power Incorporated
 1223 Lower Water St
 Halifax NS B3J 3S8
 Canada

Ship To

Nova Scotia Power Incorporated
 1223 Lower Water St
 Halifax NS B3J 3S8
 Canada

TOTAL

Due Date: 02/04/2026

8672 67 C Baddeck WO# 8599744 - Excavator Service

Terms	Due Date	Customer PO #	Project (Header)
Net 35	02/04/2026	2149455	8672 Nova Scotia Power Incorporated : 67 C Baddeck WO# 8599744

Item	Quantity	Rate	Amount
William MacColl Invoice 314			

Tax Number

774455877
RT0001

Subtotal

Tax (%)

Total



INV029977