

CI C0061005

POA Cell Capping 2025

NON-CONFIDENTIAL

July 7, 2025



NSEB APPROVAL SHEET

Project Title: POA Cell Capping 2025

CI Number: C0061005

Date: July 7, 2025

Expenditure Profile			Type of Filing	
Year	Budget Amount	Project Estimate	☒	Capital Project Authorization
2024	9,025	30,321	☐	Unforeseen and Unbudgeted (U&U)
2025	1,017,701	2,500,084	☐	Planned & Advanced (P&A)
2026	2,228,714		☒	Subsequent Approval Item
			☐	Authorization to Overspend (ATO)
			☐	Scope Change
			☐	Final Cost (FIN)
Total	\$3,255,440	\$2,530,405		

COMMENTS

Submitted on behalf of NOVA SCOTIA POWER INCORPORATED



Authorized Signatory
Dave Pickles
Chief Operating Officer

DATE
July 4, 2025

Approved on behalf of NOVA SCOTIA ENERGY BOARD

DATE

CI Number: C0061005**Title: POA Cell Capping 2025**

Start Date: 2024/07
In-Service Date: 2025/09
Final Cost Date: 2026/03
Function: Steam
Forecast Amount: \$2,530,405

DESCRIPTION:

This project is for the capping of Ash Disposal Cell 2 at the Point Aconi Generating Station Residue Management Site (RMS). The execution of this work is mandated by the conditions set forth in Point Aconi's Industrial Permit, which requires permanent capping of ash disposal cells upon reaching capacity. A cell is considered to have reached capacity when it meets any of its critical design or regulatory thresholds — including maximum volume, final elevation, permitted airspace, or environmental constraints. In the context of this project, the cell capacity was determined by the elevation limit, which is approximately 41 meters above sea level. Cell 2 has been evaluated and identified as suitable and available for permanent capping in 2025.

The primary objective of the capping activity is to establish a stable, vegetative cover over the ash residue, thereby minimizing environmental impacts and ensuring regulatory compliance pursuant to Part V of the *Environment Act*, S.N.S. 1994–95, c. 1, s. 1. The capping will also reduce the volume of wastewater generated at the ash disposal site by limiting the infiltration of precipitation into the ash cells.

The project scope includes construction work on the Cell 2 Interceptor Ditch to divert water not contacted by ash away from the ash management area and treatment ponds, therefore reducing the operational demands on the wastewater treatment system.

The Board provided the following Directive in its Decision pertaining to the Decarbonization Deferral Account (DDA) (M11220):

NS Power must provide specific notice to all participants in this proceeding upon filing any future capital work order applications involving assets that are forecasted to be included in the DDA and to confirm this was done in its applications to the Board.

In accordance with the Board's directive, NS Power provided notice of this investment to participants in the DDA proceeding on July 4, 2025.

Summary of Related CIs +/- 2 years:

Pursuant to Section 11.2 of the CEJC, related CIs for Steam projects includes “work completed on the same asset (turbine, boiler, etc.) and on the same unit (Lingan Unit #3, for example).”

- 2023 C0052498 POA - Ash Cell Capping 2023 - \$3,698,493
- 2026 TBD POA Ash Cell Capping 2026 - \$2,420,000
- 2027 TBD POA Ash Cell Capping 2027 - \$TBD

Depreciation Class: Steam Production Plant – Point Aconi

Estimated Life of the Asset: N/A

JUSTIFICATION:

Justification Criteria: Environment

Why do this project?

Capping of decommissioned ash disposal cells at the RMS is a requirement under the Point Aconi Generating Station's approved industrial permit issued by the Department of Environment and Climate Change (Department), in accordance with Approval No. 2007-058666-07, Section 10. The permanent cap constitutes the final stage of closure for the cell and is designed to establish a stable, vegetated cover to minimize infiltration and environmental impacts.

Following installation, surface runoff from the capped area will be monitored in accordance with the Department's regulatory standards. Upon verification that water quality meets the applicable discharge criteria, runoff will be directed away from the wastewater collection system, thereby reducing the hydraulic load on the site's treatment infrastructure.

Why do this project now?

In accordance with the Point Aconi Generating Station's industrial permit, capping material must be applied within 12 months of abandonment following the completion of specific areas within the Residue Management Site (RMS). The proposed permanent capping of Cell 2 is scheduled for 2025. Cell 2 has been selected as it has reached capacity and is available for final capping. This work is planned to be executed during the drier months of June to October, so that the weather and ground conditions are most conducive to achieving efficient and effective placement of the capping materials. Other cells within the Residue Management Site (RMS) remain active and continue to receive ash material throughout the construction season.

Why do this project this way?

A topographical survey was conducted to assess the existing condition of Cell 2 and document its surface features. The data collected was used to develop a detailed model of the cell, enabling the identification of any grading or shaping requirements prior to cap construction.

A liner-style cap has been selected as the most cost-effective and technically suitable solution for the permanent closure of the cell. The linear-style cap offers superior containment performance, regulatory compliance, and long-term cost savings by minimizing infiltration, reducing environmental risk, and lowering future maintenance needs. Notably, this design is consistent with the approach previously accepted by Department of Environment and Climate Change for earlier cell capping projects, reinforcing its proven effectiveness and alignment with established environmental management practices.

By diverting portions of runoff from the capped Cell 2 away from the wastewater treatment pond, the project enhances the site's resilience to climate risks by reducing hydraulic loading during extreme precipitation events, thereby mitigating the potential for system overflows and ensuring continued regulatory compliance under high-intensity storm conditions.

Contingency Statement

Contingency for this project has been determined using a combination of internal subject matter expert judgement (professional engineers) based on previous experience with these assets, and the non-binding contingency guidelines. Consistent with the maturity matrix, this project is being filed as a Class 1 estimate with a contingency of 15 percent. The risks intended to cover by this contingency include unforeseen conditions such as site-specific grading adjustments, market availability and pricing volatility of the materials, and weather-related impacts or delays that may result in additional material and labour requirements to complete work during the 2025 season.

Reason for Variance

The decrease of approximately \$725 thousand from the 2025 ACE Plan subsequent submittal estimate of \$3,255,440 is primarily due to improved scope definition, refined material, labour and equipment costs, and updated pricing informed by recent market conditions and engineering assessments. As the project scope has progressed in maturity, enhanced clarity around construction requirements has enabled a more accurate and efficient cost estimate.

Location: Steam CI# : C0061005 Title: POA Cell Capping 2025 Execution Year: 2025						
Description	Unit	Quantity	Estimate	Total Estimate	Cost Support Reference	Completed Similar Projects (FP#s)
Regular Labour						
Electrician	PD	10	\$ 403	\$ 4,033		C0030786 C0052498
Engineering	PD	30	\$ 457	\$ 13,706		C0030786 C0052498
Maintenance Trades	PD	20	\$ 411	\$ 8,212		C0030786 C0052498
Power Plant Technician	PD	20	\$ 422	\$ 8,438		C0030786 C0052498
Utilityworker	PD	20	\$ 286	\$ 5,720		C0030786 C0052498
Technologists	PD	30	\$ 363	\$ 10,886		C0030786 C0052498
			Sub-Total	\$ 50,995		
Materials						
Geosynthetic Clay Liner	Lot	1	\$ 355,163	\$ 355,163	Attachment 1 #6-1	C0030786 C0052498
Type 1 Geotextile	Lot	1	\$ 115,500	\$ 115,500	Attachment 1 #7-1	C0030786 C0052498
Erosion Control Blanket	Lot	1	\$ 51,000	\$ 51,000	Attachment 1 #7-2	C0030786 C0052498
Fill Materials	Lot	1	\$ 552,524	\$ 552,524	Attachment 1 #3-1 #3-2 #3-3 #3-4 #4-1 #5-1	C0030786 C0052498
Topsoil	Lot	1	\$ 108,750	\$ 108,750	Attachment 1 #8-1	C0030786 C0052498
Consumables	Lot	1	\$ 25,000	\$ 25,000		C0030786 C0052498
88 HP Pond Pump	Lot	1	\$ 120,000	\$ 120,000		C0030786 C0052498
			Sub-Total	\$ 1,327,936		
Contracts						
Cell Capping Contractor	Lot	1	\$ 543,396	\$ 543,396		
Environmental Services	Lot	1	\$ 50,000	\$ 50,000		
Rescue Services	Lot	1	\$ 25,000	\$ 25,000		
			Sub-Total	\$ 618,396		
Consulting						
Environmental Consulting Services	Lot	1	\$ 80,000	\$ 80,000		
			Sub-Total	\$ 80,000		
Rental/ Main of Equipment						
Pump Rental Services	Lot	1	\$ 25,000	\$ 25,000		
			Sub-Total	\$ 25,000		
Other Goods & Services						
Contingency	%	15%	\$ 2,102,327	\$ 315,349		
				\$ -		
			Sub-Total	\$ 315,349		
Interest Capitalized						
AFUDC				\$ 17,041		
				\$ -		
			Sub-Total	\$ 17,041		
Administrative Overhead						
Labour AO				\$ 19,147		
Contractor AO				\$ 76,541		
			Sub-Total	\$ 95,688		
SUB-TOTAL (no AO, AFUDC)				\$ 2,417,676		
TOTAL (AO, AFUDC included)				\$ 2,530,405		
Original Cost				\$ -		

Note 1: The labour figures noted above are an average of salaries across a variety of jobs within similar classifications including fringe, and are used solely for budgeting purposes.
Note 2: Small differences in totals are attributable to rounding.



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						
Process Industries	Required fields:	Estimate Classification				
Project Name: POA Cell Capping 2025	Started or Preliminary	Class 5	Class 4	Class 3	Class 2	Class 1
Maturity Level of Project Definition Deliverables	Defined or Complete					
General Project Data						
A. Scope						
Non-Process Facilities (Infrastructure, Ports, Pipeline, Power Transmission)	Defined (D)	P	P	D	D	D
Project Scope of Work Description	Defined (D)	P	P	D	D	D
Byproduct and Waste Disposal	Defined (D)	NR	P	D	D	D
Site Infrastructure (Access, Construction Power, Camp, etc.)	Defined (D)	NR	P	D	D	D
B. Capacity						
Plant Production/Facility (includes power facilities)	Not Applicable (NA)					
Electrical Power Requirements (when not the primary capacity driver)	Not Applicable (NA)	NR				
C. Project Location						
Plant and Associated Facilities	Defined (D)	P	P	D	D	D
D. Requirements						
Codes and/or Standards	Defined (D)	NR	P	D	D	D
Communication Systems	Defined (D)	NR	P	D	D	D
Fire Protection and Life Safety	Defined (D)	NR	P	D	D	D
Environmental Monitoring	Defined (D)	NR	NR	P	P	D
E. Technology Selection						
Process Technology	Not Applicable (NA)					
F. Strategy						
Contracting/Sourcing	Defined (D)	NR	P	D	D	D
Escalation	Not Applicable (NA)	NR				
G. Planning						
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	Defined (D)	NR	P	D	D	D
Stakeholder Consultation/Engagement/Management Plan	Defined (D)	NR	P	D	D	D
Work Breakdown Structure (WBS)	Defined (D)	NR	P	D	D	D
Start-up & Commissioning Plan	Defined (D)	NR	P	P/D	D	D
H. Studies						
Environmental Impact/Sustainability Assessment	Defined (D)	NR	P	D	D	D
Environment/Existing Conditions	Defined (D)	NR	P	D	D	D
Soils & Hydrology	Defined (D)	NR	P	D	D	D
Technical Deliverables (Specifications and/or Drawings)						
Block Flow Diagrams	Not Applicable (NA)					
Equipment Data Sheets	Not Applicable (NA)	NR/S				
Equipment Lists: Electrical	Not Applicable (NA)	NR/S				
Equipment Lists: Process/Utility/Mechanical	Not Applicable (NA)	NR/S				
Heat & Material Balances	Not Applicable (NA)	NR				
Process Flow Diagrams (PFDs)	Not Applicable (NA)	NR				
Utility Flow Diagrams (UFDs)	Not Applicable (NA)	NR				
Design Specifications	Not Applicable (NA)	NR				
Electrical One-Line Drawings	Not Applicable (NA)	NR				
General Equipment Arrangement Drawings	Not Applicable (NA)	NR				
Instrument List	Not Applicable (NA)	NR				
Piping & Instrumentation Diagrams	Not Applicable (NA)	NR				
Plot Plans/Facility Layouts	Complete (C)	NR	S/P	C	C	C
Construction Permits	Complete (C)	NR	S/P	P/C	C	C
Civil/Site/Structural/Architectural Discipline Drawings	Complete (C)	NR	S/P	P	C	C
Demolition Plans and Drawings	Not Applicable (NA)	NR				
Erosion Control Plan & Drawings	Complete (C)	NR	S/P	P	C	C
Fire Protection & Life Safety Drawings & Details	Not Applicable (NA)	NR				
Electrical Schedules	Not Applicable (NA)	NR	NR/S			
Instrument & Control Schedules	Not Applicable (NA)	NR	NR/S			
Instrument Data Sheets	Not Applicable (NA)	NR	NR/S			
Piping Schedules	Not Applicable (NA)	NR	NR/S			
Piping Discipline Drawings	Not Applicable (NA)	NR	NR/S			
Spare Parts Listings	Not Applicable (NA)	NR	NR			
Electrical Discipline Drawings	Not Applicable (NA)	NR	NR			
Facility Emergency Communication Plan & Drawings	Complete (C)	NR	NR	S/P	P/C	C
Information Systems/Telecommunication Drawings	Not Applicable (NA)	NR	NR			
Instrumentation/Control System Discipline Drawings	Not Applicable (NA)	NR	NR			
Mechanical Discipline Drawings	Not Applicable (NA)	NR	NR			
Total # Deliverables for this Project		4	25	27	27	27
% Defined/Complete towards Class Estimate		100%	100%	100%	100%	100%

Comments:

This project is being filed as an AACE Class 1 Estimate. The defined deliverables for this project indicate that 100% of Class 1 deliverables are complete. According to AACE Guidelines, a contingency value between 3% and 15% is recommended for Class 1 estimates. A 15% contingency has been used to cover risks that include unforeseen conditions such as site-specific grading adjustments, market availability and pricing volatility of the materials, and weather-related delays that may impact labour costs during the 2025 season.

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 *process industries* is assumed to include firms involved with the manufacturing and production of chemicals, petrochemicals, and hydrocarbon processing. The common thread among these industries (for the purpose of estimate classification) is their reliance on process flow diagrams (PFDs), piping and instrument diagrams (P&IDs), and electrical one-line drawings as primary scope defining documents. These documents are key deliverables in determining the degree of project definition, and thus the extent and maturity of estimate input information. This RP applies to a variety of project delivery methods such as traditional design-bid-build (DBB), design-build (DB), construction management for fee (CM-fee), construction management at risk (CM-at risk), and private-public partnerships (PPP) contracting methods.

Estimates for process facilities center on mechanical and chemical process equipment, and they have significant amounts of piping, instrumentation, and process controls involved. As such, this recommended practice may apply to portions of other industries, such as pharmaceutical, utility, water treatment, metallurgical, converting, and similar industries.

Most plants also have significant electrical power equipment (e.g., transformers, switchgear, etc.) associated with them. As such, this RP also applies to electrical substation projects, either associated with the process plant, as part of power transmission or distribution infrastructure, or supporting the power needs of other facilities. This RP excludes power generating facilities and high-voltage transmission.

Primary Responses

Success: All data is valid!

Status	Bid/No Bid Decision	#	Item	Section #	Quantity Required	UOM	Numeric	
							Unit Price	Total Cost
Success: All values provided	Bid	#0-1	Mobilization / Demobilization		1	Lump Sum	\$ 28,695.00	\$ 28,695.00
Success: All values provided	Bid	#0-2	Performance Security		1	Lump Sum	\$ 5,500.00	\$ 5,500.00
Success: All values provided	Bid	#0-3	Labour and Material Security		1	Lump Sum	\$ 5,500.00	\$ 5,500.00
Basket Total								\$ 39,695.00

Environmental Management

Success: All values provided	Bid	#1-1	Design and Submission of Environmental Management Control Plan	01 35 43	1	Lump Sum	\$ 750.00	\$ 750.00
Success: All values provided	Bid	#1-2	Erosion and Sedimentation Controls	01 35 43	1	Lump Sum	\$ 8,500.00	\$ 8,500.00
Basket Total								\$ 9,250.00

Open Cut Excavation

Success: All values provided	Bid	#2-1	Class "A" Excavation	31 23 33.02	17000	m3	\$ 20.00	\$ 340,000.00
Success: All values provided	Bid	#2-2	Stripping	31 23 33.02	19000	m2	\$ 3.80	\$ 72,200.00
Success: All values provided	Bid	#2-3	Tie in to Existing GCL	31 23 33.02	260	m2	\$ 60.00	\$ 15,600.00
Basket Total								\$ 427,800.00

Pervious Fill

Success: All values provided	Bid	#3-1	Type C-5 Clear Stone	31 05 16.01	3610	Tonne	\$ 32.75	\$ 118,227.50
Success: All values provided	Bid	#3-2	Type C-3 Clear Stone	31 05 16.01	500	Tonne	\$ 46.50	\$ 23,250.00
Success: All values provided	Bid	#3-3	Type 1 Granular Material	31 05 16.01	700	Tonne	\$ 42.00	\$ 29,400.00
Success: All values provided	Bid	#3-4	Armour Stone	31 05 16.01	1	Lump Sum	\$ 1,646.00	\$ 1,646.00
Success: All values provided	Bid	#3-5	Quality Control	31 05 16.01	1	Lump Sum	\$ 3,900.00	\$ 3,900.00
Basket Total								\$ 176,423.50

Common Fill

Success: All values provided	Bid	#4-1	Common Fill	31 05 16.02	2700	m3	\$ 15.00	\$ 40,500.00
Success: All values provided	Bid	#4-2	Quality Control	31 05 16.02	1	Lump Sum	\$ 2,800.00	\$ 2,800.00
Basket Total								\$ 43,300.00

Low Permeability Fill

Success: All values provided	Bid	#5-1	Low Permeability Fill	31 05 16.03	3500	m3	\$ 97.00	\$ 339,500.00
Success: All values provided	Bid	#5-2	Quality Control	31 05 16.03	1	Lump Sum	\$ 16,500.00	\$ 16,500.00

Basket Total	\$ 356,000.00
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Geosynthetic Clay Liner

Success: All values provided	Bid	#6-1	Geosynthetic Clay Liner	31 32 18	18450	m2	\$ 19.25	\$ 355,162.50
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Basket Total	\$ 355,162.50
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Geotextile Soil Stabilization

Success: All values provided	Bid	#7-1	Type 1 Geotextile	31 32 19.16	16500	m2	\$ 7.00	\$ 115,500.00
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Success: All values provided	Bid	#7-2	Erosion Control Blanket	31 32 19.16	15000	m2	\$ 3.40	\$ 51,000.00
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Basket Total	\$ 166,500.00
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Hydroseeding/ Topsoil

Success: All values provided	Bid	#8-1	Topsoil	32 92 19.16	15000	m2	\$ 7.25	\$ 108,750.00
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Success: All values provided	Bid	#8-2	Hydroseeding	32 92 19.16	16800	m2	\$ 1.00	\$ 16,800.00
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Basket Total	\$ 125,550.00
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Grand Total	\$ 1,699,681.00
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