



July 4, 2025

REDACTED

Crystal Henwood  
Clerk of the Board  
Nova Scotia Energy Board  
1601 Lower Water Street, 3rd Floor  
Halifax, NS B3J 3S3

**Re: M11927 Nova Scotia Power Inc. - CI 50518 – HYD Ruth Falls Main Dam Refurbishment – \$15,445,508 (ATO) Compliance Filing**

Dear Ms. Henwood:

On June 18, 2025 the Nova Scotia Energy Board (NSEB, Board) issued its decision in Matter M11927 Nova Scotia Power Inc. – CI 50518 – HYD Ruth Falls Main Dam Refurbishment - \$15,445,508 (ATO). The Board's decision stated:

The Authorization to Overspend application will be held in abeyance until NS Power receives the *Fisheries Act* Authorization from the Department of Fisheries and Oceans. Once the *Fisheries Act* Authorization is obtained, NS Power can file an amended application, which must be accompanied by a Net Present Value analysis comparing the preferred refurbishment option to the decommissioning option.<sup>1</sup>

Nova Scotia Power Incorporated (NS Power, the Company) would like to confirm that it received its *Fisheries Act Authorization* (FAA) for the Ruth Falls Main Dam Refurbishment (Project) from Fisheries and Oceans Canada (DFO) on June 17, 2025. Please refer to **Attachment 1** for a copy of the FAA.

Please refer to **Partially Confidential Attachment 2** for a copy of the Company's Economic Analysis Model (EAM) which presents a Net Present Value (NPV) analysis comparing the preferred refurbishment option to the decommissioning option. This analysis shows a significant gap between the two options, even with all future sustaining costs from the Hydro Interval Plan (HIP) included, as well as an annual contingency added in the event that additional sustaining capital were to be required at Ruth Falls that's currently not captured

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<sup>1</sup> M11927, Document 322217, NSUARB Decision Letter, Nova Scotia Power Inc. - CI 50518 – HYD Ruth Falls Main Dam Refurbishment – \$15,445,508 (ATO), June 18, 2025, page 1.

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in the HIP.

Please refer to **Partially Confidential Attachment 3** for a copy of the Company's updated Detailed Cost Estimate (DCE). The offsetting costs have been confirmed as part of the FAA, and the updated DCE reflects those costs. As a result, the Company is amending its ATO request to reflect the reduction in offsetting costs. Therefore, the updated ATO request is for \$14,839,116, which represents a reduction of \$606,392.

The Board also indicated in its decision that once the Company has submitted its amended ATO a new timeline for the proceeding will be established. NS Power respectfully requests that any additional process to consider the information provided herein as Attachments 1-3 is expedited.

In addition to the fact that the information being filed herein as Attachments 1-3 is limited in nature and that there has already been two separate regulatory processes to assess the need and costs related to this project, the Company would like to take the opportunity to outline additional relevant considerations that support an expedited decision from the Board.

As explained further below, the ATO submitted to the NSEB was developed with estimates that assumed construction in 2025.

In order to secure the FAA, avoidance and mitigation measures to minimize impacts to fish and fish habitat were integrated into the Project schedule, primarily the avoidance of sensitive time periods for critical life stages of migratory fish species. Therefore, NS Power's FAA requires that in-water construction must be conducted between July 21, 2025 and March 31, 2026. Due to the extent of the work scope, the fact that the work is largely within the watercourse, and the inability to shorten the construction schedule in order to meet the timelines as set forth in the FAA, the work must start by July 21, 2025 and all in-stream construction work must be completed and the water levels returned to the normal operating range by March 31, 2026. Any delay beyond that date would jeopardize the Company's ability to complete the work within the authorized window and may require the Company to defer construction to a subsequent year.

The schedule to complete the proposed scope of work is subject to a number of variables, such as weather, that are beyond the control of NS Power. DFO has also acknowledged that the proposed scope is substantial and recommended that NS Power proceed with as much construction activity in advance of the planned in-stream construction window as possible, as schedule extensions would not be possible. Furthermore, the water management plan and construction activities have been coordinated to minimize the amount of construction activities where water management would be restricted, such as completing dam sill refurbishment work before the start of Nova Scotia's hurricane season.

If construction is not commenced by July 21, then the Company may be in a position where

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it must defer the remainder of the capital investment to a subsequent year, pending the outcome of the regulatory process.

If deferred, it is anticipated that the project will see cost escalations related to construction deferrals and the potential for escalating regulatory requirements. NS Power estimates that the overall project cost will escalate by approximately 10 percent. Deferring construction would also require the Company to seek an amendment to its FAA, which is valid until March 31, 2026. In accordance with the *Fisheries Act*, regulatory timelines for requests for Amendment to existing FAA's are the same as standard applications and are subject to the same conditions, such as Crown Consultation or requests for additional information from Fisheries and Oceans Canada (DFO). It is presumed that continuing engagement and Crown Consultation with the Mi'kmaq of NS would accompany NS Power's Amendment request. Further regulatory review, engagement and Crown Consultation could lead to additional requirements for the Company to secure an Amended FAA for a deferred Construction season.

NS Power's ability to readily manage the site with the existing assets through future flood seasons has diminished and is at the point where sustaining capital investment in 2025 will be required to address the critical deficiencies around water management for safe operation should the Company be in a position where it has to defer construction by another year.

As a result, and as previously stated, NS Power respectfully requests that with the FAA received and the risk of changes to scope mitigated, along with the additional sustaining capital that would be required to maintain the site in a safe manner, that the Board approve the ATO with an amended cost of \$14,839,116 and that it do so on an expedited manner, recognizing the prior regulatory process, assessment, and consideration that has already occurred in relation to this project.

If you have any questions or require any additional information, please contact the undersigned.

Yours truly,

A handwritten signature in blue ink, appearing to read 'AS', followed by a long horizontal line extending to the right.

Annie Beth Sampson, P.Eng.  
Manager, Regulatory



Fisheries and Oceans    Pêches et Océans  
Canada                                  Canada

Bedford Institute of Oceanography  
1 Challenger Drive  
PO Box 1006, Station P500  
Dartmouth, Nova Scotia B2Y 4A2

JUN 16 2025

Our file                  Notre référence  
19-HMAR-00549

Nova Scotia Power  
Attention: Jennifer Leblanc  
PO Box 910  
Halifax, NS B3J 2W5

**Subject: Ruth Falls Dam Refurbishment Project, Sheet Harbour, Halifax County, Nova Scotia - *Fisheries Act* Authorization**

Dear Jenny Leblanc:

Pursuant to Paragraphs 34.4(2)(b) and 35(2)(b) of the *Fisheries Act*, Fisheries and Oceans Canada (DFO) authorizes the carrying on of your proposed work, undertaking or activity that results in:

- the death of fish by means other than fishing and the harmful alteration, disruption or destruction of fish habitat, which is prohibited under subsections 34.4(1) and 35(1) of the *Fisheries Act*.

The proposed works for the Ruth Falls Dam Refurbishment Project, near Sheet Harbour, Halifax County, Nova Scotia, will result in the harmful destruction of up to 60 square meters (m<sup>2</sup>) of riverine fish habitat, and the harmful disruption of 1.15 km<sup>2</sup> of reservoir fish habitat to accommodate the drawdown of the Ruth Falls Headpond. The harmful disruption of 1,666 m<sup>2</sup> of fish habitat downstream of the main dam will also occur from the installation of a temporary bridge and access roads. Death of fish may occur from stranding and entrainment as a result of the temporary drawdown of the Ruth Falls Headpond, as well as dewatered areas associated with the construction.

The authorization under paragraphs 34.4(2)(b) and 35(2)(b) of the *Fisheries Act* is attached.

Failure to comply with any of the terms or conditions of the attached authorization may lead to prosecution under the *Fisheries Act*.

Please note that the attached *Fisheries Act* authorization includes conditions for NS Power to provide a detailed construction schedule and monthly progress update reports. The Department is committed to ensuring this project is completed as per the schedule outlined by NS Power in your application for *Fisheries Act* authorization. This is to ensure that fish passage is restored prior to next year's migratory period; therefore, the Department is requesting NS Power to take all reasonable measures, including working extended hours as needed, to ensure that all in-water works, undertakings and activities are completed and the Ruth Falls headpond is returned to normal operating water levels **no later than April 1, 2026**.

DFO File No.: 25-HMAR-00040

The Department is also requesting NS Power to arrange for an onsite meeting with DFO staff and representatives from the Mi'kmaq (Kwilmu'kw Maw-klusuaqn Negotiation Office, Millbrook First Nation, and Sipekne'katik First Nation) for a site specific construction meeting prior to the start date of the project.

Kwilmu'kw Maw-klusuaqn (KMK) has also recommended that NS Power work with KMK and Millbrook First Nation prior to commencing construction activities to establish and implement a Mi'kmaq Communication Plan or Strategy to ensure sustained alignment with First Nations.

A copy of this authorization should be kept on site while the work is in progress and, upon request, be provided to relevant federal or provincial officials. The authorization holder is responsible for ensuring work crews are familiar with, and able to adhere to, the conditions.

As you are aware, Bill C-68 included new provisions (sections 42.2 to 42.5) in the *Fisheries Act* that require the Minister of Fisheries and Oceans to establish a public registry to facilitate public access to certain records, including amongst other items, authorizations issued pursuant to paragraphs 34.4(2)(b) and 35(2)(b) of the *Fisheries Act*. While the public registry provisions of the *Fisheries Act* are not yet in force, the Department has begun to post a list of authorizations issued since August 28, 2019, when amendments to the fish and fish habitat protection provisions of the Act came into force.

Information pertaining to this authorization will be posted to the *Fisheries Act* Registry and accessible from the Department's website at <https://www.dfo-mpo.gc.ca/pnw-ppe/registry-registre-eng.html> as well as from the Open Government Portal at <https://open.canada.ca/data/en/dataset/2c09d2fd-9a8e-4d8c-b5af-95747e36eaac> and the Common Project Search at <https://common-project-search.canada.ca/>. Information and data will be updated as the Department continues to develop the *Fisheries Act* Registry.

Any disclosure of information will be conducted in accordance with the *Access to Information Act* and the *Privacy Act*. Should you have any documents that contain sensitive or proprietary information that you believe should be protected from public disclosure, please contact us to discuss whether and how the information may be protected.

If you or anyone conducting work on your behalf have any questions please contact Kelley Fraser at our Dartmouth office at 902-441-3671, or by email at [Kelley.Fraser@dfo-mpo.gc.ca](mailto:Kelley.Fraser@dfo-mpo.gc.ca).

Yours sincerely,



Doug Wentzel  
Regional Director General  
Maritimes Region

Attachment: Authorization 19-HMAR-00549

c.c.: DFO-Conservation and Protection



Fisheries and Oceans  
Canada

Pêches et Océans Canada

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**Paragraphs 34.4(2)(b) and 35(2)(b) Fisheries Act Authorization**

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**Authorization issued to**

Nova Scotia Power Incorporated (NS Power) *hereafter referred to as the "Proponent"* and to the contractor operating under the proponent's supervision

*All conditions and requirements in this Authorization must be complied with by any contractor employed by the Proponent to conduct any of the authorized activities.*

**Attention to:**

Jennifer Leblanc  
1223 Lower Water Street  
Halifax, Nova Scotia B3J 2W5

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**Location of Proposed Project**

Nearest community (city, town, village): Sheet Harbour

Municipality, district, township, county: Halifax

Province: Nova Scotia

Name of watercourse, waterbody: Ruth Falls Headpond and East River, Sheet Harbour

UTM Coordinates: Zone 20N 539486 E, 4978146 N

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**Valid Authorization Period**

This Authorization remains in force from the **Date of Issuance** until Fisheries and Oceans Canada (DFO) confirms to you in writing that all of the requirements of this Authorization have

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been met, in particular those requirements relating to monitoring, the offsetting plan and the contingency measures.

Please note that this Authorization may contain more specific timing requirements and limitations. These are set out in the Conditions of Authorization section.

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**Description of Proposed Project**

The proposed project of which the work, undertaking or activity authorized is a part of involves:

The refurbishment of the existing Ruth Falls Dam, the lowermost dam in the Ruth Falls Hydro System, near Sheet Harbour, Halifax County, Nova Scotia to meet the requirements of Canadian Dam Association's (CDA) Dam Safety Guidelines (2007).

This involves replacing the existing three deep stoplog bays with vertical lift gates in the central portion of the dam, and replacing the existing 30 stoplog bays with seven rubber dams. A free overflow spillway will be constructed at the northwest end (right side looking downstream) of the dam, and concrete will be refaced on the dam and spillways.

Fish passage changes will be made to the upstream fishway and the downstream louvre system, and an upstream eel pass will be installed, as described in Section 12.2.2, pages 34 to 39 of 601, and Appendix E Fish Passage Engineering Designs, pages 85 to 101 of 601, of Supporting Information - Application For Authorization - Fisheries Act - Ruth Falls Dam Refurbishment Sheet Harbour Hydro System, February 2025.

Lowering of the Ruth Falls Headpond from the minimum operating level of 109.25 ft to 91.0 ft will occur on or after July 21, 2025, and will take a minimum of eight (8) days to complete. Once the headpond reaches an elevation of 109.25 ft (the top of the spillway stoplogs), the drawdown will be controlled by removing the spillway stoplogs until an elevation of 104.1 ft (the concrete spillway crest) is reached. After this point, the sluiceway bay stop logs will be removed until the desired elevation of 91.0 ft is achieved.

The drawdown flow will be directed through areas that are part of the normal flowage channels. At least one gate bay will remain open throughout construction to maintain lowered

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water elevations, provide the required 35 cubic feet per second (cfs) ecological maintenance flow, and provide a method of downstream fish passage. Hydroelectric generation will not occur at the Ruth Falls powerhouse below the minimum Ruth Falls Headpond elevation of 109.25 ft. No upstream fish passage will be provided once the drawdown begins on or after July 21, 2025 until the reservoir is watered back up by April 1, 2026.

The installation of a temporary bridge and access roads for machinery on both the upstream and downstream sides of the main dam will commence in early July 2025, two (2) weeks prior to the start of the drawdown. Access to the right side of the dam will be provided by the downstream access roads connected by a temporary bridge. Installation of temporary access roads for machinery on the upstream side of the dam will take place after the drawdown of the Ruth Falls Headpond is complete.

Once all main construction works are complete, the upstream access roads will be removed followed by the downstream access roads, including the temporary bridge. The rewatering of the Ruth Falls Headpond is expected to take one day which will be complete no later than April 1, 2026.

The Project will result in the temporary disruption of approximately 1.15 square kilometres (km<sup>2</sup>) of fish habitat associated with the drawdown of the Ruth Falls Headpond from the minimum operating level of 109.25 ft to 91.0 ft from July 21, 2025 to April 1, 2026. This drawdown is *herein referred to as the Authorized drawdown*. The installation of a temporary bridge and access roads for machinery will result in a temporary instream footprint of 1,571 m<sup>2</sup> upstream of main dam and 1,666 m<sup>2</sup> downstream of the main dam. The footprint associated with the temporary access roads upstream of the dam is accounted for within the temporary drawdown of the Ruth Falls Headpond.

The Project will result in the permanent loss of 60 square metres (m<sup>2</sup>) of fish habitat for the concrete infill on the downstream side of the Ruth Falls Dam, as illustrated in Drawings 300-02 and 300-03, page 69-70 of 601 pages, Appendix C, Supporting Information - Application For Authorization - Fisheries Act - Ruth Falls Dam Refurbishment Sheet Harbour Hydro System, February 2025, *herein referred to as the Authorized footprint*.

**Description of Authorized work(s), undertaking(s) or activity(ies) likely to result in the death of fish by means other than fishing:**

The work(s), undertaking(s), or activity(ies) associated with the proposed project described above, that are likely to result in the death of fish by means other than fishing, are:

- The temporary drawdown of the Ruth Falls Headpond, and dewatered areas associated with construction, will likely result in the incidental death of fish from stranding and from entrainment of fish from lake habitat in the Ruth Falls Headpond into riverine, estuarine, and marine habitat downstream of the Ruth Falls Dam.

**Description of Authorized work(s), undertaking(s) or activity(ies) likely to result in the harmful alteration, disruption or destruction of fish habitat:**

The work(s), undertaking(s), or activity(ies) associated with the proposed project described above, that are likely to result in the harmful alteration, disruption or destruction of fish habitat, are:

- The refurbishment of the Ruth Falls Dam will result in the permanent destruction of 60 m<sup>2</sup> fish habitat on the downstream side of the dam to accommodate additional concrete requirements;
- The drawdown of the Ruth Falls Headpond will result in the temporary disruption of 1.15 km<sup>2</sup> of fish habitat; and
- The installation of a temporary bridge and access roads for machinery will result in a temporary instream footprint of 1,571 m<sup>2</sup> upstream of main dam and 1,666 m<sup>2</sup> downstream of the main dam. The footprint associated with the temporary access roads upstream of the dam is accounted for within the temporary drawdown of the Ruth Falls Headpond.

**The authorized work(s), undertaking(s), or activity(ies) are likely to result in the following impacts to fish and fish habitat:**

- Harmful destruction of 60 m<sup>2</sup> of fish habitat immediately downstream of the Ruth Falls Dam;
- Harmful disruption of up to approximately 1.15 km<sup>2</sup> of fish habitat from the drawdown of the Ruth Falls Headpond;

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- Harmful disruption of 1,666 m<sup>2</sup> of fish habitat downstream of the main dam from the installation of a temporary bridge and access roads; and
  - Death of fish from stranding and entrainment as a result of the temporary drawdown of the Ruth Falls Headpond, as well as dewatered areas associated with the construction.
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### **Conditions of Authorization**

The above described work, undertaking or activity must be carried on in accordance with the following conditions.

**1. Conditions that relate to the period during which the work, undertaking or activity can be carried on**

The work, undertaking or activity that is/are authorized to be carried on during the following periods:

- From **July 1, 2025** to **July 21, 2025**: In-water installation of access roads downstream of the Ruth Falls dam and the temporary bridge construction below the Ruth Falls Dam in the East River, Sheet Harbour.
- From **July 21, 2025** to **April 1, 2026**: Drawdown of the Ruth Falls Headpond and installation of access roads and in-water construction upstream of the Ruth Falls Dam.

If the Proponent cannot complete the work, undertaking or activity during this period, Fisheries and Oceans Canada (DFO) at [ReferralsMaritimes@dfo-mpo.gc.ca](mailto:ReferralsMaritimes@dfo-mpo.gc.ca) must be notified in advance of the expiration of the above time period.

The periods during which other conditions of this authorization must be complied with are provided in their respective sections below.

**2. Conditions that relate to measures and standards to avoid and mitigate impacts to fish and fish habitat, including impacts to aquatic species at risk**

- 2.1 Sediment and erosion control: Sediment and erosion control measures must be in place and must be upgraded and maintained, such that release of sediment is avoided at the location of the authorized work, undertaking, or activity.
  - 2.1.1 A final Project-specific Environmental Protection Plan and Contractor's Site-Specific Erosion and Sedimentation Control (ESC) Plan must be submitted to DFO at [ReferralsMaritimes@dfo-mpo.gc.ca](mailto:ReferralsMaritimes@dfo-mpo.gc.ca) for review at least fourteen (14) calendar days prior to the start of the authorized work, undertaking, or activity.
  - 2.1.2 The final Project-specific Environmental Protection Plan and Contractor's Site-Specific Erosion and Sedimentation Control Plan must be developed, and measures must be implemented, upgraded and maintained, such that the release of silt and sediment is avoided outside the authorized work areas associated with the dam refurbishment.
  - 2.1.3 The temporary upstream and downstream access roads and the temporary bridge, as depicted in Appendix D, page 84 of 601 of the Supporting Information - Application For Authorization - Fisheries Act - Ruth Falls Dam Refurbishment Sheet Harbour Hydro System February 2025, must be capable of withstanding all flows, weather and precipitation conditions that are likely to occur during construction.
  - 2.1.4 ESC, temporary access roads, and temporary bridge must be implemented as per the plan described in conditions 2.1.1, 2.1.2 and 2.1.3 and capable of withstanding flows, weather, and precipitation conditions that are likely to occur throughout the construction period.
  - 2.1.5 ESC measures must be installed prior to commencing in-water construction works and maintained until all exposed erodible soils adjacent to the waterbody are stabilized.
  - 2.1.6 A copy of the plans referred to in conditions 2.1.1, 2.1.2 and 2.1.3 and any amendments to the plans must be kept on-site and accessible at all times during the works, undertakings and activities. DFO at [ReferralsMaritimes@dfo-mpo.gc.ca](mailto:ReferralsMaritimes@dfo-mpo.gc.ca) must be notified of any amendment to the plans and provided with copies of the amendments. Refer to section 3 of this authorization for reporting requirements.

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- 2.2 Supplemental measures and standards to avoid and mitigate impacts to fish and fish habitat
- 2.2.1 Turbidity levels must not exceed 8 Nephelometric Turbidity Units (NTUs) above the background level when background levels are between 8 and 80 NTUs OR exceed 10% above background levels when background is greater than 80 NTUs. Background levels are to be measured at least 20 m upstream of the plume into the unaffected part of the waterbody/watercourse. In-plume/downstream samples must be taken directly where the sediment is entering the receiving waterbody. Background and in-plume/downstream turbidity samples must be measured within 60 minutes of each other. Refer to section 3 of this authorization for further turbidity monitoring requirements.
  - 2.2.2 The plan titled Water Management, pages 9 to 11 in Section 3.4 of the Supporting Information - Application For Authorization - Fisheries Act - Ruth Falls Dam Refurbishment Sheet Harbour Hydro System February 2025, herein referred to as the *Water Management Plan* must be implemented once the drawdown is complete prior to starting dam refurbishment works, and must be capable of managing flows that are likely to occur throughout the construction period.
  - 2.2.3 Placement of concrete on the downstream side of the Ruth Falls Dam must be contained within *the authorized footprint* of up to 60 m<sup>2</sup> as illustrated in Drawings 300-02 and 300-03, page 69-70 of 601 pages, Appendix C, Supporting Information - Application For Authorization - Fisheries Act - Ruth Falls Dam Refurbishment Sheet Harbour Hydro System, February 2025.
  - 2.2.4 Implement a minimum 8-day drawdown schedule via removing spillway and sluiceway stoplogs at the Ruth Falls Dam as described in the Section 3.2 and Table 1, Pages 6 to 8 of 601 pages, Supporting Information - Application For Authorization - Fisheries Act - Ruth Falls Dam Refurbishment Sheet Harbour Hydro System, February 2025.
  - 2.2.5 Do not lower or maintain the Ruth Falls Headpond below the minimum operating level of 109.25 ft outside the July 21, 2025 to April 1, 2026 construction period.
  - 2.2.6 Fish passage changes to the upstream fishway and the downstream louvre system, and installation of the upstream eel pass must be made as described in Section 12.2.2, pages 34 to 39 of 601, and Appendix E Fish Passage Engineering Designs, pages 85 to 101 of 601, of Supporting Information - Application For Authorization - Fisheries Act - Ruth Falls Dam Refurbishment Sheet Harbour Hydro System, February 2025.

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- 2.2.7 All in-water works, undertaking, or activities must be conducted in isolation of surrounding waters.
- 2.2.8 During the drawdown period, fish rescues and monitoring of the Ruth Falls Headpond, canal, fish ladder, downstream bypass and East River areas affected by the drawdown must occur as described in Appendix N, Monitoring Plan, Section 3.2 Fish Rescue Plan Pages 336 to 337 of 601 pages, Supporting Information - Application For Authorization - Fisheries Act - Ruth Falls Dam Refurbishment Sheet Harbour Hydro System, February 2025, to avoid/mitigate fish mortality within isolated or dewatered areas.
- 2.2.9 Intake pipes must be screened to prevent entrainment or impingement of fish, with screens adhering to DFO Code of Practice for Water Intake Screens (<https://dfo-mpo.gc.ca/pnw-ppe/codes/screen-ecran-eng.html>).
- 2.2.10 Maintain a minimum ecological maintenance flow of 35 cubic feet per second (cfs) below the Ruth Falls Dam during construction through the open sluiceway bays, with the exception of when the centre bay is being worked on. When the centre bay is being worked on, the minimum flow requirement of 35 cfs below the Ruth Falls Dam must be provided via pumping through the other bays.
- 2.2.11 After completing the drawdown, allow water and fish to freely pass downstream through sluiceway openings without obstruction, and maintain these openings free from obstructions.
- 2.2.12 All rock or other materials that are used as part of the temporary access roads and may interfere with upstream or downstream fish passage must be permanently removed by April 1, 2026.
- 2.2.13 Machinery must be operated from land or on temporary access roads in the dry.
- 2.2.14 All equipment to be used must be clean and in good repair such that it does not release any deleterious substance (e.g., fuel, oil, lubricants and/or other contaminants) into waters frequented by fish, and all fuel and other material for the machinery must be stored in such a way as to prevent any deleterious substances from entering the water.
- 2.2.15 All material used in the project must be non-ore bearing, and non-toxic (i.e., free of fuel, oil, grease, and/or other contaminants). Screened gravel/rock is to be used for backfilling to avoid excessive fines.
- 2.2.16 Any stockpiled materials must be stored and isolated above the ordinary high water mark when not in use.
- 2.2.17 A project-specific Response Plan must be developed and submitted to DFO at [ReferralsMaritimes@dfo-mpo.gc.ca](mailto:ReferralsMaritimes@dfo-mpo.gc.ca) for review at least 14 calendar days prior to

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the start of the authorized work, undertaking, or activity. The final project-specific Response Plan must be implemented immediately in the event of a sediment release or spill of a deleterious substance. A copy of the plan and an emergency spill kit must be kept on-site and accessible at all times during the works, undertakings or activities.

- 2.2.18 An emergency spill kit must be kept on site and accessible at all times.
- 2.2.19 Disturbed areas must be re-vegetated with native species suitable for the site.
- 2.3 Contingency measures: Immediately cease works, undertakings or activities and notify DFO at [OccurrencesMaritimes.XMAR@dfo-mpo.gc.ca](mailto:OccurrencesMaritimes.XMAR@dfo-mpo.gc.ca) should the monitoring required in section 3 of this authorization indicate that the measures and standards to avoid and mitigate impacts to fish and fish habitat are not successful. Only recommence works, undertakings or activities after the reasons for the failure of the measures and standards have been determined and new mitigation measures that are expected to be effective have been implemented and DFO have given written approval.
- 2.4 Dates by which these measures and standards shall be implemented: Measures and standards to avoid and mitigate impacts to fish and fish habitat must be implemented prior to the initiation of works, undertakings or activities.

### **3. Conditions that relate to monitoring and reporting of measures and standards to avoid and mitigate impacts to fish and fish habitat**

- 3.1 Monitor turbidity in the waterbody visually during the works, undertakings and activities. If turbidity outside the Authorized HADD footprint (30 m outside where equipment is operating) changes from the existing conditions of the surrounding water (i.e. distinct changes in water clarity), turbidity measurements must be taken in accordance with condition 2.2.1 to ensure that levels are within acceptable ranges.
- 3.2 Notify the National Environmental Emergency Center (NEEC) at 1-800-565-1633 and [OccurrencesMaritimes.XMAR@dfo-mpo.gc.ca](mailto:OccurrencesMaritimes.XMAR@dfo-mpo.gc.ca) within 24 hours of any turbidity level exceedances described in condition 2.2.1. Include the DFO file# 19-HMAR-00549 in the description of the incident and provide details on what contingency measures have been or will continue to be implemented to ensure compliance.
- 3.3 Monitoring of avoidance and mitigation measures: Monitor the implementation of avoidance and mitigation measures referred to in section 2 of this authorization and report to DFO, within 30 days after completion of all authorized works, undertakings or activities and indicate whether the measures and standards to avoid and mitigate

impacts to fish and fish habitat were conducted according to the conditions of this authorization. This must be done, by:

- 3.3.1 Demonstration of effective implementation and functioning: Providing dated photographs and inspection reports to demonstrate effective implementation and functioning of mitigation measures and standards described above to limit the impacts to fish and fish habitat to what is covered by this authorization.
- 3.3.2 Contingency measures: Providing details of any contingency measures that were followed, to prevent impacts greater than those covered by this authorization in the event that mitigation measures did not function as described.
- 3.4 Other monitoring and reporting conditions:
  - 3.4.1 After the contract is awarded for the project and prior to commencement of the authorized works, undertakings or activities, a detailed schedule of construction phases with start and end dates for each activity must be provided to DFO at [ReferralsMaritimes@dfo-mpo.gc.ca](mailto:ReferralsMaritimes@dfo-mpo.gc.ca).
  - 3.4.2 Construction progress reports must be submitted on monthly basis (minimum), no later than by the last day of each month, for the duration of the project via email to [ReferralsMaritimes@dfo-mpo.gc.ca](mailto:ReferralsMaritimes@dfo-mpo.gc.ca).
  - 3.4.3 Conduct monitoring during the 2025 drawdown, construction and post-construction as described in Appendix N, Monitoring Plan, Pages 327 to 446 of 601 pages, Supporting Information - Application For Authorization - Fisheries Act - Ruth Falls Dam Refurbishment Sheet Harbour Hydro System, February 2025.
  - 3.4.4 Monitoring reports must be submitted to DFO at [ReferralsMaritimes@dfo-mpo.gc.ca](mailto:ReferralsMaritimes@dfo-mpo.gc.ca) as described in Appendix N Monitoring Plan, Pages 371 to 534 of 601 pages, Supporting Information - Application For Authorization - Fisheries Act - Ruth Falls Dam Refurbishment Sheet Harbour Hydro System, February 2025, by the following dates:
    - 3.4.4.1 The 2025 Drawdown Monitoring Activities Report by December 31, 2026;
    - 3.4.4.2 The Post-Construction Monitoring Report of upstream fish passage by March 1<sup>st</sup> of 2027 and 2028;
    - 3.4.4.3 The Downstream Migration Study Report by May 1, 2027;
    - 3.4.4.4 The Eel Ramp Upstream Passage Report by May 1, 2027; and
    - 3.4.4.5 The annual Post Construction Wetland Monitoring Reports in accordance with the schedule in the Wetland Monitoring Plan, Appendix N Monitoring Plan, Pages 387 to 388 of 601 pages, Supporting Information - Application For Authorization - Fisheries Act - Ruth Falls Dam Refurbishment Sheet Harbour Hydro System, February 2025.

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- 3.4.5 Notify the NEEC and [OccurrencesMaritimes.XMAR@dfo-mpo.gc.ca](mailto:OccurrencesMaritimes.XMAR@dfo-mpo.gc.ca) immediately at 1-800-565-1633 of any spills, leaks or of any turbidity level exceedances described in condition 2.2.1.
- 3.4.6 Provide a post work survey/as-built schematic showing the extent of the authorized work with depths and GPS locations (NAD 83, UTM Zone 20 North) to DFO, at [ReferralsMaritimes@dfo-mpo.gc.ca](mailto:ReferralsMaritimes@dfo-mpo.gc.ca) in raw format (e.g. AutoCAD) within 90 days of the completion of the authorized work.

#### **4. Conditions that relate to the offsetting plan**

- 4.1 Letter of credit: DFO may draw upon funds available to DFO as the beneficiary of the Irrevocable Standby Letter of Credit No OSB62460GWS provided to DFO as part of the application for this authorization, to cover the costs of implementing and maintaining the offsetting plan required to be implemented under this authorization, including the associated monitoring measures included in section 5 of this authorization, in instances where the Proponent fails to implement these required measures.
- 4.2 Scale and description of offsetting measures: 27,601 m<sup>2</sup> of existing degraded fish habitat must be restored by installing digger logs and deflectors along with riparian planting at Dort's Brook, a tributary of the North River St. Mary's, and Sutherland's Brook, a tributary of the West River St. Mary's. The offsetting measures must be carried out in accordance with the measures set out in the Proponent's offsetting plan, Ruth Falls Offsetting Plan Detailed Offsetting Plan for Ruth Falls – Dort's Brook & Sutherland's Brook River Restoration, Appendix O of Supporting Information - Application For Authorization - Fisheries Act - Ruth Falls Dam Refurbishment Sheet Harbour Hydro System, February 2025, approved by DFO.
- 4.3 Offsetting criteria to assess the implementation and effectiveness of the offsetting plan: All fish habitat offsetting measures must be completed and functioning according to the offsetting plan criteria to evaluate implementation and effectiveness of the offsetting plan, as described in Appendix O of Supporting Information - Application For Authorization - Fisheries Act - Ruth Falls Dam Refurbishment Sheet Harbour Hydro System, dated February 2025, by December 31, 2030.
- 4.4 Contingency measures: If the results of monitoring as required in section 5 of this authorization indicate that the offsetting measures are not completed by the date specified and/or are not functioning according to the above criteria in 4.3, the Proponent must give written notice to DFO at [ReferralsMaritimes@dfo-mpo.gc.ca](mailto:ReferralsMaritimes@dfo-mpo.gc.ca) and must implement the contingency measures and associated monitoring measures, as

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contained within the approved offsetting plan and as set out in section 5 of this authorization, to ensure the implementation of the offsetting measures is completed and/or functioning as required by this authorization.

4.4.1 Scale and description of contingency measures: Upgrades to the work done in the original offsetting restoration area must be conducted as described in Appendix O of Supporting Information - Application For Authorization - Fisheries Act - Ruth Falls Dam Refurbishment Sheet Harbour Hydro System, dated February 2025. Additional offsetting measures must be approved by DFO if contingency measures are required.

4.4.2 Monitoring measures to ensure offsetting contingency is completed and/or functioning as required: Additional monitoring measures must be approved by DFO if contingency measures are required.

4.5 The Proponent must not carry on any work, undertaking or activity that will adversely impact the offsetting measures.

4.6 Other conditions related to offsetting: The Proponent must obtain written permission for the Proponent, DFO, and anyone authorized to act on behalf of DFO, to access lands, water sources, or water bodies that are not owned by or under the care, control, or administration of the Proponent that must be accessed in order to implement the offsetting measures in this section of the authorization and the monitoring of said measures.

**5. Conditions that relate to monitoring and reporting of implementation of the offsetting plan (described in section 4 of this authorization):**

5.1 Schedule(s) and criteria: The Proponent must conduct monitoring of the implementation of offsetting measures according to the timeline and criteria in the offsetting plan approved by DFO, referred to in section 4.2 of this authorization, and which are the following:

5.1.1 Baseline monitoring documenting pre-restoration habitat conditions and existing habitat found in Dort's Brook and Sutherlands Brook: This report must include site layout, photos, quantification of baseline fish habitat indicators both physical (HSI surveys) biological (electrofishing and redd counts) as described in Appendix O of Supporting Information - Application For Authorization - Fisheries Act - Ruth Falls Dam Refurbishment Sheet Harbour Hydro System, dated February 2025. This report must be completed in Year 0 (2025) and be submitted to DFO at [ReferralsMaritimes@dfo-mpo.gc.ca](mailto:ReferralsMaritimes@dfo-mpo.gc.ca) no later than December 31, 2025.

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- 5.1.2 As-built document containing schematic, GPS coordinates (NAD 83, UTM Zone 20 North) depicting restoration structure locations in raw format (e.g. AutoCAD), and before and after photos of each restoration structure must be completed in Year 0 (2025) and be submitted to DFO at [ReferralsMaritimes@dfo-mpo.gc.ca](mailto:ReferralsMaritimes@dfo-mpo.gc.ca) no later than December 31, 2026.
- 5.1.3 Post-restoration monitoring reports must be completed in Year 1 (2026), Year 3 (2028), and Year 5 (2030) and must indicate whether the restoration structures are functioning as intended and include comparisons to Baseline (Year 0) data. Year 1 (2026) and Year 3 (2028) monitoring reports must be submitted to DFO at [ReferralsMaritimes@dfo-mpo.gc.ca](mailto:ReferralsMaritimes@dfo-mpo.gc.ca) no later than December 31 of the corresponding year.
- 5.1.4 Year 5 (2030) post-restoration monitoring report must summarize the results of the project and how objectives were achieved and must be submitted to DFO at [ReferralsMaritimes@dfo-mpo.gc.ca](mailto:ReferralsMaritimes@dfo-mpo.gc.ca) no later than December 31, 2030.
- 5.2 List of reports to be provided to DFO: The Proponent must report to DFO at [ReferralsMaritimes@dfo-mpo.gc.ca](mailto:ReferralsMaritimes@dfo-mpo.gc.ca) on whether the offsetting measures were conducted according to the conditions of this authorization by providing the following:
  - 5.2.1 Reports must be provided to DFO as described in conditions 5.1.1, 5.1.2, 5.1.3, and 5.1.4.

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### **Authorization Limitations and Application Conditions**

The Proponent and contractors operating under the Proponent's supervision are responsible for plans and specifications relating to this authorization and for all design, safety and workmanship aspects of all the works associated with this authorization.

The holder of this authorization is hereby authorized under the authority of Paragraphs 34.4(2)(b) and 35(2)(b) of the *Fisheries Act*. R.S.C., 1985, c.F-14, to carry on the work(s), undertaking(s) and/or activity(ies) that are likely to result in impacts to fish and fish habitat as described herein.

This authorization does not purport to release the Proponent from any obligation to obtain permission from any private landowner or to comply with the requirements of any other regulatory agencies.

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This authorization does not permit the deposit of a deleterious substance in water frequented by fish. Subsection 36(3) of the *Fisheries Act* prohibits the deposit of any deleterious substances into waters frequented by fish unless authorized by regulations made by Governor in Council.

At the date of issuance of this authorization, no individuals of aquatic species listed under the *Species at Risk Act* (SARA) were identified in the vicinity of the authorized works, undertakings or activities.

It is also your *Duty to Notify* DFO if you have caused, or are about to cause, the unauthorized death of fish by means other than fishing and/or the harmful alteration, disruption or destruction of fish habitat. Such notifications must be directed to the NEEC line at 1-800-565-1633 and [OccurrencesMaritimes.XMAR@dfo-mpo.gc.ca](mailto:OccurrencesMaritimes.XMAR@dfo-mpo.gc.ca).

The failure to comply with any condition of this authorization constitutes an offence under Paragraph 40(3)(a) of the *Fisheries Act*, and may result in charges being laid under the Act.

A copy of this authorization will be kept on site while the work is in progress and upon request be provided to relevant federal or provincial officials. The authorization holder is responsible for ensuring work crews are familiar with, and able to adhere to, the conditions.

This authorization cannot be transferred or assigned to another party. If the work(s), undertaking(s) or activity(ies) authorized to be conducted pursuant to this authorization are expected to be sold or transferred, or other circumstances arise that are expected to result in a new Proponent taking over the work(s), undertaking(s) or activity(ies), the Proponent named in this authorization must advise DFO in advance.

Date of Issuance:

JUN 17 2025

Approved by: \_\_\_\_\_

Doug Wentzell

Regional Director General

Maritimes Region

Fisheries and Oceans Canada

### Description Summary of Alternatives



Division : Power Production  
Department : Capital Projects

Date : 3-Jul-25  
CI Number: 50518  
Project No. : H792

|          | Alternative             | After Tax WACC | PV of Revenue Requirement | PV of EVA / NPV | Rank (based on PV of RR) | IRR    | Disc Pay   |
|----------|-------------------------|----------------|---------------------------|-----------------|--------------------------|--------|------------|
| <b>A</b> | Dam Refurbishment       | 5.81%          | -21,926,086               | 12,516,533      | 1                        | 12.36% | 10.2 years |
| <b>B</b> | Partial Decommissioning | 5.81%          | 49,632,167                | -37,924,730     | 2                        | #NUM!  | 0.0 years  |
|          | 0                       | NA             | NA                        | NA              | NA                       | #NUM!  | 0.0 years  |
|          | 0                       | NA             | NA                        | NA              | NA                       | #NUM!  | 0.0 years  |

**Recommendation :**

**Notes/Comments :**

**Dam Refurbishment**  
Suggested Ruth Falls dam refurbishment (2025-2026): Replacement of the existing 30 stoplog bays with 7 rubber dams and a free overflow spillway at the northwest end of the dam; Replacement of the 3 deep stoplog bays with 3 vertical lift gates; Refacing the concrete on the crest and downstream slope of the main dam ogee section; Fish Passage upgrades

**Partial Decommissioning**  
Removal of the Ruth Falls dam and Ruth Falls powerhouse (2025-2035): Demolition of the dam and powerhouse infrastructure; Site reinstatement; Sediment management; Environmental assessment/permitting; Fish habitat restoration; Wetland compensation; Archaeological reconnaissance and mitigation

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**Description  
Summary of Sensitivities**



**Division :** Power Production  
**Department :** Capital Projects

**Date :** 3-Jul-25  
**CI Number:** 50518  
**Project No. :** H792

|   | Alternative             | After Tax WACC | PV of Revenue Requirement | PV of EVA / NPV | Rank | IRR    | Disc Pay   |
|---|-------------------------|----------------|---------------------------|-----------------|------|--------|------------|
| A | Dam Refurbishment       | 5.81%          | -21,926,086               | 12,516,533      | 1    | 12.36% | 10.2 years |
| B | Partial Decommissioning | 5.81%          | 49,632,167                | -37,924,730     | 2    | #NUM!  | 0.0 years  |
|   | 0                       | NA             | NA                        | NA              | NA   | #NUM!  | 0.0 years  |
|   | 0                       | NA             | NA                        | NA              | NA   | #NUM!  | 0.0 years  |

|   | Alternative Variance on Capital Spend | Variance (%) | PV of Revenue Requirement | PV of EVA / NPV | Rank | IRR   | Disc Pay   |
|---|---------------------------------------|--------------|---------------------------|-----------------|------|-------|------------|
| A | Dam Refurbishment                     | 30%          | -14,912,741               | 5,143,373       | 1    | 8.36% | 17.3 years |
| B | Partial Decommissioning               | 30%          | 64,521,818                | -49,302,149     | 2    | #NUM! | 0.0 years  |
|   | 0                                     | 30%          | NA                        | NA              | NA   | #NUM! | 0.0 years  |
|   | 0                                     | 30%          | NA                        | NA              | NA   | #NUM! | 0.0 years  |

|                |   |            |             |    |        |           |
|----------------|---|------------|-------------|----|--------|-----------|
| <b>Change:</b> | A | 7,013,345  | -7,373,160  | 0  | -4.00% | 7.0 years |
|                | B | 14,889,650 | -11,377,419 | 0  | #NUM!  | 0.0 years |
|                |   | NA         | NA          | NA | #NUM!  | 0.0 years |
|                |   | NA         | NA          | NA | #NUM!  | 0.0 years |

|   | Alternative Variance on Avoided Expenses | Variance (%) | PV of Revenue Requirement | PV of EVA / NPV | Rank | IRR    | Disc Pay   |
|---|------------------------------------------|--------------|---------------------------|-----------------|------|--------|------------|
| A | Dam Refurbishment                        | -10%         | -17,081,819               | 8,551,076       | 1    | 10.65% | 13.2 years |
| B | Partial Decommissioning                  | -10%         | 49,632,167                | -37,924,730     | 2    | #NUM!  | 0.0 years  |
|   | 0                                        | -10%         | NA                        | NA              | NA   | #NUM!  | 0.0 years  |
|   | 0                                        | -10%         | NA                        | NA              | NA   | #NUM!  | 0.0 years  |

|                |   |           |            |    |        |           |
|----------------|---|-----------|------------|----|--------|-----------|
| <b>Change:</b> | A | 4,844,266 | -3,965,457 | 0  | -1.71% | 3.0 years |
|                | B | 0         | 0          | 0  | #NUM!  | 0.0 years |
|                |   | NA        | NA         | NA | #NUM!  | 0.0 years |
|                |   | NA        | NA         | NA | #NUM!  | 0.0 years |

| Alternative Variance on Avoided Expenses - Change in Revenue Requirement | Yrs Delay: | PV of Revenue Requirement | PV of Revenue Requirement | PV of Revenue Requirement | Delay?   |
|--------------------------------------------------------------------------|------------|---------------------------|---------------------------|---------------------------|----------|
|                                                                          |            | 1                         | 2                         | 3                         |          |
| A                                                                        |            | -1,172,772                | -956,582                  | 340,254                   | 1 Year   |
| B                                                                        |            | -2,195,126                | -4,293,166                | -6,298,414                | 3+ Years |
|                                                                          |            | 0                         | 0                         | 0                         | No       |
|                                                                          |            | 0                         | 0                         | 0                         | No       |

Description  
Avoided Cost Calculations



Division : Power Production  
Department : Capital Projects

Date : 3-Jul-25  
CI Number: 50518  
Project No. : H792

Dam Refurbishment

| Year                              | Avoided Replacement Energy Costs |             | Avoided Unplanned Repair Costs |      | Total Annual Avoided Costs |              |
|-----------------------------------|----------------------------------|-------------|--------------------------------|------|----------------------------|--------------|
|                                   | 2025                             | 2026        | 2025                           | 2026 | 2025                       | 2026         |
| Replacement Energy Cost (\$/MWh)  |                                  |             |                                |      |                            |              |
| Repair Cost (\$)                  |                                  |             | 0                              | 0    |                            |              |
| Events/Outages (#)                | 0                                | 1           | 0                              | 1    |                            |              |
| Probability of Occurrence (%)     | 0%                               | 75%         | 0%                             | 75%  |                            |              |
| Capacity Factor (%)               |                                  |             |                                |      |                            |              |
| Energy Replaced (MW)              | 0.0                              | 31100.0     |                                |      |                            |              |
| Duration (Hours or Years)         | 0                                | 1           |                                |      |                            |              |
| Totals                            | \$0                              | \$1,426,946 | \$0                            | \$0  | \$0                        | \$1,426,946  |
| Total Capital Cost of Alternative |                                  |             |                                |      |                            | \$83,249,698 |

Partial Decommissioning

| Year                              | Avoided Replacement Energy Costs |      | Avoided Unplanned Repair Costs |      | Total Annual Avoided Costs |              |
|-----------------------------------|----------------------------------|------|--------------------------------|------|----------------------------|--------------|
|                                   | 2025                             | 2026 | 2025                           | 2026 | 2025                       | 2026         |
| Replacement Energy Cost (\$/MWh)  |                                  |      |                                |      |                            |              |
| Repair Cost (\$)                  |                                  |      | 0                              | 0    |                            |              |
| Events/Outages (#)                | 0                                | 0    | 0                              | 0    |                            |              |
| Probability of Occurrence (%)     | 0%                               | 0%   | 0%                             | 0%   |                            |              |
| Capacity Factor (%)               |                                  |      |                                |      |                            |              |
| Energy Replaced (MW)              | 0.0                              | 0.0  |                                |      |                            |              |
| Duration (Hours or Years)         | 0                                | 0    |                                |      |                            |              |
| Totals                            | \$0                              | \$0  | \$0                            | \$0  | \$0                        | \$0          |
| Total Capital Cost of Alternative |                                  |      |                                |      |                            | \$81,582,308 |

0

| Year                              | Avoided Replacement Energy Costs |      | Avoided Unplanned Repair Costs |      | Total Annual Avoided Costs |      |
|-----------------------------------|----------------------------------|------|--------------------------------|------|----------------------------|------|
|                                   | 2025                             | 2026 | 2025                           | 2026 | 2025                       | 2026 |
| Replacement Energy Cost (\$/MWh)  |                                  |      |                                |      |                            |      |
| Repair Cost (\$)                  |                                  |      | 0                              | 0    |                            |      |
| Events/Outages (#)                | 0                                | 0    | 0                              | 0    |                            |      |
| Probability of Occurrence (%)     | 0%                               | 0%   | 0%                             | 0%   |                            |      |
| Capacity Factor (%)               |                                  |      |                                |      |                            |      |
| Energy Replaced (MW)              | 0.0                              | 0.0  |                                |      |                            |      |
| Duration (Hours or Years)         | 0                                | 0    |                                |      |                            |      |
| Totals                            | \$0                              | \$0  | \$0                            | \$0  | \$0                        | \$0  |
| Total Capital Cost of Alternative |                                  |      |                                |      |                            | \$0  |

0

| Year                              | Avoided Replacement Energy Costs |      | Avoided Unplanned Repair Costs |      | Total Annual Avoided Costs |      |
|-----------------------------------|----------------------------------|------|--------------------------------|------|----------------------------|------|
|                                   | 2025                             | 2026 | 2025                           | 2026 | 2025                       | 2026 |
| Replacement Energy Cost (\$/MWh)  |                                  |      |                                |      |                            |      |
| Repair Cost (\$)                  |                                  |      | 0                              | 0    |                            |      |
| Events/Outages (#)                | 0                                | 0    | 0                              | 0    |                            |      |
| Probability of Occurrence (%)     | 0%                               | 0%   | 0%                             | 0%   |                            |      |
| Capacity Factor (%)               |                                  |      |                                |      |                            |      |
| Energy Replaced (MW)              | 0.0                              | 0.0  |                                |      |                            |      |
| Duration (Hours or Years)         | 0                                | 0    |                                |      |                            |      |
| Totals                            | \$0                              | \$0  | \$0                            | \$0  | \$0                        | \$0  |
| Total Capital Cost of Alternative |                                  |      |                                |      |                            | \$0  |

**Description**  
**Dam Refurbishment**

| Year         | Total Revenue | Operating Costs       | Avoided Expenses     | Capital               | CCA                 | UCC          | CFBT                | Applicable Taxes      | CFAT                | PV of CF            | Discount Factor | CNPV           |
|--------------|---------------|-----------------------|----------------------|-----------------------|---------------------|--------------|---------------------|-----------------------|---------------------|---------------------|-----------------|----------------|
| 2024         | -             | -                     | -                    | (3,866,380.3)         | -                   | -            | (3,866,380.3)       | -                     | (3,866,380.3)       | (3,866,380.3)       | 1.00            | (3,866,380.3)  |
| 2025         | -             | (138,261.0)           | -                    | (7,815,781.2)         | -                   | -            | (7,954,042.2)       | 40,095.7              | (7,913,946.5)       | (7,479,393.7)       | 0.95            | (11,345,774.0) |
| 2026         | -             | (286,483.0)           | 1,426,945.9          | (2,021,211.5)         | 512,744.2           | 12,555,724.5 | (880,748.6)         | (182,038.4)           | (1,062,787.0)       | (949,276.6)         | 0.89            | (12,295,050.7) |
| 2027         | -             | (166,474.3)           | 2,617,156.6          | (533,250.0)           | 512,234.4           | 12,536,628.2 | 1,917,432.3         | (562,149.9)           | 1,355,282.4         | 1,144,062.3         | 0.84            | (11,150,988.4) |
| 2028         | -             | (151,360.3)           | 2,707,922.8          | (219,699.0)           | 499,985.1           | 12,225,471.2 | 2,336,863.5         | (596,407.5)           | 1,740,456.0         | 1,388,533.0         | 0.80            | (9,762,455.4)  |
| 2029         | -             | (156,026.1)           | 3,271,473.4          | (226,290.0)           | 488,472.9           | 11,932,600.2 | 2,889,157.2         | (761,822.6)           | 2,127,334.7         | 1,603,992.2         | 0.75            | (8,158,463.3)  |
| 2030         | -             | (160,850.9)           | 3,336,902.8          | (409,703.9)           | 484,300.2           | 11,821,998.3 | 2,766,348.1         | (780,608.0)           | 1,985,740.1         | 1,415,018.5         | 0.71            | (6,743,444.8)  |
| 2031         | -             | (165,840.3)           | 3,403,640.9          | (420,228.5)           | 480,689.3           | 11,725,065.0 | 2,817,572.1         | (799,562.3)           | 2,018,009.8         | 1,359,052.6         | 0.67            | (5,384,392.1)  |
| 2032         | -             | (171,000.4)           | 3,471,713.7          | (431,034.3)           | 477,628.0           | 11,641,501.2 | 2,869,679.0         | (818,694.7)           | 2,050,984.3         | 1,305,415.1         | 0.64            | (4,078,977.1)  |
| 2033         | -             | (176,337.4)           | 3,541,148.0          | (442,127.7)           | 475,105.3           | 11,571,025.1 | 2,922,682.9         | (838,014.5)           | 2,084,668.4         | 1,253,997.1         | 0.60            | (2,824,979.9)  |
| 2034         | -             | (181,857.8)           | 3,611,970.9          | (453,517.2)           | 473,110.6           | 11,513,374.0 | 2,976,596.0         | (857,530.7)           | 2,119,065.2         | 1,204,695.2         | 0.57            | (1,620,284.7)  |
| 2035         | -             | (187,568.4)           | 3,684,210.4          | (465,210.5)           | 471,634.3           | 11,468,302.3 | 3,031,431.4         | (877,252.2)           | 2,154,179.2         | 1,157,412.0         | 0.54            | (462,872.7)    |
| 2036         | -             | (266,047.7)           | 3,757,894.6          | (742,428.7)           | 480,614.4           | 11,682,646.9 | 2,749,418.2         | (873,257.4)           | 1,876,160.8         | 952,685.3           | 0.51            | 489,812.6      |
| 2037         | -             | (200,472.3)           | 3,833,052.4          | (658,616.3)           | 486,091.7           | 11,809,325.6 | 2,973,963.8         | (912,481.6)           | 2,061,482.2         | 989,309.8           | 0.48            | 1,479,122.4    |
| 2038         | -             | (205,912.4)           | 3,909,713.5          | (2,847,575.0)         | 573,448.8           | 13,969,213.3 | 856,226.0           | (907,802.1)           | (51,576.1)          | (23,392.4)          | 0.45            | 1,455,730.0    |
| 2039         | -             | (212,456.3)           | 3,987,907.8          | (515,198.6)           | 569,833.8           | 13,866,033.5 | 3,260,252.8         | (929,629.1)           | 2,330,623.7         | 999,013.7           | 0.43            | 2,454,743.7    |
| 2040         | -             | (219,228.1)           | 4,067,665.9          | (743,849.3)           | 574,939.2           | 13,979,281.8 | 3,104,588.5         | (949,314.6)           | 2,155,273.9         | 873,122.2           | 0.41            | 3,327,865.9    |
| 2041         | -             | (226,236.2)           | 4,149,019.2          | (2,299,138.2)         | 638,172.8           | 15,535,849.7 | 1,623,644.8         | (952,537.0)           | 671,107.8           | 256,943.8           | 0.38            | 3,584,809.7    |
| 2042         | -             | (233,489.4)           | 4,231,999.6          | (2,236,345.4)         | 696,521.9           | 16,968,516.6 | 1,762,164.7         | (957,576.6)           | 804,588.2           | 291,133.9           | 0.36            | 3,875,943.6    |
| 2043         | -             | (240,996.9)           | 4,316,639.6          | (570,767.6)           | 690,068.2           | 16,789,212.2 | 3,504,875.1         | (981,816.6)           | 2,523,058.5         | 862,819.1           | 0.34            | 4,738,762.7    |
| 2044         | -             | (248,768.0)           | 4,402,972.4          | (585,606.1)           | 684,429.1           | 16,630,123.1 | 3,568,598.3         | (1,006,234.8)         | 2,562,363.5         | 828,145.1           | 0.32            | 5,566,907.8    |
| 2045         | -             | (256,812.5)           | 4,491,031.9          | (600,843.3)           | 679,587.1           | 16,490,791.8 | 3,633,376.0         | (1,030,843.3)         | 2,602,532.7         | 794,941.5           | 0.31            | 6,361,849.4    |
| 2046         | -             | (525,220.8)           | 4,580,852.5          | (939,783.0)           | 687,651.0           | 16,671,959.9 | 3,115,848.8         | (976,714.4)           | 2,139,134.4         | 617,519.0           | 0.29            | 6,979,368.4    |
| 2047         | -             | (274,951.2)           | 4,672,469.5          | (797,440.4)           | 690,053.6           | 16,711,994.3 | 3,600,077.9         | (1,075,164.8)         | 2,524,913.1         | 688,861.7           | 0.27            | 7,668,230.1    |
| 2048         | -             | (282,690.9)           | 4,765,918.9          | (649,065.4)           | 686,795.3           | 16,611,115.3 | 3,834,162.6         | (1,100,965.5)         | 2,733,197.1         | 704,741.4           | 0.26            | 8,372,971.5    |
| 2049         | -             | (291,935.2)           | 4,861,237.3          | (1,866,793.8)         | 729,339.1           | 17,647,788.0 | 2,702,508.3         | (1,113,589.2)         | 1,588,919.0         | 387,198.7           | 0.24            | 8,760,170.2    |
| 2050         | -             | (301,508.1)           | 4,958,462.1          | (683,422.1)           | 725,797.9           | 17,538,044.6 | 3,973,531.9         | (1,140,035.3)         | 2,833,496.7         | 652,571.5           | 0.23            | 9,412,741.8    |
| 2051         | -             | (311,421.8)           | 5,057,631.3          | (2,842,940.1)         | 803,392.9           | 19,443,507.0 | 1,903,269.5         | (1,143,416.8)         | 759,852.6           | 165,389.6           | 0.22            | 9,578,131.3    |
| 2052         | -             | (321,689.1)           | 5,158,783.9          | (719,662.0)           | 798,248.7           | 19,290,875.8 | 4,117,432.8         | (1,171,265.4)         | 2,946,167.5         | 606,051.4           | 0.21            | 10,184,182.7   |
| 2053         | -             | (332,323.3)           | 5,261,959.6          | (738,521.7)           | 794,017.7           | 19,160,935.5 | 4,191,114.7         | (1,199,329.4)         | 2,991,785.3         | 581,641.9           | 0.19            | 10,765,824.6   |
| 2054         | -             | (343,338.1)           | 5,367,198.8          | (757,892.0)           | 790,682.4           | 19,053,228.4 | 4,265,968.6         | (1,227,621.7)         | 3,038,346.9         | 558,259.3           | 0.18            | 11,324,083.8   |
| 2055         | -             | (354,748.1)           | 5,474,542.8          | (777,787.3)           | 788,226.6           | 18,967,327.7 | 4,342,007.4         | (1,256,154.7)         | 3,085,852.7         | 535,854.7           | 0.17            | 11,859,938.5   |
| 2056         | -             | (497,640.1)           | 5,584,033.6          | (2,029,756.5)         | 832,825.3           | 20,050,101.5 | 3,056,637.0         | (1,233,534.8)         | 1,823,102.3         | 299,196.3           | 0.16            | 12,159,134.8   |
| 2057         | -             | (380,409.7)           | 5,695,714.3          | (1,020,200.6)         | 837,775.8           | 20,146,314.8 | 4,295,104.0         | (1,298,483.3)         | 2,996,620.7         | 464,783.0           | 0.16            | 12,623,917.8   |
| 2058         | -             | (391,499.9)           | 5,809,628.6          | (840,776.4)           | 835,798.8           | 20,070,138.4 | 4,577,352.3         | (1,328,875.7)         | 3,248,476.6         | 476,180.3           | 0.15            | 13,100,098.1   |
| 2059         | -             | (404,644.7)           | 5,925,821.2          | (2,953,984.8)         | 913,158.6           | 21,964,469.3 | 2,567,191.6         | (1,336,325.2)         | 1,230,866.5         | 170,520.2           | 0.14            | 13,270,618.3   |
| 2060         | -             | (418,265.1)           | 6,044,337.6          | (885,675.0)           | 909,850.3           | 21,852,207.0 | 4,740,397.5         | (1,367,704.4)         | 3,372,693.1         | 441,585.8           | 0.13            | 13,712,204.2   |
| 2061         | -             | (432,378.9)           | 6,165,224.3          | (21,794,229.4)        | 1,690,867.6         | 41,221,082.4 | (16,061,384.0)      | (1,172,173.6)         | (17,233,557.5)      | (2,132,487.6)       | 0.12            | 11,579,716.6   |
| 2062         | -             | (447,005.0)           | 6,288,528.8          | (933,054.7)           | 1,658,227.9         | 40,351,697.8 | 4,908,469.1         | (1,213,155.8)         | 3,695,313.3         | 432,151.6           | 0.12            | 12,011,868.2   |
| 2063         | -             | (462,162.7)           | 6,414,299.4          | (3,107,977.9)         | 1,708,466.2         | 41,541,914.5 | 2,844,158.7         | (1,230,664.4)         | 1,613,494.3         | 178,330.5           | 0.11            | 12,190,198.7   |
| 2064         | -             | (477,872.3)           | 6,542,585.4          | (1,675,663.8)         | 1,702,974.8         | 41,345,968.9 | 4,389,049.2         | (1,264,904.1)         | 3,124,145.1         | 326,334.2           | 0.10            | 12,516,532.9   |
| <b>Total</b> | <b>-</b>      | <b>(11,504,184.6)</b> | <b>176,850,212.2</b> | <b>(75,119,429.5)</b> | <b>29,533,762.0</b> |              | <b>90,226,598.1</b> | <b>(39,385,557.0)</b> | <b>50,841,041.1</b> | <b>12,516,532.9</b> |                 |                |

# REDACTED (CONFIDENTIAL INFORMATION REMOVED)

## Description

### Partial Decommissioning

| Year | Total Revenue | Operating Costs | Avoided Expenses | Capital        | CCA          | UCC           | CFBT           | Applicable Taxes | CFAT           | PV of CF       | Discount Factor | CNPV           |
|------|---------------|-----------------|------------------|----------------|--------------|---------------|----------------|------------------|----------------|----------------|-----------------|----------------|
| 2024 | -             | -               | -                | (176,166.0)    | -            | -             | (176,166.0)    | -                | (176,166.0)    | (176,166.0)    | 1.00            | (176,166.0)    |
| 2025 | -             | -               | -                | (474,404.6)    | -            | -             | (474,404.6)    | -                | (474,404.6)    | (448,355.2)    | 0.95            | (624,521.2)    |
| 2026 | -             | -               | -                | (1,217,512.5)  | -            | -             | (1,217,512.5)  | -                | (1,217,512.5)  | (1,087,476.8)  | 0.89            | (1,711,997.9)  |
| 2027 | -             | -               | -                | (1,747,468.7)  | -            | -             | (1,747,468.7)  | -                | (1,747,468.7)  | (1,475,126.5)  | 0.84            | (3,187,124.5)  |
| 2028 | -             | -               | -                | (1,797,422.9)  | -            | -             | (1,797,422.9)  | -                | (1,797,422.9)  | (1,433,981.0)  | 0.80            | (4,621,105.5)  |
| 2029 | -             | -               | -                | (23,961,759.8) | 14,687,367.3 | 29,980,486.4  | (23,961,759.8) | 4,259,336.5      | (19,702,423.3) | (14,855,459.0) | 0.75            | (19,476,564.5) |
| 2030 | -             | -               | -                | (11,563,642.3) | 26,251,009.5 | (1,569,784.5) | (11,563,642.3) | 7,612,792.8      | (3,950,849.5)  | (2,815,335.8)  | 0.71            | (22,291,900.3) |
| 2031 | -             | -               | -                | (28,329,652.5) | 28,329,652.5 | (1,937,760.4) | (28,329,652.5) | 8,215,599.2      | (20,114,053.3) | (13,546,047.6) | 0.67            | (35,837,947.8) |
| 2032 | -             | -               | -                | (948,568.0)    | 948,568.0    | (1,994,492.2) | (948,568.0)    | 275,084.7        | (673,483.3)    | (428,660.1)    | 0.64            | (36,266,608.0) |
| 2033 | -             | -               | -                | (768,234.8)    | 768,234.8    | (2,052,358.7) | (768,234.8)    | 222,788.1        | (545,446.7)    | (328,104.3)    | 0.60            | (36,594,712.2) |
| 2034 | -             | -               | -                | (1,702,550.4)  | 1,702,550.4  | (2,111,382.5) | (1,702,550.4)  | 493,739.6        | (1,208,810.8)  | (687,212.7)    | 0.57            | (37,281,925.0) |
| 2035 | -             | -               | -                | (1,685,056.7)  | 1,685,056.7  | (2,162,960.6) | (1,685,056.7)  | 488,666.5        | (1,196,390.3)  | (642,804.7)    | 0.54            | (37,924,729.6) |
| 2036 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.51            | (37,924,729.6) |
| 2037 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.48            | (37,924,729.6) |
| 2038 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.45            | (37,924,729.6) |
| 2039 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.43            | (37,924,729.6) |
| 2040 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.41            | (37,924,729.6) |
| 2041 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.38            | (37,924,729.6) |
| 2042 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.36            | (37,924,729.6) |
| 2043 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.34            | (37,924,729.6) |
| 2044 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.32            | (37,924,729.6) |
| 2045 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.31            | (37,924,729.6) |
| 2046 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.29            | (37,924,729.6) |
| 2047 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.27            | (37,924,729.6) |
| 2048 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.26            | (37,924,729.6) |
| 2049 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.24            | (37,924,729.6) |
| 2050 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.23            | (37,924,729.6) |
| 2051 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.22            | (37,924,729.6) |
| 2052 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.21            | (37,924,729.6) |
| 2053 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.19            | (37,924,729.6) |
| 2054 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.18            | (37,924,729.6) |
| 2055 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.17            | (37,924,729.6) |
| 2056 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.16            | (37,924,729.6) |
| 2057 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.16            | (37,924,729.6) |
| 2058 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.15            | (37,924,729.6) |
| 2059 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.14            | (37,924,729.6) |
| 2060 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.13            | (37,924,729.6) |
| 2061 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.12            | (37,924,729.6) |
| 2062 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.12            | (37,924,729.6) |
| 2063 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.11            | (37,924,729.6) |
| 2064 | -             | -               | -                | -              | -            | (2,162,960.6) | -              | -                | -              | -              | 0.10            | (37,924,729.6) |
|      | -             | -               | -                | (74,372,439.3) | 74,372,439.3 |               | (74,372,439.3) | 21,568,007.4     | (52,804,431.9) | (37,924,729.6) |                 |                |

**REDACTED CI 50518 Ruth Falls Main DAM ATO Attachment 2 Page 6 of 8**

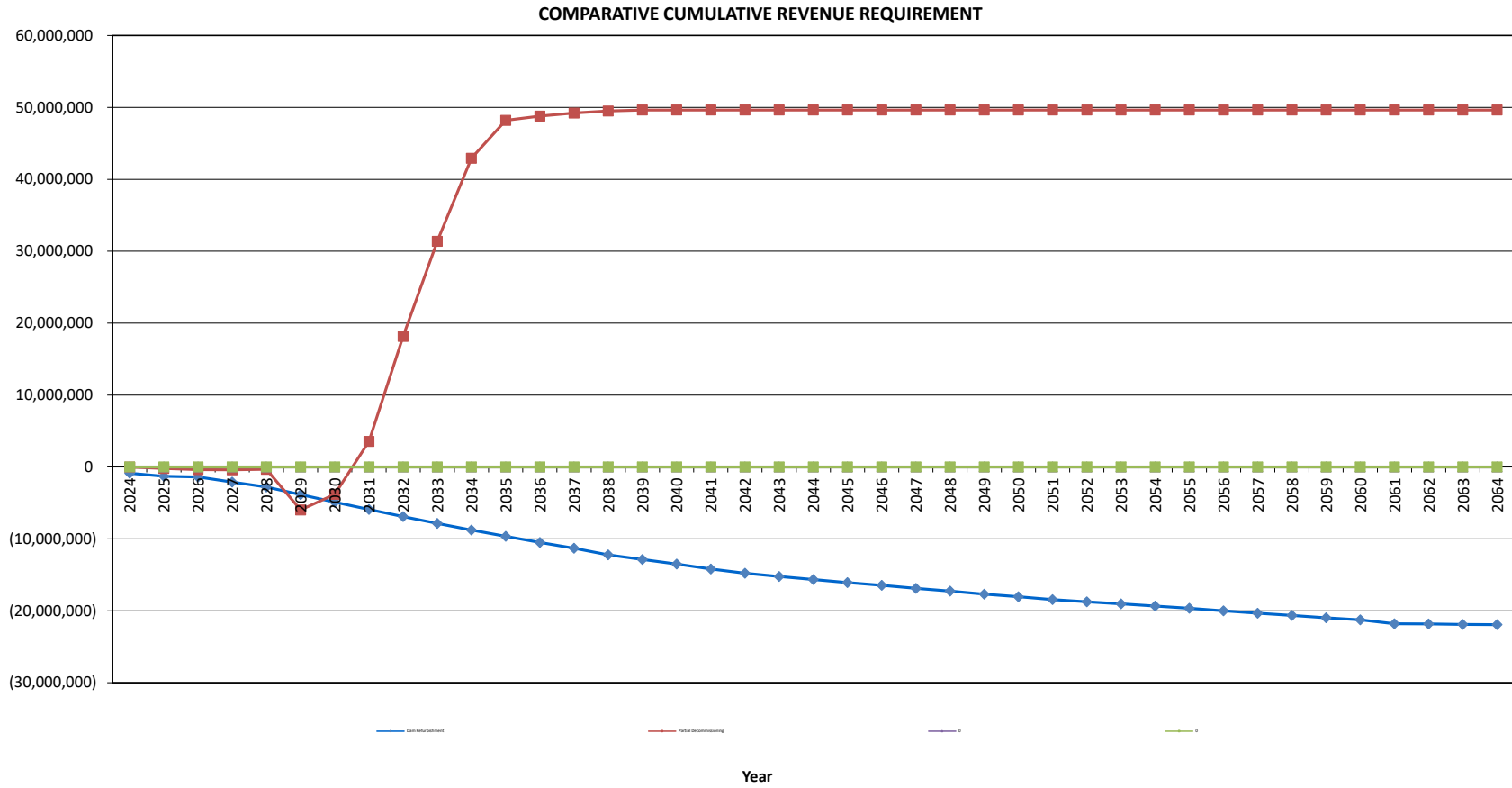
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**REDACTED CI 50518 Ruth Falls Main DAM ATO Attachment 2 Page 7 of 8**

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**Capital Project Detailed Estimate**

| <b>Location: Hydro</b><br><b>CI# : 50518</b><br><b>Title: HYD Ruth Falls Main Dam Refurbishment</b><br><b>Execution Year: 2025</b> |      |          |               |                |                        |                                   |
|------------------------------------------------------------------------------------------------------------------------------------|------|----------|---------------|----------------|------------------------|-----------------------------------|
| Description                                                                                                                        | Unit | Quantity | Unit Estimate | Total Estimate | Cost Support Reference | Completed Similar Projects (FP#s) |
| <b>Regular Labour</b>                                                                                                              |      |          |               |                |                        |                                   |
| Project Support - Engineering                                                                                                      | lot  | 1        | \$ 619,734    | \$ 619,734     |                        |                                   |
|                                                                                                                                    |      |          |               | \$ -           |                        |                                   |
|                                                                                                                                    |      |          | Sub-Total     | \$ 619,734     |                        |                                   |
| <b>OT Labour</b>                                                                                                                   |      |          |               |                |                        |                                   |
| Project Support - Engineering                                                                                                      | lot  | 1        | \$ 6,186      | \$ 6,186       |                        |                                   |
|                                                                                                                                    |      |          |               | \$ -           |                        |                                   |
|                                                                                                                                    |      |          |               | \$ -           |                        |                                   |
|                                                                                                                                    |      |          |               | \$ -           |                        |                                   |
|                                                                                                                                    |      |          | Sub-Total     | \$ 6,186       |                        |                                   |
| <b>Term Labour</b>                                                                                                                 |      |          |               |                |                        |                                   |
| Project Support - Environmental                                                                                                    | lot  | 1        | \$ 96,609     | \$ 96,609      |                        |                                   |
|                                                                                                                                    |      |          |               | \$ -           |                        |                                   |
|                                                                                                                                    |      |          |               | \$ -           |                        |                                   |
|                                                                                                                                    |      |          | Sub-Total     | \$ 96,609      |                        |                                   |
| <b>Travel Expense</b>                                                                                                              |      |          |               |                |                        |                                   |
| Travel                                                                                                                             | lot  | 1        | \$ 28,819     | \$ 28,819      |                        |                                   |
|                                                                                                                                    |      |          |               | \$ -           |                        |                                   |
|                                                                                                                                    |      |          | Sub-Total     | \$ 28,819      |                        |                                   |
| <b>Materials</b>                                                                                                                   |      |          |               |                |                        |                                   |
| Supply of gates and actuators                                                                                                      | lot  | 1        | \$ 193,640    | \$ 193,640     |                        |                                   |
| Supply of rubber dams                                                                                                              | lot  | 1        | \$ 525,187    | \$ 525,187     |                        |                                   |
| Backup generator during winter construction                                                                                        | lot  | 1        | \$ 15,450     | \$ 15,450      |                        |                                   |
| Generator for Compressor Building                                                                                                  | lot  | 1        | \$ 125,000    | \$ 125,000     |                        |                                   |
| Supply of insulataed storage containers                                                                                            | lot  | 1        | \$ 15,487     | \$ 15,487      |                        |                                   |
| Concrete, Steel, Electrical, Piping, Rebar                                                                                         | lot  | 1        | \$ 1,387,144  | \$ 1,387,144   |                        |                                   |
| Fish passage ugrades including eel ramp                                                                                            | lot  | 1        | \$ 666,781    | \$ 666,781     |                        |                                   |
|                                                                                                                                    |      |          |               | \$ -           |                        |                                   |
|                                                                                                                                    |      |          | Sub-Total     | \$ 2,928,689   |                        |                                   |
| <b>Contracts</b>                                                                                                                   |      |          |               |                |                        |                                   |
| General Contract - LNTP                                                                                                            | lot  | 1        | \$ 1,136,916  | \$ 1,136,916   |                        |                                   |
| Mobilization / Demobilization                                                                                                      | lot  | 1        | \$ 125,000    | \$ 125,000     |                        |                                   |
| Environmental Management                                                                                                           | lot  | 1        | \$ 25,000     | \$ 25,000      |                        |                                   |
| Water Controls                                                                                                                     | lot  | 1        | \$ 60,000     | \$ 60,000      |                        |                                   |
| Concrete Works                                                                                                                     | lot  | 1        | \$ 1,033,440  | \$ 1,033,440   |                        |                                   |
| Rubber Dam Installation                                                                                                            | lot  | 1        | \$ 225,000    | \$ 225,000     |                        |                                   |
| Verical Lift Gates Installation                                                                                                    | lot  | 1        | \$ 150,000    | \$ 150,000     |                        |                                   |
| Earthworks, retaining wall                                                                                                         | lot  | 1        | \$ 25,000     | \$ 25,000      |                        |                                   |
| Rubber Dam Inspection                                                                                                              | lot  | 1        | \$ 37,520     | \$ 37,520      |                        |                                   |
| Wiring electrical to Compressor Building                                                                                           | lot  | 1        | \$ 61,801     | \$ 61,801      |                        |                                   |
| Pre-clearing nesting bird survey                                                                                                   | lot  | 1        | \$ 9,336      | \$ 9,336       |                        |                                   |
| Concrete testing                                                                                                                   | lot  | 1        | \$ 45,332     | \$ 45,332      |                        |                                   |
| Escalation costs due to execution deferral                                                                                         | lot  | 1        | \$ 612,787    | \$ 612,787     |                        |                                   |
| Archaeology related costs                                                                                                          | lot  | 1        | \$ 232,573    | \$ 232,573     |                        |                                   |
| Vegetation removal                                                                                                                 | lot  | 1        | \$ 67,738     | \$ 67,738      |                        |                                   |
| New Upstream Eel Ramp                                                                                                              | lot  | 1        | \$ 368,658    | \$ 368,658     |                        |                                   |
| Upstream Fishway upgrades                                                                                                          | lot  | 1        | \$ 995,722    | \$ 995,722     |                        |                                   |
| Downstream Louvre System upgrades                                                                                                  | lot  | 1        | \$ 265,658    | \$ 265,658     |                        |                                   |
| Construction supervision                                                                                                           | lot  | 1        | \$ 374,451    | \$ 374,451     |                        |                                   |
| Engineering support for envir. permitting                                                                                          | lot  | 1        | \$ 15,443     | \$ 15,443      |                        |                                   |
| Construction demolition activities                                                                                                 | lot  | 1        | \$ 360,000    | \$ 360,000     |                        |                                   |
| Barn swallow nest removal                                                                                                          | lot  | 1        | \$ 10,735     | \$ 10,735      |                        |                                   |
| Bird habitat building construction                                                                                                 | lot  | 1        | \$ 9,725      | \$ 9,725       |                        |                                   |
|                                                                                                                                    |      |          |               | \$ -           |                        |                                   |
|                                                                                                                                    |      |          | Sub-Total     | \$ 6,247,833   |                        |                                   |
| <b>Freight/Postage/Delivery</b>                                                                                                    |      |          |               |                |                        |                                   |
| Rubber dams and components freight                                                                                                 | lot  | 1        | \$ 17,440     | \$ 17,440      |                        |                                   |
|                                                                                                                                    |      |          |               | \$ -           |                        |                                   |
|                                                                                                                                    |      |          | Sub-Total     | \$ 17,440      |                        |                                   |

**Capital Project Detailed Estimate**

|                                               |      |          |               |                | Cost Support Reference | Completed Similar Projects (FP#'s) |
|-----------------------------------------------|------|----------|---------------|----------------|------------------------|------------------------------------|
| Description                                   | Unit | Quantity | Unit Estimate | Total Estimate |                        |                                    |
| <b>Consulting</b>                             |      |          |               |                |                        |                                    |
| Conceptual / Detailed design of refurb.       | lot  | 1        | \$ 231,374    | \$ 231,374     |                        |                                    |
| Juvenile Gaspereau Entrainment Study          | lot  | 1        | \$ 135,199    | \$ 135,199     |                        |                                    |
| Wetland delineation and functional assessment | lot  | 1        | \$ 22,971     | \$ 22,971      |                        |                                    |
| Wetland & Fish Habitat Monitoring             | lot  | 1        | \$ 55,405     | \$ 55,405      |                        |                                    |
| Archaeological Reconnaissance                 | lot  | 1        | \$ 108,495    | \$ 108,495     |                        |                                    |
| Design of fish passage upgrades               | lot  | 1        | \$ 192,102    | \$ 192,102     |                        |                                    |
| Post-construction monitoring                  | lot  | 1        | \$ 309,000    | \$ 309,000     |                        |                                    |
| Offsetting (West River Project)               | lot  | 1        | \$ 440,750    | \$ 440,750     |                        |                                    |
| 3D Hydraulic Modelling                        | lot  | 1        | \$ 117,545    | \$ 117,545     |                        |                                    |
| Environmental maintenance flow assesment      | lot  | 1        | \$ 1,539      | \$ 1,539       |                        |                                    |
| Electrical work on Compressor Building        | lot  | 1        | \$ 3,664      | \$ 3,664       |                        |                                    |
| Fish Count and review                         | lot  | 1        | \$ 120,399    | \$ 120,399     |                        |                                    |
| Electrical work during construction           | lot  | 1        | \$ 32,400     | \$ 32,400      |                        |                                    |
|                                               |      |          |               | \$ -           |                        |                                    |
|                                               |      |          | Sub-Total     | \$ 1,770,842   |                        |                                    |
| <b>Legal</b>                                  |      |          |               |                |                        |                                    |
| Corporate Legal fee                           | lot  | 1        | \$ 141        | \$ 141         |                        |                                    |
|                                               |      |          |               | \$ -           |                        |                                    |
|                                               |      |          | Sub-Total     | \$ 141         |                        |                                    |
| <b>Meals</b>                                  |      |          |               |                |                        |                                    |
| Meals                                         | lot  | 1        | \$ 8,074      | \$ 8,074       |                        |                                    |
|                                               |      |          |               | \$ -           |                        |                                    |
|                                               |      |          | Sub-Total     | \$ 8,074       |                        |                                    |
| <b>Personal Equipment</b>                     |      |          |               |                |                        |                                    |
| Purchase of PPE                               | lot  | 1        | \$ 4,743      | \$ 4,743       |                        |                                    |
|                                               |      |          |               | \$ -           |                        |                                    |
|                                               |      |          | Sub-Total     | \$ 4,743       |                        |                                    |
| <b>Other Goods &amp; Services</b>             |      |          |               |                |                        |                                    |
| Previously approved contingency               | lot  | 1        | \$ 842,715    | \$ 842,715     |                        |                                    |
| Offsetting contingency                        | lot  | 1        | \$ -          | \$ -           |                        |                                    |
|                                               |      |          |               | \$ -           |                        |                                    |
|                                               |      |          | Sub-Total     | \$ 842,714     |                        |                                    |
| <b>Equipment Rental</b>                       |      |          |               |                |                        |                                    |
| Equipment Rental during 2022 construction     | lot  | 1        |               | \$ -           |                        |                                    |
|                                               |      |          | Sub-Total     |                |                        |                                    |
| <b>Mi'kmaw Engagement</b>                     |      |          |               |                |                        |                                    |
| KMKNO capacity agreement payments             | lot  | 1        |               |                |                        |                                    |
| Mi'kmaq observer during construction          | lot  | 1        |               |                |                        |                                    |
|                                               |      |          |               | \$ -           |                        |                                    |
|                                               |      |          | Sub-Total     |                |                        |                                    |
| <b>Interest Capitalized</b>                   |      |          |               |                |                        |                                    |
| AFUDC                                         | lot  | 1        | \$ 884,768    | \$ 884,768     |                        |                                    |
|                                               |      |          |               | \$ -           |                        |                                    |
|                                               |      |          | Sub-Total     | \$ 884,768     |                        |                                    |
| <b>Administrative Overhead</b>                |      |          |               |                |                        |                                    |
| Labour AO                                     | L.S. | 1        | \$ 413,588    | \$ 413,588     |                        |                                    |
| Contractor AO                                 | L.S. | 1        | \$ 724,985    | \$ 724,985     |                        |                                    |
|                                               | L.S. | 1        |               | \$ -           |                        |                                    |
|                                               |      |          | Sub-Total     | \$ 1,138,573   |                        |                                    |
| <b>SUB-TOTAL (no AO, AFUDC)</b>               |      |          |               |                | \$ 12,815,776          |                                    |
| <b>TOTAL (AO, AFUDC included)</b>             |      |          |               |                | \$ 14,839,116          |                                    |
| <b>Original Cost</b>                          |      |          |               |                | \$ 1,279,623           |                                    |

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.

Note 3: Contingency for the original 2019 submission was determined using a combination of internal subject matter expert judgement and previous experience with hydro dam refurbishment projects. During the initial filing of the project as AACE Class 3 Estimate, this was meant to account for the risks related to water management during construction associated with upstream reservoir temporary drawdown, installation of the rubber dams and sluice gates, concrete works, and archaeological screening with possible mitigation. To date, the dam refurbishment activities have not started yet and are forecasted to commence in July 2025, therefore, this contingency is still required and remains appropriate. Consistent with the maturity matrix (65-100%, Class 1), this project does not require any increases to the base contingency amount.