


Submission

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|   | No.: 2015-P56e |
| | To: Board of Directors |
| | Date: 2015-04-22 |
| For: DECISION | |

1. TITLE

Federal Design Approval – Chaudière Falls Hydroelectric Development and Public Access to Chaudière Falls – Chaudière Hydro Limited Partnership

2. PURPOSE OF THE SUBMISSION

To obtain the approval of the National Capital Commission (NCC) Board of Directors for the design of the new generating station (GS) and the public access to the Chaudière Falls and delegation of authority for the Executive Director of Capital Planning to sign the Federal Land Use and Design Approval.

To obtain approval of the NCC Board of Directors to delegate authority to the CEO to sign a Memorandum of Understanding (MOU) between the Chaudière Hydro Limited Partnership (CHLP) and the NCC.

On December 8, 2006, the NCC granted Federal Land Use Approval for a New Hydroelectric Facility on Chaudière Island Site Adjacent to the Ottawa River pursuant to section 12 of the *National Capital Act* to Domtar Inc. The Ottawa No.1 and 2 GSs, associated lands and facilities were purchased by Hydro Ottawa in 2012. Since then, CHLP, which is fully owned by Energy Ottawa has continued to operate the GSs and now intends to proceed with the redevelopment project.

3. AUTHORITY

- *National Capital Act*, subsection 10 (2) and section 12
- Federal Land Use Approval New Hydroelectric Facility on Chaudière Island Site Adjacent to the Ottawa River (CP2125-365-07)

4. RECOMMENDATIONS

THAT the design for the CHLP GS and design of the public access to Chaudière Falls, including the entry plaza, viewing platform and outlooks, pedestrian crossings, and safety features BE APPROVED subject to the prior completion of the Environmental Assessment Decision as required by the *Canadian Environmental Assessment Act* (CEAA) of 2012, and the completion of the aboriginal consultation process required under the Constitution Act.

THAT the signature for the Federal Design Approval document for the design of the Chaudière Falls Hydroelectric Development and Public Access to Chaudière Falls, and of subsequent approvals for minor design modifications arising during the implementation process, be delegated to the Executive Director, Capital Planning Branch, provided they do not substantially alter the original design intent.

THAT the Federal Land Use Approval New Hydroelectric Facility on Chaudière Island Site Adjacent to the Ottawa River (CP2125-365-07) be amended to reflect the widening of the intake and tailrace channels, and the realigned and enlarged public access to the Chaudière Falls.

THAT the Board approve the delegation of authority to the NCC CEO to sign an MOU between CHLP and the NCC.

5. BACKGROUND

The project is situated on a portion of Chaudière Island within the National Capital Region and consists of redeveloping the existing hydroelectric generating facilities by constructing an enlarged and realigned intake channel and a new 29 megawatt GS and retiring the existing Ottawa No.1 and 2 GSs.

The project area is approximately 2.7 hectares in size and includes a dewatering structure (Ottawa Bulkhead), intake and discharging channels, and covered and open flumes. Other features on Chaudière Island include several buildings associated with Domtar's former paper mill that once operated on the island (see Maps on Drawing 0001 in Appendix 2). The western tip of Chaudière Island is referred to as Pickard's Point and is an extension to the original island as a result of the placement of fill by Domtar in the 1960s. Booth Street serves to connect the Cities of Ottawa and Gatineau and crosses the eastern part of Chaudière Island in a north-south direction.

Land ownership of Chaudière Island is comprised of provincial Crown lands on the western tip of the island, CHLP lands associated with the Ottawa No.1 and No.2 GSs, federal Crown lands under the jurisdiction of Public Works and Government Services Canada (PWGSC); a portion of which are leased to Hydro Ottawa, and lands owned by Domtar, which are currently part of the Windmill transaction.

The Chaudière Hydro Redevelopment Project was formally announced on March 7, 2014. A 40-year Power Purchase Agreement has been established under the Ontario Power Authority's Hydro Electric Standard Offer Program Municipal Stream. Once operating, the GS will provide electricity to power 20,000 homes for a year. Following receipt of all applicable permits and approvals, construction is planned to occur between April 2015 and September 2016. Testing and commissioning will then occur from October 2016 to February 2017. The GS will be fully operational in February 2017.

The project will include the following components:

- A 200 m long, 45 to 60 m wide and 9 m deep intake channel to convey water from the Ottawa River to the new powerhouse.
- A new 29 MW close-coupled powerhouse containing four 7.3 MW turbines, an enclosed control room and electrical room.
- A 40 m long by 45 m wide discharge tailrace channel from the powerhouse to the Ottawa River.
- Demolition and removal of the Ottawa Bulkhead intake structure.
- An entrance plaza at the eastern end of the GS.
- Provision of pedestrian access across the powerhouse to allow for public access through the Project area to Booth Street.
- Construction of a new pedestrian access bridge across the intake channel. This will lead to a viewing platform or plaza to better observe the Chaudière Falls. Additional smaller viewing platforms will be located around the site, providing multiple perspectives of the Falls.
- A 'Life Stream'; a series of pools connected by migration streams which will allow the American Eel to move both up and downstream and serve as an attractive water feature.

The majority of the powerhouse and associated electrical facilities (e.g. substation transformers) will be situated below grade to reduce visual impacts to the surroundings. The powerhouse will be connected to the Ontario grid by routing the 13.2 kV interconnection cable underground from the transformers to and through the Canadian War Museum and NCC lands via the existing Buchanan, Power Canal and Bronson Bulkheads to connect to Hydro Ottawa's transmission facilities.

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A new pedestrian access bridge with a single centre support pier will be constructed across the intake channel to enable public access from Chaudière Island (Pickard's Point) to a viewing area along the south side of the Chaudière Falls Ring Dam. This bridge feature is an initiative proposed by the NCC as part of the long term objective to enable public access to Chaudière Falls. In addition, pedestrian access will be provided across the top of the powerhouse to allow for public access through the project area to Booth Street.

This will be an improved and value-added public access to the Chaudière Falls, which was initially protected for by the NCC through an easement described in the December 8, 2006 Federal Land Use Approval New Hydroelectric Facility on Chaudière Island Site Adjacent to the Ottawa River. The initial easement consisted of a narrow bike path and two modest outlooks and included two crossings of the power generation channel and tailrace.

The project was presented to the Advisory Committee on Planning, Design and Realty (ACPDR) in December of 2014 and they strongly supported the project in principle including the basic design moves, the integration of the industrial heritage and the consultation with the First Nations. They felt that the project will be an important Capital Destination and offered the following recommendations.

The design should achieve a balance between First Nations and industrial heritage influences. The parts of the design that relate to the First Nation's themes should be refined and pedestrian circulation should be improved. A way should be found to make the central flame an important feature even when it is unlit. The history of the industrial past should be brought out more and could include interpretation of the working past and power generation. The historic buildings are an asset, should include washrooms and could be programmed by a third party.

They also suggested that the site should work in winter and be accessible year-round and that the NCC should collaborate for maintenance and programming. Further study of paving materials should be done and wooden walkways, although interesting may prove problematic from a maintenance perspective. Planting should consist of native shrubs and vines while flower pots are to be avoided. They also suggested that the design of the protective fencing be refined to make them less apparent.

NCC staff will work with CHLP to refine the design to incorporate the ACPDR recommendations. The NCC also proposes to enter into an agreement with CHLP for the operation and maintenance of the public access to the Chaudière Falls. The agreement will identify roles and responsibilities of each participant with regard to the publicly accessible portions of the project and will include any required easements.

6. ISSUES, IMPACTS AND RISKS

- This project responds to and supports key strategies identified in the NCC's 2013-2017 Corporate Plan, notably:
 - Build the Capital by ensuring federal lands are used to their greatest potential in a way that contributes to the significance and heritage of the Capital.
- The project responds to and supports key policies identified in the NCC's 2005 Core Area Sector Plan, notably:
 - Improve pedestrian access to Chaudière Falls to showcase the grandeur and significance of this natural feature.
 - Establish pedestrian linkages from the Canadian War Museum to the Chaudière Falls Ring Dam, via Albert and Chaudière, in collaboration with Domtar and Energy Ottawa.
 - Enhance interpretation, access to facilities, trails and lookouts to improve the image of the sector and expand the public domain over time.
 - Celebrate and interpret the area's industrial and aboriginal heritage through interpretation,

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programming, commemorations, tours of industrial and power generation installations, viewing platforms, and events.

- The link from the War Museum to the Chaudière Falls via the bulkheads and Pickard's Point will require coordination with the Windmill development in order to be completed as the GS is being constructed. Windmills' conceptual plan has been coordinated with Energy Ottawa's proposed design and includes the new intake channel configuration.
- Public access to the Chaudière Falls may be restricted at times in order to allow for the ongoing maintenance and operation of the GS.
- Interpretation component of the project is not yet developed.
- Design of the public access and viewing area must conform to the safety standards of power generating facilities.
- The CEAA 2012 determination of environmental effects for the project is ongoing. This determination includes three federal departments in addition to the NCC, namely PWGSC, Transport Canada (TC) and Department of Fisheries and Oceans (DFO). Delays in obtaining the CEAA 2012 determination pose a significant risk to the project. The proponent is also in the process of obtaining the required provincial environmental permits.
- A fast-tracked schedule offers no forgiveness with regard to meeting key deadlines, approval turnaround times and dealing with the unexpected. On-going consultations and approvals from all parties will have to be managed very carefully to minimize the impact on delivery.

7. ANALYSIS OF OPTIONS

Not applicable.

8. STRATEGIC LINKS

NCC Corporate Plan 2013-2017

Canada's Capital Core Area Sector Plan, 2005

Canada's Capital Views Protection, 2007

9. CONSULTATIONS AND COMMUNICATIONS

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| • NCC Board – Federal Land Use Approval | December 2006 |
| • Consultations with members of the Algonquin Nation | September 2014 |
| • Presented to Executive Management Committee (EMC) for information | September 2014 |
| • NCC ACPDR – comments on design development | October 2014 |
| • NCC ACPDR – comments on design development | December 2014 |
| • NCC Board – Federal Design Approval | April 2015 |

10. NEXT STEPS

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| • ACPDR – Comments on design development | December 11/12, 2014 |
| • Board Federal Design Approval | April 2015 |
| • Contract Documents/Tendering | Oct to Mar 2014-15 |
| • Implementation/Construction/Substantial completion | Apr 2015 to Sep 2016 |
| • Final site work and Commissioning/Testing | Oct 2016 to Feb 2017 |

11. LIST OF APPENDICES

- Appendix 1 – FLUA New Hydro Facility on Chaudière Island
- Appendix 2 – Chaudière Hydro Limited Partnership – Project Drawings and Renderings

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12. SUBMISSION AUTHORS

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