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Peace Project Water Use Plan

Physical Works Program Terms of Reference

**GMSWORKS-26 Williston Communication and Safety Improvements –
Williston, Dinosaur and Peace**

**Addendum 2
June 29, 2017**

A2. Addendum 2 to GMSWORKS-26 Williston Communication and Safety Improvements – Williston, Dinosaur and Peace

A2.1 Purpose

The purpose of this Terms of Reference (TOR) Addendum is to describe additional scope and budget for GMSWORKS-26 for:

- 1) The installation of an electronic usage tracking system (new scope); and
- 2) The ongoing maintenance and inspection of the marine radio repeater system (additional budget).

Additionally, the schedule has been updated to July 2027, which is the end of the 20-year terms of remissions for the Peace Water Use Plan (WUP).

A2.2 Background

On June 2, 2008, we received approval for the TOR for GMSWORKS-26 Williston Communication and Safety Improvements, in accordance with the Peace WUP Order dated August 9, 2007 Schedule A, Clauses 5 (b and c), Schedule B Clause 2 (b), and Schedule C 3 (a). TOR Addendum 1 was approved by the Comptroller of Water Rights (CWR) office on January 20, 2010 which included housekeeping revisions plus an allocation for maintenance to 2028 (\$12,000 per year for repeaters plus \$10,000 per year for the maintenance of electronic signs).

The feasibility assessment for the project was completed in 2009. Between 2011 and 2013, BC Hydro installed or modified conventional analog very high frequency (VHF) repeater equipment at five of BC Hydro's existing sites and added one additional site. The system has a single channel at each repeater site, marine channels 83 or 84, depending on the location.

On September 24, 2013, the CWR office approved a trial for a full-time monitor to track usage of the system during the recreation season. Additionally, the scope was also modified at this time to exclude the electronic signage which had been determined to be infeasible.

Full-time daily in-person monitoring and usage tracking was undertaken on a trial basis, and observed very low use, averaging 13 per month.

A2.3 Rationale for Addendum 2

BC Hydro proposes to resume usage tracking on the system, using an electronic system. This is based on the following rationale:

- Without usage tracking, it is difficult to understanding the system's full capability and limitations (e.g., how much usage can the solar batteries manage without draining). In spring of 2017, we observed very high use of the system during a time when the Bevel system (a private, land-based system) was out of service. There were concerns that the high usage might deplete the batteries, but we have little information on how this extreme usage affected the system;

- Usage is expected to increase with the addition of simpler signs and usage tracking will allow assessment of the impact, if any, from increased awareness. The simpler signs are shown in Appendix A, and the previously posted signs are shown in Appendix B;
- Electronic data tracking solutions, once installed, have very low ongoing costs compared with in-person tracking; and
- Ongoing usage tracking will provide useful information to report at the WUP Order review.

A2.4 Electronic usage tracking system

A2.4.1 Electronic usage tracking system requirements

Standard recording equipment is available for the purpose of documenting the time and duration of use of the system. It is anticipated that this equipment can be installed to fit the tracking system requirements, which include, but are not limited to the following:

- An event recorder to time stamp use and determine duration. Each time a radio is keyed it will be recorded as an event. For example, if two parties go back and forth on a conversation, each time the radio is used will count as an event;
- Network security on the system – ensuring that only BC Hydro has access to data recorded;
- Remote data accessibility – data should be accessible on BC Hydro’s secure data network, rather than requiring a site visit to download data;
- Accessible equipment – installation is expected to be located at BC Hydro facilities and not at the repeater stations. This will help minimize the installation and maintenance costs;
- Option for voice recording capability – Voice recording would allow us to gather information on the type of use of the system (e.g., safety check in, weather update, commercial use, etc.). However, there is some concern that boaters may not use the system if recorded. Voice recording will only be enabled if event time and duration information does not provide meaningful data on system use. It would be necessary to update all signs to make users aware of voice recording, and recordings would be deleted once use category is noted;
- System must conform to all requirements under the *Freedom of Information and Privacy Act* including completion of a Privacy Impact Assessment.¹;
- Any external reporting will be aggregate (e.g., not reporting on individual events, but total numbers). Data will be downloaded monthly and put into a reporting format; and

¹ The Privacy Impact Assessment is an internal BC Hydro process aimed at ensuring compliance with the *Freedom of Information and Protection of Privacy Act* by identifying and eliminating non-compliance situations (and may require additional information to be displayed on relevant signs).

- After downloading into the report format, any event data and recorded voice (audio files), if applicable, will be archived for a six-month period and then deleted.

A2.4.2 Installation approach for usage tracking system

The electronic solution will be installed using the following approach:

- Engineering Design – to be completed by BC Hydro Telecommunications Engineering team;
- Equipment installation & commissioning;
- IT installation (software installation and testing);
- Training – on data retrieval, storage and disposal; and
- Reporting – developing and testing the reports.

The schedule for the installation would be within 2017, but would not be expected to be installed prior to the peak recreation season. It is anticipated that the project would take three to six months to complete including testing and training.

The expected budget for installation of the usage tracker and voice recorder is shown in Table 1 in section A2.6 below. In addition to installation, there will be annual reporting for the data download, data transformation, and report preparation. This reporting amount includes technology support for the system.

A2.5 Maintenance of marine radio repeater system

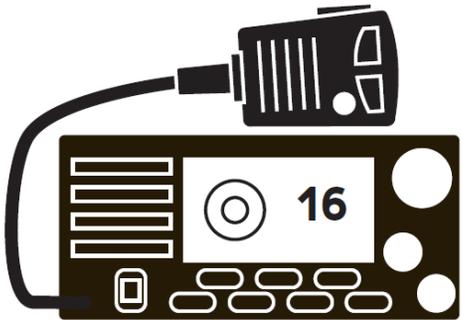
Since installation of the radio repeater equipment in 2013, BC Hydro has completed annual inspections as well as minor repairs and preventative maintenance. Early learnings on methods and pre-inspection preparation have been used to improve the efficiency and cost-effectiveness of the inspections (e.g., only one trip via helicopter flight to the remote repeater station is required in most cases).

A2.6 Budget and schedule

Total Program Cost \$1,610,081.

Appendix A: Simplified signage posted around Williston & Dinosaur boat launches

NOTICE



Use Marine Radios for your Boating Safety

Use marine VHF channel 16 (limited range) in case of an emergency.

Marine VHF channels 83 or 84 are available for reservoir-wide communications (unmonitored and area-dependent).

 **BC Hydro**

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Appendix B: Coverage map information (posted at various locations around Williston and Dinosaur reservoirs)

