WIPC 1801 – Develop Definitions for Alternative Water Sources to High Quality Non-Saline Groundwater

Background

Within the province of Alberta, water licenses for oil and gas activities are required under the Water Act for use of non-saline water. Non-saline water is classified as water having a total dissolved solids content less than 4,000 mg/L. Within this definition, non-saline water quality can vary such that it may not be usable by other stakeholders.

Alberta Environment and Parks (AEP) in its draft Water Conservation Policy(1) recognizes that some sources of non-saline, low-quality groundwater and surface water are environmentally preferable for oil and gas activities relative to the use of high quality water sources. As noted in the draft, alternatives to HQNS may include but are not limited to the following:

- Recycled or reconditioned industrial and municipal wastewater, taking return flows into perspective

- Oil sands mining tailing ponds water
- Non-saline water in direct contact with bitumen deposits
- Naturally occurring non-saline water containing petroleum hydrocarbons (excluding methane) within formations that contain both water and hydrocarbon resources; and
- Non-saline groundwater that is demonstrated to be economically and technologically impractical to use for drinking water or livestock water purposes, considering the local hydrological setting, hydraulic connectivity for aquatic ecosystem needs and availability of other water supplies for nearby existing or potential water users.

In the draft policy(1) AEP also recognizes that more detailed criteria for further defining non-saline groundwater that is economically and technically impractical to use for drinking water supplies or livestock watering purposes may be included in the associated subsector guidelines or developed at a later stage to supplement the policy".

Project Description

The oil and gas industry is aligned with the objectives of the policy and the need to expand the use of alternative water sources. To this end, industry through the PTAC Water Innovation Planning Committee (WIPC) is requesting support to refine the

definitions/criteria in the draft policy for non-saline alternatives to HQNS. Work outcomes from this project will be shared with AER and AEP (both organizations are represented on the WIPC) to support future subsector guidelines or policy.

Project Scope and Deliverables

The proposed scope of work is to: a) define additional criteria for alternatives to HQNS for use in upstream oil and gas operations, and b) develop detailed criteria defining “non-saline groundwater that is technologically and economically impractical to use for drinking water supplies or livestock purposes”. In completing the proposed scope of work the vendor shall:

- Review the draft policy, and become familiar with policy direction and existing definitions (and limitations) of alternatives to HQNS and useable groundwater;
- Attend meetings with AEP and AER to review project scope and work already completed by these organizations that could support this project (arranged by WIPC project champion).
- Complete a regulatory review of Alberta and other jurisdictions (North America and Internationally) to compare definitions of (1) the difference between non-saline and saline water; (2) groundwater that is technologically and economically impractical to use for drinking

water supplies or livestock watering; and (3) alternatives to non-saline/fresh water. For example, the Alberta 2012 Code of Practice for Water Works Systems using High Quality Groundwater defines high quality groundwater.

- Tabulate this information and review with the WIPC project champion (TBD);
- Incorporate industry experience to recommend (1) expanding the draft policy definition of "alternatives to HQNS water and (2) criteria to define a workable definition of "non-saline groundwater that is economically and technically impractical to use for drinking water supplies or livestock watering purposes".
- Review this work with AER and AEP, collect feedback and adjust work product based on this feedback.
- Prepare a brief summary report and deliver to WIPC project champion for review by the WIPC.
- Revise report based on feedback and present final report to PTAC.

Project Timeline

The final report shall be delivered to PTAC within 6 months of the project being awarded.

Estimated Budget

The estimated budget shall not exceed $15,000.

References –

(1) Alberta Government. Water Conservation Policy for Upstream Oil and Gas Operations (Draft). October, 2016.

RFP Schedule

April 11, 2018	RFP issued
April 27, 2018	Deadline for submission to PTAC
May 8, 2018	Proposal selected by WARI.

Selection Process

PTAC has formed a Steering Committee for this project composed of industry stakeholders with relevant expertise. PTAC will facilitate Steering Committee proceedings but will not be a decision-maker.

All submitted proposals will be provided to the Steering Committee for review. The Steering Committee will determine if proposals meet the requirements herein and provide an overall ranking based on Contractor qualifications and on proposal quality. The Steering Committee will make the final decision.
Once a selection of the best proposal according to the Steering Committee has been made, all submission contacts will be notified by email of the regarding the outcome of their individual proposal. The project final report will be shared on the PTAC website upon completion of the project.

Contact Information

Proposals should be submitted online using the following
form: http://auprf.ptac.org/2018-letter-of-intent-step

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