EES Consulting

August 27, 2014

Ms. Lisa A. Brautigam
Environmental Attorney
Puyallup Tribe of Indians
3009 Portland Avenue
Tacoma, Washington 98404

SUBJECT: Evaluation of Transfer of Ownership for Electron Hydro Facility from Puget Sound Energy to Electron Hydro LLC

Dear Ms. Brautigam:

Introduction

EES Consulting, Inc. (EES) has been asked by the Puyallup Tribe of Indians (Tribe) to examine Electron Hydro LLC's (LLC) projected annual expenses and revenues associated with owning and operating the Electron Hydro project (Project). The LLC and Puget Sound Energy (PSE) have filed an application at the Washington Utilities and Transportation Commission (WUTC) to approve a transaction through which PSE would sell the Project to the LLC. Pursuant to the transaction documents between PSE and the LLC, the LLC would pay all of the costs associated with purchasing and operating the Project, and receive revenues from selling all of the Project's output to PSE at the prices included in this transaction's Power Purchase Agreement (PPA).

EES is pleased to undertake this assignment and is uniquely qualified to assist the Tribe in this matter. EES has a long and distinguished history in providing technical assistance on hydroelectric-related projects. Over the firm's history, we have designed, financed, permitted, constructed and operated numerous hydro projects. I have personally appeared as an expert witness in federal court proceedings on hydro project-related disputes. I have also appeared as an expert before the WUTC. Our firm's hydro project-related experience and my professional resume follow this narrative and analysis, and are marked as Attachments A and B, respectively. In conjunction with this assignment, I have reviewed the confidential and extremely

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confidential information developed in this WUTC proceeding, other Project information provided to the Tribe by PSE and other publically available information regarding the Project.

Please find below EES's initial comments and proforma analysis of the financial performance of the Project under LLC ownership per the terms of the PPA, Resource Enhancement Agreement (REA) and Electron Facilities Operation Agreement. This report prepares a financial proforma of the Project's financial performance under various scenarios, and then provides my observations and options on how this transaction may unfold if approved by the WUTC.

Background on Report's Analysis

The following report includes two scenarios of how the LLC will perform financially as defined below. A description of each scenario follows:

- **Scenario #1**: LLC sells Project output to PSE in 2015 through 2026 (12-year term), and, pursuant to the REA, pays decommissioning costs at the end of the term of the PPA. In this scenario, it is assumed that the LLC does not upgrade the Project and sells 52,000 MWh of Project output per year to PSE. Implicit in this scenario is the assumption that extending the study period beyond 2026 is not a realistic alternative because the REA between PSE and the Tribe expires at the end of 2026.

- **Scenario #2**: LLC sells Project output to PSE in 2015 through 2064 (50-year term) and pays decommissioning costs at the end of the term of the PPA. In this scenario, it is assumed that the plant generates 52,000 MWh per year in 2015-16. During this time, permits required to perform the construction upgrades to the Project will be acquired. It is assumed that the Project will be shut down during a four-year period (2017-2020), while the construction required to upgrade the Project is performed and that the Project will generate 184,000 MWh annually in 2021 through 2064. Scenario #2 is complicated by the lack of a REA which may subject the Project owner to claims by the Tribe and others as discussed below.

Assumptions Used in this Analysis

Below are global assumptions used to calculate the LLC's annual costs and revenues under both scenarios. Assumptions regarding equity and debt financing are based on EES's experience with existing financial markets and prior working knowledge of similar generating projects financed by independent power producers similar to the LLC. The source of these assumptions are also delineated below.

- LLC purchase of the Project: [redacted] – Asset Purchase Agreement – Amendment #4
- Equity financing: 25 percent of total capital costs – EES
- Cost of equity to LLC: 12 percent – EES
- Debt financing: 75 percent of total capital costs – EES
- Borrowing rate for debt financing: 8 percent – EES
- Borrowing term: 12 years – based on duration of PPA
- Annual Project generation without upgrades: 52,000 MWh – 2011 and 2012 actual generation per PSE's FERC Form 1s
- Annual Project generation with upgrades: 184,000 MWh – Exhibit A of PSE's Application for Sale
- Discount rate used in net present value calculations: 9 percent – EES
- Property taxes at 1.5 percent of projected 2015 Project book value based on the average tax rate in Pierce County, Washington and escalated at 1 percent annually – Pierce County and EES
- Federal income taxes estimated to be 34 percent of net revenues (excluding debt service principal payments) less depreciation – EES
- Annual cost inflation = 2.5 percent – EES

It should be noted that the [redacted] purchase price for the Project shown above is a decrease from the initially agreed upon purchase price of [redacted] This [redacted] initial purchase price was based on a PPA term of [redacted] rather than the [redacted] that agreed upon to coincide with the term of the REA.

The assumed discount rate of 9 percent is the weighted average cost of capital for the LLC.

The financing capitalization assumptions are predicated on EES's past experience with independent power producers such as the LLC where no security is available to support the financing other than the PPA and the net worth of the LLC. This assumption is made as no information was made available to EES to show that credit support for the Project financing is available from any of the LLC's affiliates.

The general rate of inflation of 2.5 percent is the long-term forecast for inflation in the United States provided by numerous government agencies.

Scenario #1 Detail

Below are assumptions specific to Scenario #1.

- Project output at 52,000 MWh annually – PSE FERC Form 1
- PPA term: 2015 through 2026 (12 years) – PPA

- PPA sale price: [redacted] in 2012 dollars with an annual escalation rate of [redacted] – PPA [redacted]
- Annual operation and maintenance costs without upgrades: $3.2 million in 2015 escalating at 2.5 percent annually – PSE escalated by EES
- LLC responsible for decommissioning the Project after the PPA and REA expire in 2026 – REA
- Decommissioning costs are $36.9 million in nominal 2027 dollars – PSE escalated by EES

The assumption of $3.2 million of 2015 O&M costs is based on the projected 2015 O&M costs included in PSE's April 2012 "Electron Hydroelectric Project Energy Management Committee Memorandum".

Decommissioning costs of $36.9 million in 2027 are based on estimated decommissioning costs of $28.9 million estimated by PSE in in PSE's Exhibit A to the Application for Sale plus 2.5 percent annual escalation.

Net Revenue Calculations

The assumptions noted above for Scenario #1 were used to calculate LLC's annual revenues and expenses. Annual net revenues are shown below on Exhibit 1.

[redacted]

As shown above in Exhibit 1, using Scenario #1 assumptions, the Project loses money during every year of operation. On a net present value basis, the Project would lose [redacted] (2014$) over the term of the PPA.

The taxes shown are all property tax costs. There are no income taxes because there is no taxable income in any of the years.

Scenario #2 Detail

Below are assumptions specific to Scenario #2.

- PPA term: 2015 through 2064 (50 years)
- 2015-26 PPA price: [redacted] in 2012 dollars with an annual escalation rate of [redacted] through 2026 per the PPA currently agreed to between the LLC and PSE
- 2027-64 PPA sale price: [redacted] in 2027 dollars with an annual escalation rate of [redacted] through 2064 based on current forecasts of wholesale market prices – developed by EES
- Cost of upgrades required to extend the life of the plant through 2064: $75.3 million – PSE
- 2015-16 generation: 52,000 MWh per year – PSE
- 2017-20 generation: No generation while plant upgrades are being completed.
- 2021-64 generation: 184,000 MWh per year – PSE
- 2015-16 operation and maintenance costs: [redacted] in 2015 escalated at 2.5 percent annually – PSE
- 2021-64 operation and maintenance costs: [redacted] escalated at 2.5 percent annually – PSE
- Decommissioning costs: $64.4 million in nominal 2065 dollars – PSE escalated by EES

According to PSE, an alternative to spending $75.3 million to extend the life of the plant through 2064 would be to spend $68.8 million in order to extend the life of the plant only through 2026. The lower value of $68.8 million was not included in Scenario #2 as it would be more cost-effective for the LLC to incur the additional expense and benefit from a much longer revenue stream.

The assumption of O&M costs of $1.8 million in 2021 is based on the projected $3.19 million of 2015 O&M costs included in PSE's April 2012 "Electron Hydroelectric Project Energy Management Committee Memorandum" and a statement by PSE in this memorandum that O&M costs would be cut in half after the upgrade due to reduced labor and material needs if the upgrades are completed.

Decommissioning costs of $64.4 million in 2064 are based on PSE's estimated decommissioning costs of $28.9 million plus 2.5 percent annual escalation.

Net Revenue Calculations

The assumptions noted above were used to calculate the LLC's annual revenues and costs. Scenario #2 costs are shown below in Exhibit 2.

[redacted]

As shown above, net revenues are negative through 2020 then become positive once upgrades to the Project are complete and Project output increases from 52,000 to 184,000 MWh. The combination of negative revenues during the first six years of the PPA and the decommissioning costs at the end of the plant's life in 2065 results in negative net income over a 50-year PPA of [redacted]

Sensitivity Analysis Detail

If PSE's projections of capital expenses required to upgrade the Project and other factors are incorrect, the results shown in Exhibit 2 would change significantly. The LLC's exposure to increased risks and expenses include the amount by which upgrade costs are understated, possible FERC licensing requirements, additional requirements associated with extending Project operations past the term of the REA and other mitigation measures associated with the Project. If the required capital costs are double those estimated by PSE, or [redacted] the net present value of the PPA would be significantly lower as shown below in Exhibit 3.

[redacted]

It should also be noted that changes in minimum instream flows could adversely impact the Project's electrical output. If minimum instream flows are increased post-2026, Project electrical output would decrease proportionately and further compromise the Project's financial viability.

Conclusion

Based on the foregoing analysis, the best case scenario for the LLC shows a net present value of [redacted] in losses while the worst case scenario shows losses of [redacted] EES believes there will be substantial rate impacts and risks resulting from a failed Project and PSE's remaining obligations under the REA, however, due to time constraints, I have not performed a rate impact or risk analysis. Positive net revenues are not projected under any set of assumptions.

The likelihood of Project upgrade costs being more than PSE's estimates may be valuable information to the WUTC in determining whether or not this transaction is in the public interest and should be closely reviewed. In my view, there are three key areas that have significant risk of resulting in upgrade costs greater than PSE's initial estimates. These three areas are summarized below:

- Expiration of the REA/Environmental Compliance Post-2026

  The current REA terminates in 2026. In the absence of a new REA, there is a risk and cost exposure associated with new Project requirements. It is possible that a new environmental compliance agreement would contain significantly more mitigation costs than the current REA. Mitigation cost increases could be triggered by fish migration improvements, improved sediment control, improved access roads, sophisticated nets and screens, wildlife enhancement requirements, and other more costly regulatory and environmental measures that are imposed as a condition precedent to post-2026 Project operations.

- FERC Jurisdiction

  The Project upgrades currently contemplated will increase the Project's generating capacity. The Project's water storage capacity may also change. Either of these occurrences would likely attract FERC jurisdiction, regulation and a full FERC licensing process. EES's experiences with the requirements of a full FERC licensing process are significant. This FERC process would cause a project licensee to incur significant time delays and added costs. Participation in the FERC licensing process could cost the licensee [redacted] in outside studies, and expert and legal expenses based upon EES's prior experience with these FERC processes, not to mention the implementation costs of the additional measures and requirements that may result from this process.

- Capital Cost Estimation Errors

The ability to accurately estimate hydro project upgrade costs is my final concern. Refurbishing a project that is over 100 years is old is often risky. The actual condition of a facility's infrastructure is often not known until actual demolition and reconstruction begin. For example, hazardous waste may be found after actual refurbishment begins. Given the history and location of this Project, sacred artifacts could be discovered during excavation work which could have very significant impacts on costs and the time needed to upgrade the Project. Additionally, PSE has provided an initial cost to repair the 10-mile long flume associated with this Project. PSE's current estimate to repair the flume is roughly [redacted] EES refurbished a similar flume in Nevada at a Truckee Meadows Water Authority hydro facility. From discussions with other EES hydro engineers, the flume in Nevada was roughly 100 years old and circumnavigated very rugged terrain with limited access. It was about the same capacity as the flume at the Project. Using the cost to refurbish the flume in Nevada, the direct costs of upgrading the Project flume would approximate $40 million. This $40 million estimate does not include indirect costs, bonding, profit, overhead, sales tax, contingencies, planning, engineering or permitting costs. Once these other upgrade costs for the flume are included, the cost to refurbish the Project's flume alone could approach $80 million.

Based upon the aforementioned analysis of Project risks and possible cost overruns going forward, it is possible that PSE's capital cost estimate to refurbish the entire Project is low by a factor of two. The sensitivity analysis above showing a net loss to the LLC of over [redacted] if PSE cost estimates are off by a factor of two is a reasonable outcome which the WUTC should consider in its deliberations.

When considering the pending application to approve the sale by PSE of the Project to the LLC, the WUTC should consider what happens if the LLC does encounter operating losses as calculated in this report. My review of all the information made available to EES through this process does not show that any credit support is forthcoming from any of the LLC's affiliates. There was also no documentation in the information provided by PSE of the LLC providing a performance bond or other surety instrument to guarantee that PSE ratepayers will be held harmless if this transaction goes forward and the LLC does not meet its obligations. As such, it must be assumed that any Project-related loss is covered by the LLC. Nowhere in the documentation available to [redacted]ndicate that the LLC is capable of sustaining losses of between [redacted] As such, it seems possible that operating losses of [redacted] may cause the LLC to walk away from the Project and not pay PSE the costs associated with the REA. Under this scenario, PSE would be forced to recover the costs associated with the REA and take over control of the Project with the condition of the Project not known. Without assurances that the LLC can sustain losses of [redacted] and hold PSE's ratepayers harmless from Project-related risks and cost exposures, the prudency of the WUTC approving this proposed transaction is questionable in my view.

I hope this report is responsive to the Tribe's request. Please contact me directly with any questions you might have about this report's analysis or conclusions.

Very truly yours,

Gary S. Saleba

Gary S. Saleba
President