PRC PROJECT PRESENTATION QUESTIONS

– DECEMBER 1, 2016 –

Okanogan County Public Utility District #1 – Enloe Hydroelectric Project – Design Build

1. **Will funding status be in place at the time of selection of the DB firm?**

   Yes, the District has a $10 million line of credit with KeyBank that will be used while it goes to the bond market. Currently, the District has an "A" rating from Standards & Poor and an "A1" rating from Moodys. Issuing bonds should take between 90 to 180 days.

   a. **Should there be delays in receipt of funding, how would that affect the DB selection and contract?**

   As explained above, sufficient funding is in place to move forward with the DB selection and contract.

   b. **How will funds availability be communicated to prospective proposers? *(page 2 of 10)***

   As explained above, sufficient funding is in place to move forward with the DB selection and contract.

2. **Please provide examples for the five benefits listed *(page 3 of 10)* and how you believe they would not be readily achievable in Design Bid Build.**

   i. Hydropower project development is a highly specialized field which requires early contractor involvement to address constructability issues, develop practical construction plans and to address environmental plans and protection measures.

   Examples of benefit of early contractor involvement are:
   - Environmental plans, permits and protection measures are based on better construction information.
   - Constructability is addressed earlier and in greater depth in the design process.
   - Resource-based contractor cost estimates have higher accuracy than typical engineer's estimates.

   Achieving early contractor involvement in conventional design-bid build is very difficult due to the bidding process which requires that engineering design and specifications be complete before invitation to bid. Some preliminary information can be solicited from equipment vendors and contractors prior to bidding but this cannot provide the above benefits.

   ii. Integration of design, procurement and construction of power facilities is beneficial since the final design of the powerhouse cannot be completed until the hydraulic configuration of the turbine and generator of the most favorable generating equipment bid are determined.

   Examples of benefits of integration of design, procurement and construction of powerhouse facilities are:
   - Carrying forward of previous team experience and lessons learned.
   - Better collaboration between engineer, equipment supplier and contractor.
   - Reduction in drawings, specifications and documentation needed for communicating design to contractor.

Achieving such integrated design benefits in the design-bid-build process is very difficult. It is very unlikely that the design engineer, equipment supplier and construction contractor selected by three different procurement processes have previously worked together as a team, so there will be no previous team experience to build from. Collaboration between the engineer, equipment supplier and contractor is limited since much of the design work gets carried out before the equipment supplier and contractor are selected in separate procurement processes. Efficiencies due to the reduction in the number of engineering drawings and size of technical specifications needed to communicate design information within the Design-Build team also cannot be achieved in Design-Bid-Build since much of that information is needed up-front for bidding of multiple packages. Administration of the design-bid-build approach also requires considerable additional management, administration, communication and documentation effort by the multiple parties involved.

iii. D-B offers greater innovation and efficiencies through value engineering executed by the engineer, equipment supplier and contractor working as a team.

Examples of benefits of value engineering carried out by the D-B team are:

- Improvement in project performance.
- Environmental problem solving.
- Reduction of project cost.
- Avoidance or reduction of risk.

In the design-bid-build process value engineering is still feasible but would need to be carried out pre-bid and final engineering design by the Engineer alone. Such an approach lacks the creative input and practical experience of the generating equipment supplier and the contractor. There is also less certainty whether value engineering benefits will be realized by the equipment supplier and contractor subsequently selected according to normal public works bidding procedures.

iv. D-B has risk management benefits for the owner in allocating project design, project coordination and project performance risk to the D/B constructor.

Examples of risks allocated to the D-B instead of the District are:

- Performance risk
- Design risk
- Integration risk
- Cost risk.

In the Design-Bid-Build approach the District is the project integrator that is ultimately responsible for the overall permitting, design, coordination, construction management and performance of the project. Experience has shown that risks to the Owner of costly disputes, claims and litigation between multiple parties are higher in the design-bid-build process.

v. The District has limited resources and experience to assume the role of project integrator for conventional design/bid/build project development.

Examples of benefits of D-B to the District's operations and resources are:

- Less impact to ongoing District operations.
- Reduced District staffing requirements for project management, complex equipment procurement, coordination and technical oversight.
- DFBOM alternative can reduce potential impact on District's financing and bonding capacity and address the need for additional operation and maintenance resources.

The District is primarily an electric power transmission and distribution entity which has constructed transmission/distribution infrastructure but has not previously constructed power

generation facilities. If the District were to assume the role of project integrator in the conventional Design-Bid-Build process of generation facilities then it would need to add qualified technical, management and administration staff. It would be very difficult to find qualified staff willing to relocate to Okanogan to work as District employees on the project knowing that there are no further power generation projects in the pipeline.

As noted above, the design-build delivery method is the most effective means of achieving the District's goals in this project, and many of the benefits noted simply could not be achieved using design-bid-build. The question as posed is not consistent with RCW 39.10.280, as there is no requirement in the statute for a public agency to compare the benefits to the design-bid-build delivery method and show that design-build is superior to design-bid-build.

3. **Regarding Public Benefit *(page 4 of 10)*:**
   a. #3 - Please explain which cost risks are significant and what types of reporting and cost controls need to be robust, and how that will be accomplished.

In a progressive design-build project, the owner selects the design-builder prior to the establishment of a final price. Therefore, there is a cost risk on the owner that the parties will not be able to reach agreement on a final maximum cost for the project. Significant cost risks on the Enloe Project are:

- Environmental permitting/ compliance cost risk.
- Scope change.
- Subsurface conditions
- Project delay risk

Reporting and cost controls will be developed collaboratively with the D-B contractor and documented in a Project Implementation Plan. The types of reports provided by design-builders vary with the software the design-builder uses to manage their estimating and other accounting functions. Typical project controls are as follows:

- Development and implementation of a project risk management plan.
- Development of job cost accounting system and financial controls.
- Development of a responsibility matrix showing allocation of responsibility in the project team.
- Document control system
- Cost estimation and development of target budget to be updated as the project becomes fully defined.
- Implementation of GMP or Fixed Price to contain overall cost.
- Regular cost status and forecast reports showing planned value, earned value and actual cost.
- Updated cash flow projections for project finance.
- Baseline schedule with regular updates of actual and forecast progress.
- Scope/cost/schedule change management procedures.
- Regular progress review meetings focusing on issues, exceptions, decisions, and look ahead work plan/coordination.

The District will be evaluating the cost reporting systems of the Proposers as part of the RFQ process and will be evaluating the Finalists' specific plan for development of the Guaranteed Maximum Price as part of the Finalists' proposals.

In addition, the contract will have several mechanisms to assist the owner in managing that risk. First, the design-builder will always be subject to a not to exceed amount. Second, the contract will require open book cost reporting during the development of the Guaranteed Maximum Price. The contract will also have the option of continuing open book reporting after agreement on the GMP or agreeing on a lump sum amount.

b. #4 - Please explain your reference to *"other design build hydro projects"* and how they relate to this project.

In a qualifications focused procurement, public agencies often evaluate the proposer's success in their past performance on similar projects. The newly approved Design-Build Institute of America form Request for Qualifications uses the term "Project of Similar Scope and Complexity" as a definitional tool to describe the type of projects for which the owner would like to see past performance. As noted in the DBIA RFQ/RFP Guide, "The purpose of this definition is to provide a short hand mechanism to describe those projects that the owner feels are the best representation of either the type of project or the best type of experience to be successful in the project." Therefore, previous performance on other design-build hydro projects will inform the District on how the Proposers will perform on the Enloe Dam project.

Examples of some other recent successful hydro projects that used Design Build project delivery approaches are as follows:

- Allison Creek Project – AK 2016, D-B construction of new 6.5-MW hydro plant.
- Arrowrock Project, ID, 2010 – D-B retrofit of 18-MW small hydro project at an existing dam.
- Kokish Hydro Project, BC, 2015 – D-B of a 45-MW hydro project developed in partnership with the Nagmis First Nation.
- Lower Baker Hydro Project, WA 2013 – D-B retrofit of additional 30-MW powerhouse at an existing dam.
- Ridgeway Dam, CO 2014 – D-B retrofit of 8-MW hydro power plant at an existing dam.
- South Canal Drop 1 and Drop 3 projects CO, 2013 – D-B retrofit of two 4-MW hydro projects on existing canal system.
- Turnbull Hydro Projects – MT, 2011, D-B retrofit of a 8-MW and 6-MW hydro projects on an existing canal system.

These projects were developed using the design-build approach to optimize project design and cost through team collaboration and value engineering, to expedite project implementation and to best manage risk.

4. **Regarding the Project Organization Chart *(Attachment B)*: Please indicate the time commitment of the proposed management team to the project and their availability to meet those intended commitments particularly for the Project Manager and Construction Manager. What other project commitments do they have and how would changes in those commitments *(e.g., schedule changes)* affect their ability to fulfill their intended role on the project.**

Other than day-to-day operations, Okanogan PUD has one other major construction project at this time. In 2016, the District began construction of a 26 mile 115 KV transmission line from Pateros, WA to Twisp, WA. That project was suspended until April 2017 to accommodate migrating deer issues. The District expects to resume construction in April 2017 and have the line energized in July 2017. Any changes to this project will not affect the Enloe Dam project. With respect to other members of the project team, the attached shows an estimated time allocation for each person.

Public Utility District No. 1 of Okanogan County
Enloe Hydroelectric Project
Estimated Project Team Participation

		Design-Build Phase			
POSITION	**NAME**	**RFQ and RFP**	**VALIDATION**	**PERMITTING and DESIGN**	**PROCUREMENT and CONSTRUCTION**
District Manager	John Grubich	as-needed	as-needed	as-needed	as-needed
District Legal Counsel	Heidi Smith	10%	on-call	on-call	on-call
D-B Legal Counsel	Robynne Parkinson	10%	on-call	on-call	on-call
Project Manager	Tim DeVries	25%	25%	50%	50%
Assistant Project Manager	Dan Boettger	50%	50%	50%	50%
Project Management and Engineering Support	John Christensen	50%	50%	50%	50%
Construction Management Expert	Thomas McCreedy	on-call	on-call	on-call	on-call
Cost Estimating and Cost Controls	Dan Hertel	on-call	10%	10%	10%
Hydropower Engineering	Paul Carson	on-call	20%	50%	10%
Resident Engineer/Construction Manager	TBD				100%