

JUSTIFICATION FOR OTHER THAN FULL AND OPEN COMPETITION**Solicitation No.:** R13PS30347**Project Name:** Unit N6 New Stainless Steel Wicket Gates

In accordance with FAR 6.302, the proposed contractual action is pursuant to the statutory authority of 41 U.S.C. 253(c)(1).

1. **Agency and Contracting Activity.** United States Department of the Interior, Bureau of Reclamation – Lower Colorado Region, Boulder City, Nevada.
2. **Nature/Description of Action.** This acquisition is being conducted under the authority of the test program for commercial items, and as authorized by DIAPR 2013-03 – Class Deviation from the Federal Acquisition Regulation 13.5, Test Program for Certain Commercial Items. As required by Federal Acquisition Regulation 6.303-2, this Justification for Other Than Full and Open Competition (JOTFOC) is prepared to document the facts and rationale justifying the authority cited in Paragraph 4 to negotiate with a sole source offeror for the above requirement. This JOTFOC follows the format and contains all the information required under FAR 6.303-2.

Competition can be obtained for design and manufacture of new wicket gates for Hoover Dam in only certain circumstances. Competition can be obtained if the Government requires a brand new turbine runner and wicket gate design. This was done under current Contract No. R12PC30061 for the Unit A8 turbine runner and wicket gates, and competition was obtained. There are companies that can manufacture wicket gates for a particular type of turbine unit. During the design of the various types of turbine runners at Hoover Dam, different contractors developed hydraulic profiles. The hydraulic profiles are unique to their respective units. The hydraulic profile design determines the amount of water flow that passes through the wicket gate and into the turbine runner. This hydraulic profile design can improve the turbine runner's efficiency and maximum performance. A company which has the ability to manufacture wicket gates would need to subcontract with a particular contractor who owns the propriety rights to the hydraulic profiles. This was done under Contract No. 06CP308060 for design and manufacture of stainless steel wicket gates for the Allis-Chalmers turbines. Precision Machine and Supply Inc. was awarded the contract. Precision Machine was able to subcontract with VA Tech. VA Tech authorized permission to use their drawings but would not allow their Computational Fluid Dynamics (CFD) Design to be released as their engineering design is considered a Trade Secret and was not authorized for release. Under Contract No. 06CP308060, another non-responsible offeror submitted a proposal. If the second offeror

had been awarded the contract, the company would have been required to develop an entirely new CFD to meet the Government's performance requirements. In all other instances, the Government would have to enter into sole source contracts with the company that owns the rights to the hydraulic profile/wicket gate design.

However, a new CFD showing a new hydraulic profile will be required. This new hydraulic profile must conform to the specifications of the new N6 turbine runner and prove that all performance guarantees and efficiencies will be met.

Another issue that affects competition concerns is the required performance guarantees that have been proposed by Andritz Hydro Corporation for their new turbine runners which will be manufactured and delivered under Contract No. R10PC30013. This is a mission critical item for the operation of Hoover Dam. The new wicket gate design is required to guarantee the efficiencies provided by Andritz Hydro for the new N6 turbine runner under Contract No. R10PC30013.

The manufacturing and delivery of the new wicket gates for Unit N6 is crucial since Hoover Dam's overhaul schedule requires the turbine runner and wicket gates to be installed in the same time frame. A firm-fixed price contract will be awarded. This project will be incrementally funded as authorized by Section 12 of the Reclamation Project Act of 1939 (43 U.S.C. 388). This is a replacement item under Hoover Dam's 10-year plan.

3. **Description of Supplies/Services.** This procurement is for the manufacturing, finish machining, and delivery of a complete set of 24 new stainless steel wicket gates. The contract for supplying these gates includes machining keyways in each wicket gate shaft. These 9-1/2 inch long keyways correspond to keyways which need to be machined in each existing wicket gate lever. The keyways and keys serve to secure each wicket gate to the wicket gate lever. In addition to the new keyways, the mechanical gate stop located on the underside of each gate lever shall be modified to accommodate the new wicket gate stroke. These new wicket gates will be installed in Unit N6 in February 2015. The estimated value of the procurement is \$1,198,787.50.

The Government requires that the new wicket gates conform to a specific existing wicket gate design. The wicket gate design required was completed by VA Tech in July 2004. The new stainless steel wicket gates will increase the water passage into the turbine runner by increasing the surface area opening, thus increasing the efficiency and capacity of our unit. These new stainless steel wicket gates will be manufactured of a more durable material that are more corrosion resistant and have a slimmer profile. Therefore, it is extremely important to obtain the specific design by VA Tech to conform to the specifications of the Unit N6 new turbine runner.

Hoover Dam. This certain design is a unique and innovative concept that is mission critical to Hoover Dam. The new stainless steel wicket gates will increase the water passage into the turbine runner by increasing the surface area opening, thus increasing the efficiency and capacity of the unit. These new stainless steel wicket gates will be manufactured of a more durable material that are more corrosion resistant and have a slimmer profile. Therefore, it is extremely important to obtain the specific hydraulic profile design by VA Tech to conform to the specifications of the new N6 turbine runner. In the year 2006, VA Tech became a member of the Andritz Hydro Group. Andritz Hydro Group now owns the proprietary rights of the VA Tech hydro wicket gate hydraulic profile.

The proprietary data restricts competition in a way that is a disadvantage to other vendors/sources. If the Government attempted to compete this requirement, interested vendors would have to solicit and procure the VA Tech design from Andritz Hydro, therefore, interested sources would need adequate time to try and procure the design data. This would result in additional procurement costs to the Government to attempt to try and obtain competition. It would also delay award of the contract and ultimately delay in the manufacture and delivery of the new wicket gates which have long lead times.

If a different wicket gate design were able to be furnished by another source, the Government would not be able to enforce its contract rights pertaining to performance warranties under Contract No. R10PC30013. This contract includes WBR Clause 1452.246-81, Failure to Meet Performance Warranties – Bureau of Reclamation. The new wicket gate design is required to guarantee the efficiencies provided by Andritz Hydro for the new N6 turbine runner under Contract No. R10PC30013. If performance warranties were not met due to a different wicket gate design, the new N6 turbine runner would not perform to its maximum performance capacity. This could result in significant financial losses to the Government through reduced power generation and because the Government would not be able to enforce its rights under WBR Clause 1452.246-81 to reduce the contract price if performance warranties are not met.

6. **Description of efforts made to maximize competition.** Many manufacturers can manufacture stainless steel wicket gates; however, the VA Tech hydraulic profile was used in the new turbine runner design, requiring strict performance goals. This means that design details must be obtained by the vendor, VA tech. The wicket gate design by VA Tech was based on computational fluid dynamics (CFD) which indicated the new gates would provide added capacity and efficiency for Baldwin type units at Hoover Dam. VA Tech, now Andritz Hydro, may not be willingly open to disclose their proprietary design to other vendors and competitors. This was done under Contract No.

06CP308060 for design and manufacture of stainless steel wicket gates for the Allis-Chalmers turbines. Precision Machine and Supply Inc. was awarded the contract. Precision Machine was able to subcontract with VA Tech. VA Tech authorized permission to use their drawings but would not allow their CFD Design to be released as their engineering design is considered a Trade Secret and was not authorized for release. A notice of intent to sole source this requirement was published at FedBizOpps.gov on June 12, 2013. Interested offerors were requested to furnish capability statements. No sources responded to the notice.

7. **Determination of Fair and Reasonable Cost.** The contracting officer will ensure that a fair and reasonable price is negotiated for the N6 wicket gates. A detailed price analysis will be performed based on a comparison of the proposal price to the independent government cost estimate, as well as to historical prices paid for similar wicket gates manufactured for other turbine units. Data other than certified cost or pricing data may be obtained and further price analysis performed, if required.
8. **Description of Market Research Conducted.** Based on internet market research, there are companies/sources that are technically capable of manufacturing wicket gates. However, other sources cannot satisfy the agency requirement because the proprietary design cannot be provided to other contractors because it is owned by Andritz Hydro and is marked proprietary. VA Tech now Andritz Hydro holds the proprietary rights for the hydraulic profile design that indicate that the new wicket gate design will provide added capacity and efficiency for Baldwin type units at Hoover Dam. This certain design is a unique and innovative concept that is mission critical to Hoover Dam. The new stainless steel wicket gates will increase the water passage into the turbine runner by increasing the surface area opening, thus increasing the efficiency and capacity of the unit. These new stainless steel wicket gates will be manufactured of a more durable material that are more corrosion resistant and have a slimmer profile. Therefore, it is extremely important to obtain the specific hydraulic profile design by VA Tech to conform to the specifications of the new N6 turbine runner. In the year 2006, VA Tech became a member of the Andritz Hydro Group. Andritz Hydro Group now owns the proprietary rights of the VA Tech hydro wicket gate hydraulic profile.
9. **Any Other Supporting Facts.** Engineering specifications and drawings are addressed in the statement of work. The statement of work cannot be modified to provide for full and open competition. This statement of work specifically states the following: "The Government requires that the new wicket gates conform to a specific existing wicket gate design. The wicket gate design required was completed by VA Tech in July 2004 and is owned by VA Tech. In the year 2006, VA Tech Hydro became a member of the Andritz Hydro Group. Andritz Hydro Group now owns the proprietary rights of the VA Tech Hydro wicket gate design. The wicket gate design by VA Tech was based on

computational fluid dynamics (CFD) which indicated the new gates would provide added capacity and efficiency for Baldwin type units at Hoover Dam. These gate profiles were used in the Andritz Hydro Turbine design, requiring strict performance goals.”

10. **Listing of Interested Sources.** No sources expressed interest in this acquisition based on the sources sought notice that was posted to FedBizOpps.Gov.
11. **Actions Taken to Remove Barriers to Competition.** See Section 2 which explains how competition for manufacture of new wicket gates is limited due to various reasons. As explained in Section 2, a similar contract for design and manufacture of a new turbine runner and wicket gates was accomplished under Contract No. R12PC30061. Two proposals were received in response to Solicitation No. R11PS30061. This contract requires that new wicket gates be designed, manufactured and delivered. The design of the new turbine runner also considered the design of the wicket gates to achieve certain peak efficiencies and capacity gains.

Task Order No. R11PD30085 was awarded for manufacture of new stainless steel wicket gates for Unit N8 for Hoover Dam under Contract No. 08CP308090. This task order was awarded under an IDIQ contract. Prior to award of the task order, a request for proposal was issued to the IDIQ contractors as the Government contemplated that proposals could be received from at least two of the contractors and adequate competition could be obtained. One proposal was received. After award of the order, one contractor informed Hoover Engineering that they could not submit a proposal because the hydraulic profile contained proprietary data which restricted competition. The result of this competitive delivery order demonstrate that the company which owns the proprietary rights would more than likely not sell its engineering CFD to a competitor or would provide it only in a subcontracting relationship with a company that could machine wicket gates.