

ENERGY AND ENVIRONMENT COMMITTEE REPORT and ORDINANCE FIRST CONSIDERATION relative to the establishment of design-build criteria for the Haiwee Power Plant Penstock Replacement Project.

Recommendations for Council, SUBJECT TO THE APPROVAL OF THE MAYOR:

1. CONCUR with the Board of Water and Power Commissioners' (Board) action of October 16, 2013, Resolution No. 014-078, recommending that the Los Angeles City Council's adoption by Ordinance of proposed design-build criteria to be used in the selection of a contractor for the Haiwee Power Plant Penstock Replacement Project.
2. PRESENT and ADOPT the accompanying ORDINANCE for the Haiwee Power Plant Penstock Replacement Project requesting the Los Angeles City Council to establish design-build criteria pursuant to Charter Section 371.

Fiscal Impact Statement: The City Administrative Officer (CAO) reports that concurring with Resolution No. 014-078 and the accompanying Ordinance will not have a fiscal impact; however, the ensuing contract will result in a total expenditure estimated to be approximately \$21 million which is included in the Multi-Year Expenditure Plan of the Los Angeles Department of Water and Power (LADWP) Power System Capital Budget for Fiscal Years 2013-14 through 2016-17. Concurring with the Resolution and Ordinance will have no impact on the City's General Fund. The proposed request complies with the LADWP's adopted Financial Policies.

Community Impact Statement: None submitted.

Summary:

On February 19, 2014, your Committee considered a October 21, 2013 Board, September 10, 2013 CAO, and December 9, 2013 City Attorney reports, Resolution No. 014-078, and Ordinance relative to the establishment of design-build criteria for the Haiwee Power Plant Penstock Replacement Project pursuant to Charter Section 371. According to the CAO, the LADWP is requesting approval of a proposed resolution, which authorizes by ordinance, the criteria for a Design-Build contract for the Haiwee Power Plant Penstock Replacement Project (Project) that the LADWP intends to award using a competitive sealed bid proposal method. The proposed Project serves both the Power System and Water System by providing hydro power to Haiwee Power Plant for generation of renewable energy and water supply to the Los Angeles Aqueduct 1. Included in the Project is the installation of approximately 10,000 feet of composite material penstock to replace the current steel penstock; although certain portions of the penstock will be refurbished rather than replaced. A penstock is a pressurized pipe or intake structure, which in this project, controls water flow to a hydroelectric generating system.

Also included in the Project is the installation of at least two high performance valves, an ultrasonic flow measurement system, and a vacuum/air release system. Approval of the proposed resolution, and accompanying ordinance, will specifically authorize the LADWP to: 1) establish criteria for the LADWP to award one Design-Build contract for the Project; 2) permit negotiations to allow clarifications and changes to the proposals, pursuant to a competitive sealed proposal method; and 3) award one Design-Build contract for design, engineering, procurement, and construction, for a term not to exceed three years, to a bidder with the lowest ultimate cost, as determined by the LADWP.

The LADWP asserts that a competitive sealed proposal with negotiations is necessary due to the complexity and technical details of the Project that make it impractical to write detailed specifications, advertise, open bids publicly, and award a contract without any clarifications, changes, or negotiations. Pursuant to Charter Section 371 (b), a vote of two-thirds the City Council approving the contract selection criteria is required to award a contract using a competitive sealed proposal method. The City Attorney has approved the proposed resolution and ordinance as to form and legality.

The Haiwee Power Plant, which is located in Owens Valley, consists of two 2.5 megawatt (MW) hydroelectric generating units originally constructed and put in service in 1926. The LADWP states that the original penstocks bringing water to the generating units were mostly riveted steel pipe. In approximately 1950, the original penstock was replaced with welded steel plate pipe. In 1984, approximately 1,690 feet of the Haiwee penstock collapsed due to an unexpected vacuum event. Partial restoration of the collapsed penstock was achieved by pressurizing the collapsed area and inflating the steel pipe; however, the restored section is highly distorted. In 2008, a third-party review was performed on the condition of the penstock that determined the penstock is in disrepair due to the 1984 collapse and corrosion. Additionally, the penstock has exceeded its service life and has no remaining safety margin. The review concluded that a total replacement of the penstock is necessary and advised utilizing fiber reinforced polymer composite (composite material) for the penstock instead of the current steel pipe. In 2010, the Power System recommended complete replacement of the penstock using fiber reinforced polymer composite material. Technical concerns regarding the composite material were reviewed by the Water System and a determination was made that the composite material meets or exceeds performance parameters when compared to steel.

Furthermore, a net present value study was completed by a third-party consultant, comparing steel to the composite material, concluded that the composite material was a more feasible option due primarily to lower maintenance costs. The absence of corrosion in composite material reduces the anticipated cost of maintaining the penstock. After considering both the technical aspects and the cost, both the Water System and Power System are in agreement to utilize a composite material for the penstock replacement. Composite material is not currently utilized by the LADWP for penstock or aqueduct applications; however, composite material pipe is utilized at other Power System projects including the Haynes Generating Station, Scattergood Generating Station, and Valley Generating Station.

After further consideration and having provided an opportunity for public comment, the Committee moved to recommend that design-build criteria be established for the Haiwee Power Plant Penstock Replacement Project pursuant to Charter Section 371 as detailed in the above recommendations. This matter is now submitted to Council for its consideration.

Respectfully Submitted,

ENERGY AND ENVIRONMENT COMMITTEE

<u>MEMBER</u>	<u>VOTE</u>
FUENTES:	YES
BLUMENFIELD:	YES
LABONGE:	ABSENT
HUIZAR:	ABSENT
KORETZ:	YES

ARL
2/19/14

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