



## KERALA STATE ELECTRICITY BOARD Ltd

(Incorporated under the Companies Act, 1956)

Registered Office: Vydyuthi Bhavanam, Pattom,

Thiruvananthapuram – 695 004

CIN: U40100KL2011SGC027424

Website: www.kseb.in

Phone: (O) +91 471 2514522

Email: dgekseb@kseb.in

### ABSTRACT

Kakkad HEP - Procurement of one number new runner for 25.86 MW vertical Francis Turbine at Kakkad HEP from OEM, M/s BHEL and arranging the work of Erection, Testing, Balancing & Commissioning through open tender - Sanctioned - Orders issued.

### SBU-GE

BO (FTD)No.55/2023(DGE/G1/Kakkad/runner/2022-23)/1261

Thiruvananthapuram, Dated: 07.02.2023

- Read:
1. Letter No. CEG/AE-II/Kakkad/Runner/2022-23/1256 dated 29.11.2022 of the Chief Engineer (Gen).
  2. Letter No. CEG/AE-II/Kakkad/Runner/2022-23/1318 dated 14.12.2022 of the Chief Engineer (Gen).
  3. Letter No. CEG/AE-III/Kakkad/Runner/2022-23 dated 06.01.2023 of the Chief Engineer (Gen).
  4. Note No. DGE/G1/Kakkad/2022-23 (1)/169 dated 24.01.2023 of the Director (GE & HRM) submitted to Full Time Directors [Agenda item No. 61/01/23].

### ORDER

The Kakkad Hydro Electric Power Station comprises of two numbers of Generators, each having 25.86 MW capacity. Both the units were supplied and commissioned by M/s BHEL, Bhopal in 1999. The Chief Engineer (Generation) as per the letter read as 1<sup>st</sup> above reported that during annual maintenance works in 2018, the runner of unit # 1 was found weak due to continuous generation and the dimensions of each blade was found reduced by 22 mm. Since a spare runner was available at Kakkad HEP it was decided to replace the runner with this spare during the annual maintenance works scheduled in 2019. During replacement work, it was noticed that one blade of the runner had fallen off and several cracks were detected on its remaining blades. The work was successfully completed by 2019 and the damaged runner was shifted to the section store.

It is further reported that the dimensions of the blades of the runner of unit # 2 machine are reduced due to ageing and continuous wear and tear and there is every possibility of failure on unit # 2 machine. In the current situation any damage arising to the runner of Unit # 2 shall lead to loss of generation and may take a minimum of one year to put back the machine into service since spare runner is not available. The spare runner used for the replacement of Unit #1 machine during 2019 was procured from Bharat Heavy Electrical Ltd., the OEM of the generating unit. The Chief Engineer (Generation) has suggested to procure a new Francis Turbine runner for 25.86 MW Unit #2 Generator at Kakkad from the original equipment manufacturer, M/s Bharat Heavy Electricals Ltd. considering the following key requirements.

1. The existing runner assembly was supplied by M/s BHEL.
2. All the dimensions and other features of the runner assembly including that of the accessories such as bolts, bolt holes, runner core should be suitable for the existing runner.
3. The material used for construction shall also be same as that of the existing runner.
4. The gap provided at the lower and upper lip ring should be the same as the existing runner.
5. No deviation can be permitted from the reference drawing No.020407L4002 supplied by

6. The last purchased runner from M/s BHEL was put into service during February 2019 and perfectly matched with the profile features and dynamic characteristics of the existing damaged old runner which is running smoothly without any vibration since last year.
7. The design, engineering, dynamic characteristics and profile features of the proposed runner can be assured only through OEM purchase.
8. Any supplier other than OEM may take much more time since they have to start its design procedure from its beginning.
9. The external supplier if selected for the procurement of same runner, have to simulate its characteristic with a prototype model and hence their chance of error is very high.
10. The possibility of reduction in price on negotiation if the purchase is arranged through the OEM.

Based on the offer collected from the OEM, M/s Bharath Heavy Electricals Ltd. an estimate amounting to Rs.3,30,00,000/- (Rupees Three Crores and Thirty Lakhs only) has been prepared for the supply of new vertical Francis turbine runner for 25.86 MW Unit #2 Generator at Kakkad HEP. The estimate includes supply portion for replacing the runner. The scope of the work includes supply of runner in confirmation to the standards of existing runner assembly in accordance with the specification and requirements within the guarantee in respect of supply and performance as per the direction of KSEBL. The major terms and conditions of the offer are

#### 1. SCOPE OF SUPPLY

1. One number Runner for 25.86 MW vertical Francis Turbine as per drawing No 20407L4002.
2. Material of runner shall be Stainless Steel casting to ASTM A743 Gr CA6 NM/ equivalent.
3. Upper & Lower labyrinths are integrally cast with runner as indicated in drawing.
4. Runner will be statistically balanced at Works.
5. Runner will be supplied without HVOF coating.

#### 2. PRICES

1. The total price of items as per the estimate is INR 2,75,26,250/- (Rupees Two Crore Seventy Five Lakhs Twenty Six Thousand Two Hundred and Fifty only) (excluding all taxes).
2. F.O.R. Destination Prices: excluding taxes & levies. All such taxes & levies shall be payable extra at actuals as applicable at the time of actual dispatch against original tax invoice only. In case of any change in tax regime enforced by Central/State Government in future all applicable taxes & levies would be paid by the customer at the time of dispatch of material. The prices are on Firm basis including packing & forwarding charges.
3. BHEL claims only reimbursement of actual taxes & levies payable to the respective Government authorities under the existing laws. The prices quoted are after taking into account the ITC benefits and are subject to all other Statutory Obligations.
4. Tax Collection at Source (TCS) shall be applicable (on gross value) and payable extra by customer as per actuals (in line with Government norms).

#### 3. TERMS OF PAYMENT - For Supply Portion

1. 10% of Supply PO value is to be released as interest free advance along with PO. BHEL is not liable for payment of interest charges on the- advance amount paid by the purchaser during the execution of the contract, even if there be any delay beyond the stipulated delivery schedule.
4. DELIVERY/COMPLETION PERIOD-For Supply Portion:- Delivery period for the items is 12 Months. Delivery period shall be reckoned from the date of receipt of technically and commercially clear Purchase/Work Order, drawing approval and receipt of interest free advance with applicable GST, whichever is later.

5. PERFORMANCE BANK GUARANTEE/SECURITY DEPOSIT:- Since BHEL is the OEM apart from being the "Maha Ratna" Central Public Sector Enterprise (CPSE), waiver of clauses has been requested.
6. PENALTY/LIQUIDATED DAMAGES:- Since BHEL is a Government of India Undertaking, clause not acceptable and requested non inclusion in PO/WO.
7. WARRANTY:- Under warranty condition in respect of any defect in or failure of goods supplied, or for any loss, injury or damage attributable thereto, is limited to making good by replacement or repair defects which under proper use, appear therein and arise solely from faulty design, material or poor workmanship; not otherwise, within a period of 12 months after the original goods have been commissioned or 18 months from the date of supply, whichever is earlier. At the termination of said period, all liabilities on BHEL part will cease to exist.
8. ARBITRATION:- In the event of any question or dispute arising under these conditions or any special conditions of contract or in connection with this contract, the same shall be referred to the award of committee consisting of an arbitrator to be nominated by the Purchaser and an arbitrator to be nominated by BHEL, and in case of the said arbitrators not agreeing, then to the award of an Umpire to be appointed by the said arbitrators in writing before proceeding on the reference, and the decision of the arbitrators or in the event of their not agreeing, of the Umpire appointed by them, shall be final and conclusive and the provisions of the Indian Arbitration Act, 1996 or any revision thereof and of the Rule there under and any statutory modification thereof shall be deemed to apply to and be incorporated in this contract. Upon every and any such reference, the assessment of the cost of and incidental to, the reference and award respectively shall be at the discretion of the committee of arbitrators, or in the event of their not agreeing, of the Umpire appointed by them. Work under the contract shall, if reasonably possible, continue during the arbitration proceedings, and payment due or payable by the Purchaser shall not be withheld on account of such proceedings.

The erstwhile procurement of runner for use as spare at Kakkad HEP was carried out in 2008. M/s BHEL has been requested to furnish the rock bottom price for the offer. Subsequently the firm has informed that the commercial terms and conditions as per the original offer is sustained. The firm has also offered a discount of 5% on all line items of offer for supply portions.

The Chief Engineer (Generation) as per the letter read as 3<sup>rd</sup> above has also reported that during 2019, the replacement work of runner (service portion only) for unit#1 was awarded through open tender and based on the field level reassessment of the requirements of engaging the OEM for the replacement works, the Deputy Chief Engineer Generation Circle, Moozhiyar has recommended that, it is not essential to engage the work through OEM. Accordingly the confirmation from M/s BHEL has been obtained regarding the offer confined to supply part only.

The Purchase of new Francis Turbine Runner of 25.86MW machine at Kakkad Power House is urgently required since there is no spare runner available for arising replacement requirements. Considering the above, the Chief Engineer (Generation) has requested necessary sanction and orders for the procurement.

The matter was placed before the Full Time Directors as per the Note read as 4<sup>th</sup> above.

Having considered the matter in detail the Full Time directors in the meeting held on 31.01.2023 has resolved to accord sanction for the Procurement of "Supply of new Francis Turbine Runner of 25.86 MW machine at Kakkad Hydro Electric Power Project" directly from the OEM M/s. Bharat Heavy Electricals Limited for an estimate of Rs. 3,30,00,000/- (Rupees Three Crore Thirty Lakh Only) as per the terms and conditions of offer of M/s Bharat Heavy Electricals Limited.

Further resolved to accord sanction to arrange the work of Erection, Testing, Balancing & Commissioning of the new Francis Turbine Runner of 25.86 MW machine of Unit # 2 at Kakkad HEP directly through open tender.

Further resolved to include conditions that the installation and success test will be done only at the time of maintenance and also regarding the linked payment in the contract agreement.

Orders are issued accordingly.

**By Order of the  
Full Time Directors**



**LEKHA G  
Company Secretary**

To:

The Chief Engineer (Generation), Moolamattom.

Copy to: The Chief Engineer (IT)/ Financial Advisor/ Chief Internal Auditor/ Company Secretary  
The TA to CMD/ D (GE&HRM)/ D (GC)/ D (T,SO, P&S)/ D (D, SCM&IT)/ D (REES, S, NILAAVU,  
S&W)  
The PA to the D (F)  
The RCAO/ RAO  
The Sr. CA to Secretary (Administration)  
Stock File.

Forwarded / By Order



Assistant Executive Engineer