

## ESTIMATE REPORT

**Name of work : KIIFB Project: TRAN 10: WRD025-06 - WSS to Ayyappankovil Panchayat - Part II ,Package I - Design and construction of electrical control rooms at raw water pump house and treatment plant compound, supply, erection and commissioning of transformers and allied works (1) 500KVA at Thonithady raw water pump house,(2)400 KVA at WTP compound, supply erection and commissioning of motor pump sets at RWPH, treatment plant sump pump house, Kalthotty pump house and Nariyanpara intermediate P H etc.**

The estimate for Package 1 is prepared for the electro mechanical works for commissioning the ARP/NRDWP Project as per the direction of higher officers. This package includes the following components

1. Civil works.
  - a. Construction of Electrical Control room with RCC Columns and foot bridge at Thonithady raw water pumping station.
  - b. Construction of Electrical Control room at water treatment plant site.
2. Electro mechanical works.
  - a. Supply erection testing and commissioning of 500KVA Transformer with out put 3300volt and allied works at at Thonithady raw water pumping station.
  - b.. Supply erection testing and commissioning of 400 KVA Transformer and allied works at Alady Plant compound.
  - c. Supply erection testing and commissioning of 2 set Vertical Turbine motor pump set at Thonithady Raw water pumping station.
  - d. Supply erection testing and commissioning of 2 set C/F motor pump set at Alady pump house for pumping to Alady Kurisumala GLSR
  - e. Supply erection testing and commissioning of 2 set C/F motor pump set at Alady pump house for pumping to Kalthotty sump/ Nariyanpara intermediate sump
  - f. Power allocation charges (OYEC & CD) and 11KV line extension etc at Thonithady and Alady pumping stations.
  - g. Supply erection testing and commissioning of 2 set C/F motor pump set at Kalthotty pump house for pumping to Labbakkada GLSR
  - h. Supply erection testing and commissioning of 2 set C/F motor pump set at Kalthotty pump house for pumping to Meppara GLSR
  - i. Supply erection testing and commissioning of 2 set C/F motor pump set at Nariyanpara intermediate pump house for pumping to Nariyanpara top GLSR
  - j. Supply erection testing and commissioning of 2 set C/F motor pump set at Nariyanpara intermediate pump house for pumping to Mulakamedu GLSR/ Kochuthovala GLSR
  - k. Power allocation charges at Kalthotty pump house and Nariyanpara intermediate pump houses

1 . CIVIL WORKS

- a. Construction of Electrical Control Room with RCC Columns and foot bridge to Thonithady Raw water pumping station. Control panel room for housing the transformer and control systems are to be provided near the raw water pumping station at Thonithady. At intake point a framed structure building is essential as the high flood level is 8.00mtr above ground level. A foot bridge for access to control room, Intake well protection work and other improvement work of surrounding of well are also included in this component.
- b. Construction of Electrical Control room at WTP Compound Alady. Control panel room of size 9.00m X 6.00mtr for housing the transformer and control systems are to be provided at WTP compound. The location of Treatment plant is at a higher elevated area and approach road is steep and narrow. So widening and concreting the approach road (mud road) with a width of 2.50m to reach the plant compound is included in this component.

(2) Electromechanical works.

- a. Supply erection testing and commissioning of 500KVA

Transformer and allied works at Thonithady raw water pumping station Raw water motor pump set is designed 275 HP. As per the guide lines, above 200HP 3300 Volt motor to be installed. Hence 3300Volt outgoing Transformer is also proposed. Load summary design and estimate preparation of this component are prepared by the Electrical consultant Thiruvananthapuram and working estimate vetted by Electrical wing TVM. b. Supply erection testing and commissioning of 400 KVA Transformer and allied works at Alady Plant compound Total connected load calculated at Water treatment plant compound is 226KW. Design and estimate preparation of this component are prepared by the Electrical consultant Thiruvananthapuram and working estimate vetted by KWA Electrical Wing TVM. c Supply erection testing and commissioning of 2 sets VT motor pump set working at 3300 Volt at Thonithady raw water pumping station. Raw water motor pump set is designed 275 HP Vertical Turbine. As per the guide lines, motor pump set having HP 200 and above, HT motors have to be installed (3300 Volt motor). So working estimate is prepared for 3300V motor. Discharge required for the pump set is 80.00lps against total head of 180m. Working estimate has vetted by KWA Electrical Wing TVM. d. Supply erection testing and commissioning of 2 set C/F motor pump set at Alady pump house for pumping to Alady Kurisumala GLSR Centrifugal pump set having discharge 5.00lps against total head 81m is proposed for pumping water from Alady WTP pump house to Alady Kurisumala GLSR. The estimate is vetted by KWA Electrical wing, TVM e. Supply erection testing and commissioning of 2 set C/F motor pump set at Alady pump house for pumping to Kalthotty sump/ Nariyanpara intermediate sump Centrifugal pump set having discharge 65.00lps against total head 125m is proposed for pumping water from Alady WTP pump house to Kalthotty sump cum pump house/ Nariyanpara intermediate pump house. The estimate is vetted by KWA Electrical wing, TVM f. Power allocation charges (OYEC & CD) extension of 11KV line to Thonithady and Alady pumping station Power allocation charges (OYEC & CD) and extension of 11KV line to Thonithady raw water pump house and Alady plant compound are included in this component.g. Supply erection testing and commissioning of 2 set C/F motor pump set at Kalthotty pump house for pumping to Labbakkada GLSRCentrifugal pump set having discharge 11.00lps against total head 19m is proposed for pumping water from Kalthotty pump house to Labbakkada GLSR. The estimate is vetted by KWA Electrical wing, TVMh. Supply erection testing and commissioning of 2 set C/F motor pump set at Kalthotty pump house for pumping to Meppara GLSRCentrifugal multi stage pump set having discharge 11.00lps against total head 184m is proposed for pumping water from Kalthotty pump house to Meppara GLSR. The estimate is vetted by KWA Electrical Wing, TVM i. Supply erection testing and commissioning of 2 set C/F motor pump set at Nariyanpara intermediate pump house for pumping to Nariyanpara top GLSR Centrifugal multi stage pump set having discharge 3.50lps against total head 173m is proposed for pumping water from Nariyanpara intermediate pump house to Nariyanpara top GLSR. The estimate is vetted by KWA Electrical Wing, TVM j. Supply erection testing and commissioning of 2 set C/F motor pump set at Nariyanpara intermediate pump house for pumping to Mulakamedu GLSR/ Kochuthovala GLSR

Centrifugal multi stage pump set having discharge 22.00lps against total head 113m is proposed for pumping water from Nariyanpara intermediate pump house to Mulakamedu GLSR and Kochuthovala GLSR. The estimate for the pump set is vetted by KWA Electrical Wing, TVMk. Power allocation charges at Kalthotty pump house and Nariyanpara intermediate pump houses Power allocation charges for obtaining power connection at Kalthotty pumping station and Nariyanpara Intermediate pumping station are included in this component. Letter from KSEB Limited is enclosed Estimate is prepared as per DSR 2016 in Price Live Software. Copy of vetted estimates are uploaded in engineering report portion of details 3.



Kerala Water Authority

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