

**DETAILS OF WORKS / CONSULTANCY / PURCHASE CONTRACTS AWARDED ON NOMINATION BASIS**

**4TH QUARTER OF 2017 - 18 (JAN 2018 - MAR 2018)**

**DETAILS OF WORKS / CONSULTANCY CONTRACT**

| (1)     | (2)  | (3)                                    | (4)   | (5)                                      | (6)   | (7)  | (8)             | (9)  | (10)                | (11) |
|---------|--|--|---|--|---|--|-----------------|--|---------------------|------|
| Sr. No. | Name of Work / Description of Item   | Tender / Quotation No. & Date          | Estimated Cost (Rs. in Lakhs)                       | Name of the Agency                       | Work Order & Date   | Value of work awarded (Rs. in Lakhs)   | Contract Period | Reasons for nomination   | Approving Authority | UNIT |
| 1       | Extreme value analysis of meteorological data, and plant area drainage study using coupled 1-D&2-D hydrodynamic model in MIKE FLOOD software including (i) course correction of Kaiga Hole water stream (ii) hydrologic design of surface drains and corrected course of Kaiga Hole water stream, and (iii) determining critical hydraulic forces and velocities for design of flood protection walls for proposed Kaiga-5&6 Project at Kaiga site | SWHD/NIH/NP CIL/ 2017 dated 27-10-2017 | Rs.175.702 Lakhs including GST@18% or as applicable | National Institute of Hydrology, Roorkee | NPCIL/ Projects / Kaiga-5&6/ 10000/ 2018/M/ 200727 dated 06-03-2018 | Rs. 148.90 Lakhs excluding GST. GST will be paid extra as per rate applicable. | 15 months       | <p><b>Description of the work:</b><br/>Specialised studies of plant area drainage of Kaiga-5&amp;6 consisting of the following are required to be carried out to obtain AERB and MoEFCC clearance :</p> <ul style="list-style-type: none"> <li>(i) Extreme value analysis of meteorological data</li> <li>(ii) Plant area drainage study using coupled 1-D&amp;2-D hydrodynamic model in MIKE FLOOD software</li> <li>(iii) Course correction of Kaiga Hole water stream</li> <li>(iv) Hydrologic design of surface drains and corrected course of Kaiga Hole water stream,</li> <li>(v) Determining critical hydraulic forces and velocities for design of flood protection walls</li> <li>(vi) Assessment of spread of flood water under various cases of flooding for emergency preparedness plan</li> <li>(vii) Integration of area drainage studies with previously awarded flood studies.</li> <li>(viii) Participation in MOEFCC and/or AERB meetings to defend their work.</li> <li>(ix) Carry out additional studies if required by AERB and MoEFCC during the course of review.</li> </ul> <p>The above studies were awarded to NIH, Roorkee on nomination basis for reasons below:</p> <p><b>1. Technical capability of NIH</b><br/>NIH is a Government of India Institution under Ministry of Water Resources. It is the premier R&amp;D Institute in the area of hydrology and water resources in India. They have wide array of expertise, covering almost all the topics in the domain of hydrology and with large and vibrant groups of scientists, supported by scientific and project staff, and close links with field and academic community, they are taking up challenging tasks in water sector and serving the nation. The Institute has completed a number of consultancy and sponsored research projects awarded by several state governments, departments/ministries of central govt. and PSUs. NIH is familiar with entire scope of studies including developing digital elevation models, extreme value analysis of rainfall, estimation of design flood hydrographs, calibration and validation of model, carrying out coupled 1-D &amp; 2-D hydrodynamic model simulations in MIKE FLOOD wherein the flow within drain (1-D flow) is simulated in MIKE 11 and overland flow (2-D flow) is simulated in MIKE 21.</p> <p><b>2. Integration across studies</b><br/>There is no other institution in the country taking up entire scope of work under single umbrella taking single point responsibility. As the data of one sub study of the scope is to be used across the studies, the entire work has to be attempted together due to their interdependability as well as need of integrating drainage studies with flood studies taken up separately by NIH under a separate contract.</p> | Director (Projects) |      |

| (1)     | (2)   | (3)                            | (4)                           | (5)   | (6)                                  | (7)                                  | (8)             | (9)  | (10)                | (11) |
|---------|---|--------------------------------|-------------------------------|---|--------------------------------------|--------------------------------------|-----------------|--|---------------------|------|
| Sr. No. | Name of Work / Description of Item  | Tender / Quotation No. & Date  | Estimated Cost (Rs. in Lakhs) | Name of the Agency  | Work Order & Date                    | Value of work awarded (Rs. in Lakhs) | Contract Period | Reasons for nomination   | Approving Authority | UNIT |
|         |   |                                |                               |   |                                      |                                      |                 | <p><b>3. Past Track record</b><br/>NIH has completed a lot of studies entrusted by NPCIL in the past. They have carried out flood study for GHAVP, CMPAPP, NAPS and area drainage study including hydrologic design of site area drainage for GHAVP, CMPAPP. They are presently carrying out flood studies for Mahi- Banswara and Kaiga-5&amp;6 sites. They could defend their studies successfully in AERB .</p> <p><b>4. Other Competitors</b><br/>There are Govt. agencies (Central Water &amp; Power Research Station (CWPRS) Pune &amp; Central Water Commission(CWC) New Delhi) and Private agency (DHI India Water &amp; Environment Pvt.Ltd. New Delhi ) doing one or other part of the job but none of these are taking up, entire gamut of studies under single umbrella.<br/>Taking all above reasons in view, it was decided to place work order on NIH , Roorkee on nomination basis in the interest of work as well as of NPCIL.</p>   |                     |      |
| 2       | Work related to lift OFF Mechanism for large from structural monitoring of Prestress in RB Containment & Supply of 500 MT Load cell and Digital readout unit. | KAPS/CTC/3-4/CIVIL/2018/MT/585 | 610.93                        | L&T Construction Infrastructure IC, Project Office: L&T, KAPP-3&4 Project, Anumala, Vyara, Tapi, Gujarat 394651 | KAPS/CTC/3-4/CIVIL/CAP/2018/WO/80288 | 610.93                               | 18 Months       | <p>In 700 MWe PHWR, CESC/AERB has recommended to monitor 10 nos. of pre-stressed cables (vertical, horizontal, C type dome cables and J type dome cables) using Load cells and also by provision of monitoring through Lift-off operation on all these cables during reactor life. The monitoring of pre-stressing cables by Lift-off along with Load cell is a new requirement which is being done first time in Indian PHWR.<br/>Initially, the load cells have to be procured by HQ and issue to site for installation. However a communication was received from HQ that load cells have to be procured through the main plant civil contract i.e. through approved pre-stressing agency working at site to avoid any interface issues with other pre-stressing components.<br/>Also, the lift off mechanism was developed by M/s BBR (who is approved pre-stressing agency working at site) in consultation with HQ designers.</p> <p>The integrated scheme of load cell with lift-of operation was proved in various mock up conducted by M/s BBR. These mock-ups were witnessed and approved by designers.<br/>The above works related to load cell and lift-off operation is taken up under extra items in main plant civil works to take care of interface issues with other pre-stressing components and guarantee issues associated with these works. The detailed rate analysis of these items along with justification of the rates is already checked by site finance. (Copy enclosed as Annexure-1). The proposal in this regard is reviewed at various levels viz. site execution, L1Committee, and concurred by site finance. Presently, the proposal is under review in FEG group.</p> <p>As the re-stressing works are in critical path of the project and the approval of the proposal including making necessary payments is taking sufficient time. It is decided by NPCIL to take up the work on nomination basis at the rates as concurred through the same agency i.e. M/s L&amp;T.</p> | Director (Projects) |      |