

## CHAPTER - 5

# System of award of contracts

The contract management is a process of systematically and efficiently managing award, execution and analysis of contract for the purpose of maximizing financial and operational performance and minimizing risk.

Audit examined in detail various stages of contract management, *inter-alia*, cost estimate, preparation of tender documents, invitation of bids, receipt and opening of bids, processing and evaluation of bids, pre-award discussion with the recommended bidder, award of contract, post-award implementation of contract and contract amendments. Audit noticed deficiencies in 13<sup>50</sup> of the 24 contracts<sup>51</sup> reviewed in Audit. Company-wise results of examination are discussed in subsequent paragraphs.

## 5.1 Inadequacies in cost estimation

Cost estimates are prepared to establish reasonableness of the cost at which package could be executed. Therefore, it is essential that the estimates are worked out in a realistic and objective manner. Company-wise analysis of the estimation process disclosed the following inadequacies in some of the elements:

Company	Inadequacies in the Estimation process	Ministry/Management's reply
SJVNL	Cost estimates of Rampur project omitted hard coating of the main equipment involving an expenditure of ₹66.60 crore <i>i.e.</i> 12.4 <i>per cent</i> of the estimated cost; and underestimated the mandatory spares of ₹48.98 crore <i>i.e.</i> 9.1 <i>per cent</i> . Thus, the estimates were not realistic.	Ministry/SJVNL Management stated (March 2012) that these special provisions and additional quantity of spares were finalised in consultation with consultant ( <i>i.e.</i> CEA) and the same could not be included in the revised estimates because of very limited database available.

<sup>50</sup>NHPC-10, SJVNL-2, THDC- 1 and NEEPCO-0

<sup>51</sup> NHPC-16, SJVNL-3, THDC-3 and NEEPCO-2

Company	Inadequacies in the Estimation process	Ministry/Management's reply
NHPC	Estimates did not reflect current market prices as the works were awarded with significant variations ranging between (-) 26.22 <i>per cent</i> (₹204.36 crore) to (+) 37.21 <i>per cent</i> (₹53.71 crore) of the estimated cost in respect of 10 out of 16 contracts (involving seven projects). Logistic constraints and climatic conditions were not considered in case of Nimmo-Bazgo and Chutak projects which reflected maximum variation.	The cost estimate prepared by NHPC were based on the general guidelines of CEA/CWC and variation in quoted prices vis-à-vis estimates occurred in almost all work packages of hydro projects at domestic and global levels. In respect of Chutak and Nimmo-Bazgo projects, the Ministry admitted lack of experience both on the part of NHPC as well as contractors in respect of actual execution intricacies and complexities at such a high altitude as the reason for variations between estimated cost and awarded cost.
	In case of Jiwa Nallah and associated works related to Parbati-II project the actual rock excavation was 5,35,000 cum ( <i>i.e.</i> 1,326 <i>per cent</i> above the estimated Bill of Quantities of 37,500 cum). Under-estimation of work, difference in the road width and change in alignment of road led to additional financial implication of ₹30.97 crore.	Ministry accepted (March 2012) the Audit observation.
THDC	Negative variation of 39.56 <i>per cent</i> (₹35.92 crore) was observed in the estimated and awarded cost in one of the three contracts.	THDC Management and Ministry did not offer any comment on this issue.

The Ministry by and large acknowledged the audit observations. Thus, the estimation process failed to provide a realistic benchmark for the award of works.

## 5.2 Pre-qualification criteria for selection of contractors

Prequalification (PQ) criteria is required to be fixed in such a manner that it is able to weed out and exclude inexperienced, incompetent, un-resourceful and financially unsound applicants and at the same time promote wider participation. The PQ criteria should be objective and unambiguous. The applicants who qualify the PQ criteria would participate in further bidding process.

A review of the formulation of PQ criteria for award of contracts of various projects in NHPC revealed that:

- (a) Till July 2004, there were no guidelines for fixation of PQ criteria in NHPC but a practice of fixation of PQ criteria by a multidisciplinary Committee was being followed. Audit appreciates that out of total 16 contracts (13 contracts prior to July 2004 and three contracts after issuance of guidelines), this practice was followed in 13 contracts. However, in three contracts pertaining to Parbati-II project, PQ criteria was approved (November 2000) by the Chairman and Managing Director.

Ministry/NHPC Management stated (October 2011 and March 2012) that at the time of floating NIT (November 2000) there were no guidelines for formulation of PQ criteria of major civil works as well as requirement of constitution of a Committee for formulation of PQ criteria. The guidelines for constitution of Committee for formulation of PQ criteria came into effect from July 2004.

- (b) For transparency and fairness in the contract management, once the PQ criteria are fixed and tender documents have been issued, PQ criteria should not be relaxed. Audit, observed that out of 16 contracts, in five contracts pertaining to Subansiri lower and Parbati-II projects (as detailed in **Annexure-III** and **Annexure-IV**) PQ criteria was relaxed after closing date of sale of tender documents. In Parbati-II Project, considering the criticality of excavation of 9 km stretch<sup>52</sup> of head race tunnel (HRT), initial PQ criteria envisaged that 'a JV partner should be specialized in use of TBM technology'. However, after the close of sale of tender documents (15 December 2000), requirement of experience of TBM technology by a JV partner was relaxed<sup>53</sup> (February 2001) to 'relevant experience of TBM by a sub-contractors' on the plea that foreign agencies specialized in TBM were unwilling to participate in the bidding as JV partners.

NHPC Management stated (October 2011) that as per normal practice, NHPC invariably considers the representation of prospective bidders to review the PQ criteria. Accordingly, based on representation of a number of bidders, the financial criteria was reviewed by the Committee and modified. While accepting audit observation, Ministry added (March 2012) that since 2004, all PQ/Bid documents and amendments thereto are posted on website of NHPC and presently no amendment to PQ/Bid is being issued after the closure of sale date.

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<sup>52</sup> *Out of total length of HRT of 31.20 km only 9 KM was planned through TBM and the balance was through drill and blast method (DBM).*

<sup>53</sup> *By the Contract Division based on the recommendations of a committee of the company and with the approval of C&MD of NHPC*

However, argument of the Management that foreign agencies specialized in TBM were unwilling to participate in the bidding as JV partners was misplaced as six<sup>54</sup> out of ten bidders pre-qualified by NHPC for HRT package, were those in which either the sole applicant or one of the partners had the required experience of using TBM.

- (c) For JV bidders in NHPC<sup>55</sup>, PQ envisaged that the Lead Partner should meet average annual turnover of not less than 50 *per cent* of specified criteria and other partner(s) should individually meet not less than 20-30 *per cent* of specified criteria. However, PQ criteria of Parbati-II project of NHPC did not specify limit for lead partner as well as other partners. MAYTAS Infra Limited the lead partner of M/S Himachal JV met only 39 per cent of the turnover requirement and one of the other JV partners- Sri Shankarnarayan met only 19 per cent of the average turnover criteria.

NHPC Management stated (October 2011) that PQ criteria were made with a view to have wider participation for various works packages and not with a consideration to favour any individual party. The Ministry added (March 2012) that this criteria was similar to the revised PQ criteria of Teesta-V project.

Reply is not convincing as PQ criteria is meant to ensure weeding out of financially and technically weak parties and should be followed in letter and spirit. Relaxing the criteria in one of the earlier contracts cannot justify deviation for the contract.

- (d) In respect of HRT and associated works of Parbati II Project of NHPC, M/s HJV led by MAYTAS (with Sri Shankaranarayana Construction Company and Nagarjuna Construction Limited) did not meet the specific construction experience as per PQ criteria, however, they were considered eligible as could be seen from the following:

- i. PQ criteria required “completion of tunnel with Tunnel Boring Machine (TBM) of more than 8.0 km length with an excavated volume of 11,000 cum or 300 meter length per month from one tunneling face”. M/s HJV supported

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<sup>54</sup> (1) M/s Dywidag International GMBH, (2) M/s HCC-AMB JV, (3) M/s Skanska-L&T JV, (4) M/s Parbati Tunnel JV, (5) M/s Daelim Industrial Co. Limited (6) M/s Samsung Corporation

<sup>55</sup> In 10 of 13 contracts this practice was followed by NHPC, in case of two contracts, JV was not allowed.

their bid with a work experience of 10.80 km with TBM by their proposed sub-contractor in Sweden involving Head Race Tunnel (HRT) of 7.5 km and Tail Race Tunnel (TRT) of 3.3 km and the same was accepted by the Management.

NHPC Management/Ministry stated (October 2011 and March 2012) that PQ criteria were set out primarily with the objective that the bidder should have experience of completion of tunnel of a particular length as also should have achieved the desired progress rate. As such the Committee considered the experience and felt that the applicant met the criteria of average progress.

Reply is to be viewed in the context that the bidder was required to have experience of more than 8 km length of a tunnel from one tunneling face. Further, the sub-contractor proposed by one of the bidders (M/s Patel-SEW JV) who was L2 bidder had work experience of more than 21 kms with TBM.

- ii. As per PQ criteria, each item of technical criteria of the respective lot was to be individually met by a partner of the joint venture and the experience and performance of various JV partners was not to be summed up. PQ criteria inter-alia prescribed completion of tunnel of more than 5 km (revised to 2 Km in February 2001) with DBM<sup>56</sup>. MAYTAS, the lead partner of M/s HJV claimed the experience of Larji Project executed by a joint venture of MAYTAS together with Sri Shankaranarayana Construction Company.

NHPC Management stated (October 2011) that in the absence of bifurcation of work executed by the JV partners, work experience was available to both the partners of JV. Ministry added (March 2012) that the PQ evaluation Committee had taken a view in its best judgment based on the documents submitted by the bidder.

Replies confirm that the bidder was not fulfilling the PQ criteria and the Committee pre-qualified an ineligible firm who neither fulfilled the technical experience for boring tunnel of more than 8.0 km length from one tunneling face nor fulfilled individual criteria of DBM technology.

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<sup>56</sup> *Drill and Blast Method*

## 5.3 Evaluation of bids

Techno-commercial bids are invited from the bidders who qualify the pre-qualification criteria. These are evaluated by the duly constituted Committee comprising representatives from contracts department, project site and finance. Based on such evaluation, price bids are called from the techno-commercially acceptable bidders. In SJVNL and THDC, techno-commercial and price bids are, however, invited after PQ evaluation itself. The reasonability of the rates quoted by the lowest bidders is assessed with estimated rates as well as sensitivity analysed rates by the Committee before recommendation on award of work. Examination of bid process in NHPC revealed the following:

### 5.3.1 *Reconsideration of an ineligible bidder*

For civil works of Subansiri Lower project of NHPC, the PQ bid of Nurool Construction & Trading Inc., Turkey was rejected by the PQ evaluation Committee as it did not meet the financial criteria of 'Turnover' (USD 83.93 million against the requirement of USD 110 million). Despite this, the techno-commercial bid documents were issued to this firm and price bids were also invited after finding the firm techno-commercially acceptable.

Ministry/NHPC Management stated (October 2011 and March 2012) that the firm approached NHPC for reconsideration of their application for pre-qualification. In order to have better competition and international participation, Committee in its supplementary report recommended the firm to be pre-qualified and allowed participation in the SSL2 work package.

Reply of the Management is not acceptable as reconsideration of application of any bidder after evaluation of PQ criteria vitiates the bidding process and denial of equity to other prospective bidders.

### 5.3.2 *Lack of transparency in bid opening*

In case of **Chamera-III project (civil works) of NHPC**, discount of 32.40 per cent offered by the lowest evaluated bidder *i.e.* Hindustan Construction Company Limited (HCC) was not a part of the bid documents submitted by HCC as the same was neither mentioned in the forwarding letter nor specified by the bid opening committee (August 2005). The discount letter furnished suo-moto by the bidder and award of work to HCC is not in order.

NHPC Management stated (October 2011) that the bidder offered rebate in a separate envelope sealed in the outer envelope in line with the bid conditions. Bids for Chamera-III civil works package were opened by bid opening committee in the presence of all the bidders/representative of bidders who chose to remain present. As such, chances for tampering/manipulation cannot be considered. Ministry added (March 2012) that bid documents did not provide for mandatory reference of rebate in the Bid Form. However, as a matter of policy, bidders were permitted to offer discount, if any, only in Bid Form after 18 May 2009.

Reply of the Management is not tenable as bid opening committee did not list any discount letter submitted by HCC at the time of opening of bids. The same was also not mentioned in the forwarding letter of the bid.

### **5.3.3 Opening bid despite poor track record**

For civil work package of Chutak project of NHPC, techno-commercial bid of MAYTAS was set aside (April 2006) as performance of M/s HJV (led by MAYTAS) in Parbati-II project was not good. The tender was annulled as the lowest price bid received was 58 *per cent* higher than the approved cost estimate. During re-tender, the bid of MAYTAS was opened (September 2006) setting aside the earlier rejection of MAYTAS due to poor performance in Parbati-II project. Management by first not considering the offer for its poor performance and subsequently considering it on submission of a project specific financial commitment from a bank displayed lack of consistency.

Ministry/NHPC Management stated (October 2011 and March 2012) that MAYTAS had submitted a project specific assured financial commitment for the entire construction period of ₹25 crore for working capital from a Bank based on which Tender Evaluation Committee qualified the firm.

Reply of the Management is not tenable as their performance was poor in Parbati-II project and as such, it should have been debarred from participating in re-tendering in Chutak project.

## **5.4 Award of contracts**

### **5.4.1 Delays in award of contracts**

NHPC prescribed (June 2004) that tendering activities from the date of publication of NIT to the date of issue of letter of award be completed within 9.5 months. Against this, Management took 14 to 28 months (*Annexure-V*) in case of

tendering activities in 15 out of 16 selected contracts and completed the tendering activities in four months in remaining one contract. SJVNL took 21 to 28 months in three contracts selected for examination in audit while THDC took 39 to 80 months in three contracts examined in audit. Consequently, this resulted in delay in execution of projects.

Ministry/NHPC Management stated (October 2011 and March 2012) that the last date of submission of PQ applications, techno-commercial bid and price bids were extended on the request of the prospective applicants/bidders considering the status of various clearances from time to time. Bids were finalized more or less simultaneously with the accord of CCEA sanction and in most of the cases letters of acceptance were issued soon after approval by CCEA.

Reply of the Ministry/Management that works could not be awarded pending various clearances is not tenable as civil works of Subansiri Lower and Teesta-IV were awarded after three and four months from the dates of investment approval by CCEA. Further, the delays in award of contracts could have been minimised by coordinated efforts with all concerned authorities.

#### ***5.4.2 Avoidable expenditure due to award of work before land acquisition***

Civil work contracts of Subansiri Lower project were awarded (December 2003) by NHPC with instructions for work to be started immediately. However, the land was handed over to NHPC in January 2005 after forest clearance. The contractors of civil works raised claims of ₹135.68 crore on account of idling of men and machinery at the project site. Against this, NHPC has made an interim payment of ₹24.85 crore to the contractor so far (March 2012).

NHPC Management stated (October 2011) that delay in formal forest clearance due to litigation, etc. led to delay in handing over of site. The contractor was allowed to undertake the works after survey and demarcation of area by erecting concreting pillars in January 2005. Ministry added (March 2012) that as a matter of policy, after 2007, award of works is being done only after actual availability of required land for execution of works.