भारत सरकार / Government of India
जलशक्ति मंत्रालय / Ministry of Jal Shakti
जल संसाधन, नदी विकास और गंगा संरक्षण विभाग
Department of WR, RD & GR
केन- बेतवा लिंक परियोजना प्राधिकरण
Ken - Betwa Link Project Authority

विश्वेश्वरैया भवन
कोलार रोड, पंचशील नगर
भोपाल, मध्य प्रदेश-462042

फाइल संख्या:

दिनांक:30.04.2024

MINUTES OF THE TENTH MEETING

OF THE TENDER EVALUATION COMMITTEE FOR DAUDHAN DAM

The Tenth meeting of the Tender Evaluation Committee (TEC) for Daudhan Dam under the Ken-Betwa Link Project was held at KBLPA, Bhopal on 29-30 April 2024 to evaluate the technical bids received for construction of the Daudhan Dam under the Ken Betwa Link Project. The List of participants is enclosed as Annexure I.

The CEO, KBLPA extended a warm welcome to all members of the TEC and other invited participants.

The TEC was apprised that the online bids for this project were invited through the CPP Portal on August 11, 2023 with the date of opening as 20 October 2023. A Pre-Bid Conference was held on September 9, 2023 to address the queries of the bidders. The decisions of the KBLPA with respect to General Queries and Specific Queries of the bidders along with the corrigendum, were uploaded. To facilitate the bidders for submitting the comprehensive proposal, the dates of submission were extended four times. A second pre-bid consultations were held on February 1, 2024 and acceptable suggestions were incorporated through the Corrigendum. The online and offline final submission of bids was closed on March 5 and 8, 2024 respectively.

The Technical bids were opened on 11 March 2024. Following bidders submitted the bids:

1. KBLP Joint Venture (JV of M/s PEL and M/s MIPPL)
2. M/s Nagarjuna Construction Company Limited (NCC Ltd)
3. M/s Dilip Buildcon Limited (DBL)
4. MEIL-Rithwik Joint Venture
5. HCC- RVNL Joint Venture
6. M/s Larsen & Toubro Limited (L&T Ltd)

A Preliminary Scrutiny Committee (PSC) was constituted under the chairmanship of ACEO (HW), KBLPA with the members from KBLPA, WRD, MP and I&WRD, UP. The purpose of the committee was to scrutinize the bids received and determine their responsiveness with respect to conditions of the tender document. The report of the PSC containing the bidder-wise observations, evaluation and recommendations on the six bids was placed in the meeting by the PSC for perusal of the TEC and is placed as Annexure III to this document.

The TEC examined and deliberated the bids received from the aforesaid six bidders, in light of the report of the PSC and the tender conditions and clarifications/ corrigendum thereof. The TEC

examined, analysed, observed and concluded the recommendations against each bidder as follows:

1. KBLP JOINT VENTURE (BID 1 of 6)

The TEC noted that the KBLP Joint Venture is formed by M/s Patel Engineering Limited as Lead Partner (66%) & M/s Mahalakshmi Infra Projects Pvt. Ltd as minor partner (34%). During the last three years, the constituents of the JV have not been declared ineligible/ suspended/ blacklisted/ banned/debarred by appropriate agencies of the Government of India or Governments of MP and UP from participation in the Tender Processes of all of its entities. The bidder has >50% Make in India status and has submitted the declaration to this effect in Form 6. No corporate insolvency resolution process has been admitted against the Bidder. Both the partners of the Joint venture have submitted undertakings towards Anti-profiteering Clause of GST Act / Rules and the Power of Attorney. The bidder has submitted the other necessary papers like the Bank Guarantee and the Tender fee. The TEC noted that the bidder has not submitted the audited balance sheet for the year 2022-23, in absence of which, the working capital could not be ascertained at this stage and whether the bidder meets the financial criteria under paras 3.5 and 3.6 of NIT.

The TEC noted the observation of the PSC that the bidder has presented a combination of different projects taken out of seven projects (Kameng HE Project, Serlui earthen Dam, Aruna Medium Irrigation Project, Teesta Low Dam St III, Rampur HE Project, Sawara Kuddu Barrage and Keoti Taroki) to meet the different subsets of conditions stipulated under para 3.1.2 of NIT. This, as per PSC report, is not as per the tender condition, which stipulates that the aforesaid quantities should be derived from not more than five projects, necessarily including the projects proposed for meeting criteria under para 3.1.2 A(i)(a) and (b) of NIT.

However, during the deliberations in the meeting, it was observed that the bidder has not included the quantities executed by the minor partner (MPPL) in the Aruna project, which was included in claiming the experience against construction of the earthen dam under Para 3.1.2 (A)(ii). The quantities executed by the minor partner (Page 590 of the bid) were worked out by the TEC and it was found that the experience envisaged in Para 3.1.2 of the Tender document was met considering quantities executed in Aruna Project, Kameng I & II, Sawra Kuddu and Rampur HEP.

The TEC thus concluded that the JV meets the General Experience and the Financial Experience Criteria under Para 3.1.1 (a) and (b) of NIT and the Specific Experience criteria of as specified in Paras 3.1.2. However, these quantities executed in Aruna Project, Kameng I & II, Sawra Kuddu and Rampur HEP shall be reaffirmed by the bidder for which a clarification shall be sought.

The TEC noted that there are a number of deviations in the bid as mentioned at Page 23 of the report of the PSC which need clarifications / withdrawal from the bidder. The TEC held that the appropriate clarifications in this regard shall be issued. Also, clarification on the deficiencies including the audited balance sheet for the FY 2022-23 shall be sought from the bidder.

Additionally, the bidder shall be asked to furnish, as given in Annexure-II of this document, his unconditional and unequivocal acceptance of the conditions stipulated in the tender Documents and the confirmation that their quoted prices are after taking into cognizance of Scope of Work, the Owner's Requirements and probable Risks as identified in Risk Allocation Schedule.

2. NAGARJUNA CONSTRUCTION COMPANY (2 of 6)

The TEC noted that M/s NCC is the sole bidder. During the last three years, the bidder has not been declared ineligible/ suspended/ blacklisted/ banned/debarred by appropriate agencies of the Government of India or Governments of MP and UP from participation in the Tender Processes of all of its entities. The bidder has >50% Make in India status and has submitted the declaration to this effect in Form 6. No corporate insolvency resolution process has been admitted against the Bidder. The bidder has submitted undertakings towards Anti-profiteering Clause of GST Act / Rules and the Power of Attorney. The bidder has also submitted the necessary papers like the Bank Guarantee and the Tender fee.

The TEC noted that the bidder meets the General Experience and the Financial Experience Criteria as well as the Specific Experience criteria for construction of the Concrete Dam and the earthen dam as specified in Paras 3.1.1 and 3.1.2 A(i)(a) and A(i)(b) , (ii) and (iii) of the NIT . The bidder meets the financial criteria related to turnover, bid capacity, net worth and the working capital.

In light of the above, the TEC noted that M/s NCC limited meets the Qualification Requirements under clause 3 of NIT. However, to ensure the responsiveness of the technical bid in terms of clause 18.2 of ITB, the bidder shall be asked to furnish, as given in Annexure-II of this document, his unconditional and unequivocal acceptance of the conditions stipulated in the tender Documents and the confirmation that their quoted prices are after taking into cognizance of Scope of Work, the Owner's Requirements and probable Risks as identified in Risk Allocation Schedule.

3. DILIP BUILDCON LIMITED (DBL) (3 of 6)

The TEC noted that DBL is the sole bidder. During the last three years, the bidder has not been declared ineligible/ suspended/ blacklisted/ banned/debarred by appropriate agencies of the Government of India or Governments of MP and UP from participation in the Tender Processes of all of its entities. The bidder has >50% Make in India status and has submitted the declaration to this effect in Form 6. No corporate insolvency resolution process has been admitted against the Bidder. The bidder has submitted undertakings towards Anti-profiteering Clause of GST Act / Rules and also the power of Attorney. The bidder has submitted the necessary papers like the Bank Guarantee and the Tender fee.

The PSC informed the TEC that the bidder was asked to substantiate his claim for meeting experience of execution of Concrete Dam and submission of duly completed Data Sheet-9, which has been submitted by the bidder vide letter dated April 25, 2024. The TEC has noted that, after the clarification, the bidder meets the General Experience and the Financial Experience Criteria and the Specific Experience criteria of construction of the Concrete Dam as well as the earthen dam as specified in Paras 3.1.1 and 3.1.2 A(i)(a) and A(i)(b) , (ii) and (iii) of the NIT . The bidder also meets the financial criteria related to turnover, bid capacity, net worth and the working capital.

The TEC noted the anomalies brought on Page 52 of the report of the PSC, wherein some of the conditions put by the bidder contravenes the provisions of the tender. The TEC has noted that the bidder has mentioned some assurances/references from WRD, Govt. of MP related to dumping sites, quarries, etc. The representatives of WRD, Government of MP in the TEC denied any such assurance given/communicated to the bidder as claimed in the bid. The TEC concluded that only

the provisions of tender shall prevail. The TEC held that the appropriate clarifications in this regard may be issued and also information on the deficiencies may be sought from the bidder.

The bidder shall be asked to furnish, as given in Annexure-II of this document, his unconditional and unequivocal acceptance of the conditions stipulated in the tender Documents and the confirmation that their quoted prices are after taking into cognizance of Scope of Work, the Owner's Requirements and probable Risks as identified in Risk Allocation Schedule.

4. MEIL-RITHWIK JOINT VENTURE (BID 4 OF 6)

The TEC noted that the MEIL-Rithwik Joint Venture is formed by M/s Megha Engineering & Infrastructures Limited, as Lead Partner (74%) & Rithwik Projects Private Limited as minor partner (26%). During the last three years, the constituents of the JV have not been declared ineligible/ suspended/ blacklisted/ banned/debarred by appropriate agencies of the Government of India or Governments of MP and UP from participation in the Tender Processes of all of its entities. The bidder has >50% Make in India status and has submitted the declaration to this effect in Form 6. No corporate insolvency resolution process has been admitted against the Bidder. Both the partners of the Joint venture, have submitted undertakings towards Anti-profiteering Clause of GST Act / Rules and the Power of Attorney. The bidder has submitted the necessary papers like the Bank Guarantee and the Tender fee.

The TEC noted that the bidder meets the General Experience and the Financial Experience Criteria and the Specific Experience criteria of construction of the Earthen Dam, tunnel, excavation, filling and concreting as specified in Paras 3.1.1 of NIT and 3.1.2 A(i)(b), (ii) and (iii) of the ITB. The bidder also meets the financial criteria related to turnover, bid capacity, net worth and the working capital.

The TEC noted that the lead partner does not have the experience of construction of concrete dam. The same is being proposed to be met through the minor partner (RPPL) which claimed the experience of "construction of 97.5 m high Dam, Spillway and Powerhouse works of Koteshwar HE Project" (2006-2011) owned by Tehri Hydro Development Corporation (THDC) Ltd.

The TEC noted that the THDC has certified the following:

a) *The work of "construction of civil work of Dam Spillway and Power House at Koteshwar" was awarded to M/s PCL Intertech Lenhydro Consortium JV in 2002.*

b) *M/s Rithwik Swathi JV was recognized as authorized sub-contractor of M/s PCL Intertech Lenhydro Consortium JV in 2006. Later, M/s Swathi, one of the partners of M/s RSJV, withdrew from the joint venture.*

c) *Thus M/s Rithwik Projects Limited remained sole approved sub contractor thereafter, and was declared as authorized sub contractor of M/s PCL in 2010.*

d) *Subsequently M/s PCL Intertech Lenhydro Consortium JV, have informed in 2011 that name of M/s Rithwik Projects Limited have been changed to M/s Rithwik Projects Pvt Ltd.*

On perusal of the documents, the TEC noted that the certificates issued by THDC Limited indicate that the work of *"Construction of civil work of Dam Spillway and Power House at Koteshwar"* was awarded to M/s PCL Intertech Lenhydro Consortium in 2002 while M/s Ritwik Swati JV was

recognized as authorized sub-contractor in 2006. The TEC also noted that there is no specific mention in any of the documents that M/s RPPL were involved in the construction of the dam.

In this context the bidder was requested on April 18, 2024 by KBLPA to provide the requisite documents/drawings in support of its claim but even from reply received on April 24, 2024, the involvement of M/s RPPL in construction of concrete dam could not be ascertained.

The TEC concluded that the bidder does not meet the Qualification Requirements under para 3.1.2 A(i) (a) and, therefore, the bid is not responsive in terms of clause 18.2 of ITB .

The TEC noted that there are some deviations in the bid as indicated on Page 69 of the PSC report, which need clarifications / withdrawal from the bidder. However, as the bidder is not meeting even the Qualification Requirements, therefore seeking clarifications will be infructuous.

5. HCC-RVNL JOINT VENTURE (5 of 6)

The TEC noted that the Joint Venture is formed by M/s Hindustan Construction Company Limited as Lead Partner (65%) & Rail Vikas Nigam Ltd as minor partner (35%). During the last three years, the bidder has not been declared ineligible/ suspended/ blacklisted/ banned/debarred by appropriate agencies of the Government of India or Governments of MP and UP from participation in the Tender Processes of all of its entities. The bidder has >50% Make in India status and has submitted the declaration to this effect in Form 6. No corporate insolvency resolution process has been admitted against the Bidder. Both the partners of the Joint venture, have submitted undertakings towards Anti-profiteering Clause of GST Act / Rules and the requisite Power of Attorney. The bidder has submitted the necessary papers like the Bank Guarantee and the Tender fee.

The TEC also noted that the bidder meets the General Experience and the Financial Experience Criteria and the Specific Experience criteria of construction of the Concrete Dam as well as the earthen dam as specified in Paras 3.1.1 of NIT and 3.1.2 A(i)(a) and A(i)(b), (ii) and (iii) of the NIT. The bidder meets the financial criteria related to turnover, bid capacity, net worth and the working capital.

The TEC noted the anomalies on Page 85 of the report of the PSC and held that the appropriate clarifications in this regard shall be issued.

In light of the above, the TEC concluded that the bidder meets the Qualification Requirements under clause 3 of NIT. However, to ensure the responsiveness of the technical bid in terms of clause 18.2 of ITB, the bidder shall be asked to furnish, as given in Annexure-II of this document, his unconditional and unequivocal acceptance of the conditions stipulated in the tender Documents and the confirmation that their quoted prices are after taking into cognizance of Scope of Work, the Owner's Requirements and probable Risks as identified in Risk Allocation Schedule.

6. M/s LARSEN & TOUBRO LIMITED (6 OF 6)

The TEC noted that M/s L&T Limited is the sole bidder. During the last three years, the bidder has not been declared ineligible/ suspended/ blacklisted/ banned/debarred by appropriate agencies of the Government of India or Governments of MP and UP from participation in the Tender Processes of all of its entities. The bidder has >50% Make in India status and has submitted the declaration to this effect in Form 6. No corporate insolvency resolution process has been admitted against the Bidder. The bidder has submitted undertakings towards Anti-profiteering Clause of

GST Act / Rules and the Power of Attorney. The bidder has submitted the necessary papers like the Bank Guarantee and the Tender fee.

The PSC informed the TEC that the bidder was asked to submit of duly completed Data Sheet-9, which has been submitted by the bidder vide letter dated April 20, 2024. The TEC noted that, after the clarification, the bidder meets the General Experience and the Financial Experience Criteria and the Specific Experience criteria of construction of the Concrete Dam as well as the earthen dam as specified in Paras 3.1.1 of NIT and 3.1.2 A (i)(a) and A (i)(b) , (ii) and (iii) of the NIT. The bidder also meets the financial criteria related to turnover, bid capacity, net worth and the working capital.

The TEC concluded that M/s L&T meets the Qualification Requirements under clause 3 of NIT. However, some clarifications as mentioned at page 101 of PSC Report shall be issued to the bidder. However to ensure the responsiveness of the technical bid in terms of clause 18.2 of ITB, the bidder shall be asked to submit unconditional and unequivocal declaration enclosed as Annex-II.

At the end, the TEC also directed that the Bank Guarantee submitted by all the bidders should be strictly as per the proforma in the tender document and the bidders may be asked to resubmit the same, wherever needed. The TEC also directed that KBLPA shall be ensure that all the Power of Attorney are in in order and in case of an ambiguity/discrepancies, necessary clarifications may be issued.

The meeting ended with the vote of thanks to the Chair.

***

Yogesh Paithankar
Member

Shirish Mishra
Member

Pradeep Kumar Shukla
Member

Devesh Shukla
Member

Prashast Kumar Dixit
Chairman

Annexure-I

LIST OF PARTICIPANTS

A. Tender Evaluation Committee		
1.	Shri Prashast Kumar Dixit, CEO, KBLPA	In Chair
2.	Shri Yogesh Paithankar, CE CWC	Member
3.	Shri Shirish Mishra, E-in-C, WRD, Govt of M.P.	Member
4.	Shri Devesh Shukla, I &WRD, Govt, of U.P.	Representative Member
5.	Shri Pradeep Kumar Shukla, Director (Fin.), CWC	Representative Member
B. Preliminary Evaluation Committee		
1.	Shri Raj Kumar Mishra, ACEO, KBLPA, Bhopal	Chairman
2.	Shri Pradeep Kumar Saxena, Consultant-I, KBLPA	Member
3.	Ms Taruna Saini, SE(P), MPWRD	Member
4.	Shri Jitendra Kumar EE, KBLCCD-II, Banda (UP)	Member

Annexure-II

DECLARATION IN RESPECT OF THE SUBMITTED BID

It is declared unconditionally and unequivocally that:

1. That we _____ (name of the bidder) have submitted our bid for EPC Execution of Daudhan Dam under Ken Betwa Link Project.
2. That we have carefully perused the limiting provisions in the Tender document including amendments, particularly but not limited to, the availability of quarries for construction materials, the working hours and the dumping sites and we have verified our facts on the ground.
3. That we have understood that the obligations of the KBLPA are limited to those mentioned in Article 46 of the GCC of the tender document (including amendments).
4. That any deviations in our submitted bid, whether tacit, by implication or otherwise, with the tender document are hereby unconditionally withdrawn by us and will not form the basis for any claim in the time extension or the financial compensation from Ken-Betwa Link Project Authority (KBLPA).
5. That the construction method and the construction equipment proposed by us are tentative and may require changes during actual execution of work to ensure scheduled completion of the Work Package and accordingly we undertake that, for any change in the construction equipment requirement necessitated to ensure completion of Works within the specified Time for completion, we shall deploy additional construction equipment as required at our cost.
6. We hereby convey our unequivocal and unconditional acceptance of the conditions stipulated in the tender Documents (including amendments) and confirm that we have quoted our prices accordingly after taking into cognizance of Scope of Work, the Owner's Requirements and probable Risks as identified in Risk Allocation Schedule (Appendix GCC-9).
7. That we have read the Risk Allocation Schedule appended with the tender document as in reference to Article 55 and undertake that in the event of any conflict, the provisions contained in the Risk Allocation Schedule shall prevail over any other provisions in the tender documents and those mentioned in our submitted bid.
8. We further undertake that in the event of resultant contract being awarded to us, we shall strictly abide by these requirements and fulfil all the contractual obligations in letter and spirit as envisaged in the tender document.

Note: This Undertaking shall be given on Bidder's Letter Head and signed with seal by the authorized signatory of the bidder having the Power of Attorney to do so.

CONFIDENTIAL

Government of India
Ken Betwa Link Project Authority
Bhopal

REPORT OF THE

PRELIMINARY SCRUTINY COMMITTEE

EPC Tender for Daudhan Dam

Bhopal
April 2024

CERTIFICATE

This volume of "Report of The Preliminary Scrutiny Committee For EPC Tender For Daudhan Dam" comprises Pages 1 to 102 , excluding the cover, index of contents and this certificate.

The Preliminary Scrutiny Committee For EPC Tender For Daudhan Dam Tender Evaluation Committee hereby submits this report.

26/4/24

Pradeep Kumar Saxena
Consultant-I and Member

26/4/24

Raj Kumar Mishra
ACEO (HW) and Chairman of the Committee

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EPC CONTRACT FOR DAUDHAN DAM

REPORT OF THE PRELIMINARY SCRUTINY COMMITTEE

1. BACKGROUND

1.1 The National Perspective Plan (NPP) envisages inter-basin water transfer from water surplus basins to water deficit basins/areas. Ken Betwa link is one of the 30 links identified under NPP.

1.2 A tripartite Memorandum of Understanding for the preparation of the Detailed Project Report (DPR) of the Ken-Betwa Link Project (KBLP) was signed between the Government of India, the Government of Madhya Pradesh (MP) and the Government of Uttar Pradesh (UP) on 25.08.2005.

1.3 Subsequently, the National Water Development Agency (NWDA) completed the work of preparation of DPR in December 2008. DPR was modified based on the inputs of the States of UP and MP and submitted to the concerned States in April 2010. Thereafter, based on the suggestions of the Governments of MP and UP, some more components were included in the project. A comprehensive DPR incorporating all the above components was prepared in the year 2018.KBLP was declared as a National Project in the year 2008 as per the Guidelines for National Projects.

1.4 The total cost of KBLP has been assessed at ₹ 44,605 crore at 2020-21 price levels. The Union Cabinet has approved central support of ₹ 39,317 crore for the project, covering a grant of Rs.36,290 crore and a loan of ₹ 3,027 crore. Out of the total layout of ₹ 44,605 crore for the project, ₹ 14,033.18 Crore is for the component-I(a) 'where KBLPA is the implementing agency'.

1.5 KBLPA is responsible for the execution of the Daudhan dam, powerhouse, tunnels and Ken-Betwa link water carrier as specified in clause 7.1 of the Memorandum of Agreement dated 22ndMarch 2021 and is also responsible for the overall implementation of KBLP. For works under implementation by the States, KBPLA coordinates with them for financial and works planning, fund release supervision etc.

1.6 A tripartite Memorandum of Agreement (MoA) for the implementation of the project has been signed by the Hon'ble Union Minister for Jal Shakti and Hon'ble Chief Ministers of MP and UP on 22.03.2021 in the presence of the Hon'ble Prime Minister.

2. THE PROJECT

2.1 KBLP is a multi-purpose project with irrigation, hydropower and water supply benefits. The project envisages providing substantial benefits to the water stressed Bundelkhand region of MP and UP, as well as to the Vidisha, Shivpuri and Raisen districts of MP. The project will provide annual irrigation to an area of 10.62 lakh ha (8.11 lakh ha in MP and 2.51 lakh ha in UP) in the Chhattarpur, Tikamgarh, Panna, Sagar, Damoh and Datia districts of MP and Banda, Mahoba, Jhansi and Lalitpur districts of UP in Bundelkhand region as well as to the Vidisha, Shivpuri and Raisen districts of MP.

2.2 The construction of two new barrages in UP, to be executed by the Government of UP under this project, would further help in adding 1.26 lakh ha annual irrigation under the project. The project will provide 194 Million Cubic Metre (MCM) of water for enroute drinking water supply to a population of 62 lakh (41 lakh in MP and 21 lakh in UP). The project has the provision for the generation of 103 MW of hydropower and 27 MW of solar power.

3. THE STEERING COMMITTEE

3.1 The Govt. of India vide Gazette Notification dated 9th February 2022, has constituted a Steering Committee (SC) and Ken-Betwa Link Project Authority (KBLPA) for the implementation of Ken-Betwa Link Project (KBLP) as a joint project of Govt. of India and states Madhya Pradesh and Uttar Pradesh.

3.2 The Steering Committee comprises nominees of the MoEF&CC, MoP, DoE, MoTA, NITI Aayog, the representatives of the partner states as well as other representatives of various line departments

3.3 While granting the Stage-I clearance for the project the MoEF&CC stipulated *that "The State Govt. and the user agency shall ensure that the proposed Powerhouse, which has the capacity of 78 MW, shall not be constructed in the forest area to be diverted to avoid constant disturbance in the PTR".*

The Steering Committee, in its third meeting held on 18 January 2023, held that since the two powerhouses are located in the PTR area, it would require a relaxation of the conditions of clearance by MOEF&CC. It would therefore be appropriate to proceed with the tender of the Daudhan dam without these two powerhouses as relaxation from MOEF&CC may take time. However, two components of powerhouses i.e. surge shaft on the exit of the lower level tunnel and penstock to be embedded in the Daudhan dam need to be taken up along with the construction of the Dam as these cannot be constructed later. Meanwhile, the study on the soundproofing of powerhouses may be completed and then MOEF&CC shall be approached for relaxation. The tender document may be examined thoroughly by expert including its financial aspects.

3.4 The Steering Committee of Ken Betwa Link Project (SC-KBLP) in its 2nd Meeting held on 20th July 2022 also agreed to constitute a Technical Advisory Group for KBLP (TAG-KBLP) to review and advise the Authority on various planning and technical matters in the implementation of various components of the project.

4. DELIBERATION IN THE TECHNICAL ADVISORY GROUP

4.1 The original tender which was earlier prepared by NHPC in 2019 included the powerhouses in the scope. However, in pursuance of the decision taken by the Steering Committee mentioned at Paragraph 3.3 above, another set of tender documents was prepared in with the exclusion of powerhouses but keeping the provision for the same. It was also ensured that the tender meets compliance with various guidelines of DoE and CVC.

4.3 In pursuance of the directions of the Steering Committee, a Technical Advisory Group, headed by Director NHPC (retd) and experts from CWC, CSMRS and the Govt of MP and

UP and invited experts, was constituted on 26.08.2022 to finalize the tender. The draft tender went through multiple rounds of deliberations in TAG in FIVE of its meetings between February – July 2023.

4.4 In between, a stakeholder consultation was held in March 2023 to invite suggestions from prospective bidders. The viable suggestions were incorporated in the tender and the Draft Tender was finalized by the TAG in July 2023.

5. TENDER EVALUATION COMMITTEE (TEC)

5.1 Vide order dated 6 June 2023, the Tender Evaluation Committee, chaired by the CEO, KBLPA and representations of Governments of MP and UP, CWC and the Finance wing of the Ministry had been constituted with the primary mandate to finalise the Bid Document, Evaluation of Eligibility/ Qualification Criteria and resolve all queries raised by the bidders during the Pre-bid meeting.

5.2 The TEC is also mandated to evaluate the technical suitability of the bid, evaluate commercial conditions and prepare a recommendation for the techno-commercial bid to declare successful bidders. The TEC has been empowered to evaluate the bids to select the lowest (L1) bidder - the lowest evaluated, substantially responsive, bid which meets the eligibility/ qualification criteria and techno-commercial aspects.

5.3 The TEC, after holding deliberations in two meetings to review the document, recommended that with certain modifications, the tender document may be floated.

6. INVITATION TO BIDDERS

6.1 In pursuance of the recommendations of the TEC, Online bids for "EPC execution of Daudhan Dam under Ken-Betwa Link Project" were invited through the CPP Portal bearing Tender ID: 2023_NWDA_766386_1 on August 11, 2023, through open tender on Domestic Competitive Bidding basis in Single Stage Two Envelope System (Envelope-1): Qualification Requirements (QR), Techno - commercial Bid and Envelope-2: Price Bid. The date of opening of the tender was fixed as 20 October 2023

6.2 A Pre-Bid Conference was held on 09.09.2023 to address the queries of the bidders. Subsequently, the TEC-KBLPA discussed the queries received through email. The decisions of the KBLPA in respect to General Queries and Specific Queries of the bidders along with the corrigendum, were uploaded on the CPP Portal. The individual prospective bidders were also intimated through email. Further clarifications as sought by bidders since floating of the tender were addressed through email and corrigenda were issued, if needed, from time to time.

6.3 To facilitate the bidders submitting the comprehensive proposal, the dates were extended four times. A second pre-bid consultations were also held on 1st February 2024 and acceptable suggestions were incorporated through the Corrigendum. The online submission of bids and submission of hard copy of tender fee, EMD, Power of Attorney was closed on 5th March and 8 March, 2024 respectively.

7. RECEIPT OF BIDS

7.1 The Technical bids were opened on 11 March 2024. Following bidders submitted the bids arranged in chronological order:

1. Patel Engineering Limited, Mumbai & Mahalakshmi Infra projects Pvt. Ltd. Kolhapur (Bid 1 of 6)
2. NCC Limited, Hyderabad (Bid 2 of 6)
3. Dilip Buildcon Limited, Bhopal (Bid 3 of 6)
4. Megha Engineering & Infrastructures Ltd, Hyderabad & Rithwik Projects Private Limited, Hyderabad (Bid 4 of 6)
5. Hindustan Construction Company Ltd., Mumbai & Rail Vikas Nigam Limited, New Delhi (Bid 5 of 6)
6. Larsen & Toubro Ltd. (Bid 6 of 6)

8. PRELIMINARY SCRUTINY COMMITTEE

8.1 A Preliminary Scrutiny Committee was constituted vide order No. KBLPA/ 2023/ ACEO(HW) / 967-970 dated 04.10.2023 under the chairmanship of Shri R. K. Mishra, ACEO (HW). The members from WRD, MP were provided by the Engineer-in-Chief, WRD, MP and representative members from UP were provided by CE, I&WRD, UP. 8.2

The purpose of the committee is to scrutinize the submitted bids and determine their responsiveness with respect to tender documents.

8.2 Subsequently, the Government of MP, vide letter No /271/e-tendering/2023-24/506 dated 3.4.2024 conveyed that due to General Elections, its officers are also engaged with election training and duties without any relaxation along with their regular departmental responsibilities and therefore requested to withdraw the work from officers of MPWRD and relieve them from evaluation process.

8.3 However, the inputs from the representative of the Government of UP and the Finance Division of KBLPA were supplied through email and have been incorporated in the report.

8.4 Accordingly, the six numbers of bids received were examined by the preliminary scrutiny committee members. The bidder-wise observations, evaluation and recommendations are given in Annexures 1-6.

ANNEXURE 1 –KBLP JOINT VENTURE (BID 1 OF 6)

PART A- QUALIFICATION REQUIREMENTS

1. **ELIGIBILITY AND SUFFICIENCY OF THE SUBMITTED DOCUMENTS**

a) **The KBLP JOINT VENTURE, MUMBAI** (hereinafter called as "the bidder" in Annexure 1) is formed by M/s Patel Engineering Limited as Lead Partner (66%) & M/s Mahalakshmi Infra Projects Pvt. Ltd (MIPL) as other partner (34%). The JV agreement is available at *Page No 110 (vol 2)* of the bid. The bidder is classified as a "Joint Venture with the subcontractors" in accordance with Para 4 of the ITB.

b) In respect of the lead partner, M/s Patel Engineering Limited, the Certificate of Incorporation is enclosed at *page 225* and a fresh certificate of incorporation due to a change of name in Dec 1999 is placed at *page 227.* AoA is enclosed at *page 229* and MoA at *page 335.*

c) In respect of the other partner, M/s Mahalakshmi Infra Projects Pvt. Ltd(MIPL), fresh certificate from the Registrar, Ministry of Corporate Affairs, GoI, consequent to conversion from Public Company to Private Company is enclosed at the *page- 274.* MoA is placed at *page 280* and AoA at *page 287.*

d) During the last three years, both the partners of the JV have not been declared ineligible/ suspended/ blacklisted/ banned/debarred by appropriate agencies of the Government of India or Governments of MP and UP from participation in the Tender Processes of all of its entities*(Page 189 and 194 of Vol 3).*

e) Both the partners of the JV have>50% Make in India status and have submitted the declaration to this effect in Form 6*(Pages 56 and 58 of Vol 4).*

f) No corporate insolvency resolution process has been admitted against both the partners of the JV*(Pages 47 and 49 of Vol 4).*

g) The bidder has submitted the BG No 49580lGl0069323 for Rs 10.0 Crore issued on 18.12.2023 and valid till 28.02.2025 (360 days), available at *Page 66 of Vol 1*. The bidder has also submitted the DD/Banker's cheque towards the cost of the Tender fee of Rs 40,000 through DD No 671641 revalidated on 01.03.2024 (copy available at *Page 4 of Vol 1).*

h) The lead partner has submitted the Power of Attorney issued on August 1, 2023 in favour of Mr. James Kurian, Vice President (Tendering & Estimation) with the copy of the resolution dated 01.08.2023. The period of validity, however, is not given. The PoA and the copy of the resolution are placed at *Page 87 and page 93 of volume 2* respectively

2. The MIPL has submitted the Power of Attorney issued on 15.12.23 in favour of Mr. Dhirendra Anant Bhat , Director with the copy of the resolution dated 01.08.2023, valid and effective for a period of 3 (Three) years or so long as the Attorney shall continue to be

in the employment of the Company whichever is earlier. The PoA and the copy of the resolution are placed at *Page 95 and page 98 of volume 2* respectively.

3. The MIPL has given the PoA to the lead partner, to do on behalf of the Joint Venture, all or any of the acts, deeds or things necessary or incidental to the Joint Ventures bid for the contract until the culmination of the process of bidding till the contract agreement is entered into with the Ken Betwa Link Project Authority (KBLPA) and thereafter till the expiry of the contract agreement. *(Page 100 of Vol 2)*

4. Both the partners of the Joint venture, i.e. PEL and MIPL have submitted undertakings dated 05.03.2024 towards Anti-profiteering Clause of GST Act / Rules *(Page 206 and 207 respectively in Volume 4)*

5. **QUALIFICATION REQUIREMENTS**

3.1.1 GENERAL EXPERIENCE

(a) Technical

Criteria

*The lead bidder (Sole Contractor or **Lead Partner of the Joint Venture**) should have General Construction Experience as Prime Contractor or Partner of JV or Sub-contractor approved by the employer, of executing a major Civil Structure (Dam/Tunnel) in a Water Resources/ Hydro Power Development Project for a period of at least two (2) years in preceding ten (10) years. In case of tunnelling works, the experience of tunnelling of highway tunnel / railway tunnel/Metro tunnel shall also be considered.*

Observation

The Lead Partner, M/s. Patel Engineering Limited (PEL) have executed/executing the following projects: - *(Page 336, Vol 3)*

	Name of the Project		**Period**
a)	Kameng Hydro Electric Project	:	2004-19
b)	Parbati Hydro Electric Project.	:	2002-23
c)	Rampur Hydro Electric Project	:	
d)	Shongtong Karcham HE Project	:	2012-27
e)	Subansiri HEP (LOT - SSL6)	:	2020-24
f)	Luhri HEP	:	2020-25
g)	Teesta HEP Stage VI (Lot II).	:	2021-25

Thus this criterion has been met by the lead bidder.

(b) Financial

Criteria

*The main bidder (Sole Contractor or the **Lead partner of the Joint Venture**) should have successful experience as Sole Contractor or Partner of the JV or sub-contractor approved*

by the employer of having successfully or substantially completed, during last 20 years, either of the following works:

i. *Major components of three Water Resources / Hydropower/infrastructure projects with cost of executed works not less than INR 700 crore each OR*
ii. *Major components of two Water Resources/Hydropower/ infrastructure projects with cost of executed works not less than INR 1000 crore each OR*
iii. *Major components of one Water Resources/Hydropower/ infrastructure projects with cost of executed works not less than INR 1500 crore.*

Provided that

a) *The start and completion date for the above experience should fall within the preceding twenty (20) years reckoned from the last day of the month previous to the one in which Tender is invited*
b) *The substantially completed works for the above purpose means the works for which at least 80 percent payments of the contract value have been received. For contracts under which the applicant participated as a joint venture member or sub-contractor, only the applicant's share, by value, shall be considered to meet this requirement.*
c) *For arriving at cost of similar work, the value of work executed shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated from the date of completion of the work to the date of Bid opening.*

Observation

The bidder has completed the following works

Name of the works		**Value of Work of share Completed After enhancing the Value (@7% p.a (Crore)**
Kameng HEP (Pkg. I)	PEL (2004-21)	763.18 (75% share)
Kameng HEP (Pkg. III	PEL(2004-19)	796.66
Kalwakurthy LIS	PEL(2005-17)	742.80
Rampur HEP	PEL(2007-14)	1572.19
AP-7 Road Project	PEL(2008-10)	1251.50

The Financial Experience Criteria have been fully met by the lead bidder.

3.1.2 SPECIFIC EXPERIENCE

A. CIVIL WORKS

*In addition to meeting the criteria of General Experience (Para 3.1.1), the bidder (Sole Contractor or the **Joint Venture collectively**) should have successful specific experience of having successfully or substantially completed, during last 20 years, all of the following works:*

(i) a) Concrete Dam with gated Spillway

At least one concrete dam of height not less than 15 m from the deepest foundation level to the crest level, with a gated Spillway and necessarily having a foundation gallery and instrumentation/inspection gallery AND

(i)(b) Earthen dam/ Rockfill/Composite Dam

At least one earth/rockfill/composite dam of height at the dam axis not less than 15 m from deepest foundation level to the top

(ii) Earthwork and concreting

Completion of following quantities in water resources/infrastructure projects, necessarily inclusive of that in (i) above, in the last 20 years

(a) gross combined excavation of 4,00,000 cum AND

(b) gross combined earth filling of 20,00,000 cum AND

(c) gross combined concreting of 9,00,000 cum with at least 3,00,000 cum of concreting achieved in a year at least once

For the purpose of this qualification, ***not more than five projects, necessarily including those in (i) above, shall be considered***

For contracts under which the applicant participated as a joint venture member or subcontractor, only the applicant's share, by value, shall be considered to meet this requirement.

(iii) Tunnelling

Completion of tunnel excavation and lining of at least one tunnel of minimum finished diameter of 5.5 m and length not less than 1000 m. For this purpose, experience of tunnelling of Highway tunnel/ Railway tunnel/Metro tunnel shall also be considered.

Para 4(D)(i) The Lead Partner to fully and necessarily meet the following:

- *Average annual turnover not less than 51 %of the criteria specified under financial capacity,*
- *Working Capital criteria*
- *General construction experience criteria specified for the tender.*
- *Specific Experience Criteria for the Dam (3.1.2 (i)A) or (3.1.2 (i)B)*

Provided that the start and completion date for the above specific construction experience should fall within the preceding twenty (20) years reckoned from the last day of the month previous to the one in which the Tender is invited.

Observation

a) To meet the requirement of experience in the **concrete dam**, the lead partner has submitted the experience in the construction of the dam in **Kameng HEP – Pkg 1** (2004-21) of height 69.0 m with the foundation gallery and instrumentation/inspection gallery. *(Pg 336 of vol 3)*

b) To meet the requirement of experience in **earthfill/rockfill/composite dam** the Lead Partner has submitted the experience in the construction of the **Serlui earthen Dam** (2004-09) of height 51 m. The JV Partner has submitted the experience in the construction of earthen dam height 81 in the **Aruna Medium Irrigation Project** (2005-23)*(Pg 336 of vol 3. Certificate at page 420 of Vol 3).*

c) To meet the requirement of experience in **gross combined excavation** the bidder has submitted the following:

Project	By	Qty (cum)	Quantity (cum)
Kameng package I&III*	Patel	409583x75% + 2284859	25,92,046
Serlui*	Patel	4,27,935	4,27,935
Teesta Low Dam St III	Patel	36,33,797	36,33,797
Aruna Project	MIPL	Not included	0
Rampur	Patel		27,64,795
			94,18,573
*These are the projects mentioned in criteria i(a) and i(b) and are to be mandatorily included in the five projects			

Any one of the above projects meets the criteria of 4 lakh cum of excavation

d) For meeting **gross combined earth filling** the bidder has submitted the following

Project	By	Qty (cum)	Quantity (cum)
Kameng package I & II*	Patel	0	0
Serlui*	Patel	4,27,935	12,66,437
Teesta Low Dam St III	Patel	36,33,797	6,97,188
Sawara Kuddu Barrage	Patel		1,16,393
Keoti Taroki (81.26% completed)	Patel		19,85,000
			40,65,018
* These are the projects mentioned in criteria i(a) and i(b) to and are to be mandatorily included in the five projects			

The bidder meets the criteria by considering only four projects

e) For meeting **gross combined concreting,** the bidder has submitted the following:

Kameng package I & II*	4,84,908x75% + 1,94,883	5,58,564 cum
Serlui*		0
Aruna Project		32,765
Sawara Kuddu Barrage		1,95,285
Rampur		3,96,937
		11,83,551 cum
* These are the projects mentioned in criteria i(a) and i(b) and are to be mandatorily included in the five projects		

The bidder has claimed to meet the criteria by considering different projects to meet each criterion. Thus, it has considered seven projects instead of the permitted five. So is in the case of meeting the criteria of 3 lakh cum in a year.

The bid condition says that *"For the purpose of this qualification, not more than five projects, necessarily including those in (i) above, shall be considered".* However, the bidder has considered different projects to meet different subsets of conditions which appears to be a violation of the condition and to be considered by the TEC. The Specific Experience Criteria (Civil) of Para 3.1.2 does not seem to have met fully.

f) To meet the experience in tunnelling the bidder has submitted the following:

Kameng package II*	6.70 m dia	7293 m long
Kameng package III*	6.70 m dia	3149 m long
Rampur	10.50 m dia	2213 m long

As per Article 4(D) , each partner shall meet at least one specific experience criteria. In this case, the JV has not mentioned the criteria to be met by the other partner. The JV agreement too does not mention the specific role . This needs to be sought from the bidder

3.2 HYDRO-MECHANICAL WORKS:

The bidder has proposed the following sub-contractors for HM works

I. Precision Infratech Pvt. Ltd.
II. Texmaco Rail & Engineering Ltd.
III. PES Engineers Pvt. Ltd.

As per Corrigendum 01 page 3 of 22 dated 18.09.2023 the same can be provided within 90 days of the issue of LoA. Hence this aspect has not been seen in further details

3.4 DESIGN AND ENGINEERING WORKS:

The bidder has proposed the following sub-contractors for HM works

I. AFRY India Pvt. Ltd.
II. SMEC International Ltd.

As per Corrigendum 01 page 3 of 22 dated 18.09.2023 the same can be provided within 30 days of the issue of LoA. Hence this aspect has not been seen in further details

3.5 FINANCIAL CAPACITY

(i) Turnover

*Minimum average annual construction turnover of the **sole bidder or the Joint Venture** as specified in Article 3.1 (C) in the preceding 3 years shall be **INR 1,500 crore**. For arriving at the turnover of the years prior to 2021 -22 , the same shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum*

*While calculating the average turnover for the last three years , the bidder can exercise an option of **excluding the year 2020-21 as pandemic year** and include **either** (a) the year 2018-19 with the weightage of (1.28) or (b)the year 2022-2023 (with the weightage of 1.0, provided Audited Balance sheet or CA Certificate based on Audited Balance Sheet is available). **This option permits only the year 2020-2021 to be excluded** and the continuous three years period with the exclusion of 2020-21 will be considered.*

The JV Partner to have average annual turnover not less than 20% of the criteria specified under financial capacity.

Observation

					INR, Crores
Year	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**Average**
Factor @7% p.a.	*1.28*	*1.21*	*1.14*	*1.07*	
PEL	2,642.65	2,717.11	Excluded	3,117.14	*2,825.63*
MIPL	491.42	374.95		260.06	375.47

The average turnover of the lead partner for the past three years is >1500 crore while that of the minor partner is >300 crore (20% of the criteria). Hence the requirement has been met.

(ii) Net Worth

*Net worth (paid up share capital + reserves & surplus) of the bidder (**and each partner of JV in case of JV**) of last 3 financial years should be **positive** and Net Worth of the **bidder or JV of last Financial Year should not be less than 450 crore**. While calculating the Net Worth for the last three years , the bidder can exercise an option of **excluding the year 2020-21 as pandemic year** and include either the year 2018-19 with the weightage of (1.28) or the year 2022-2023 (with the weightage of 1.0, if Audited Balance sheet or CA Certificate based on Audited Balance Sheet is available). This option permits only the year 2020-2021 to be excluded and the continuous three years period with the exclusion of 2020-21 will be considered.*

Observation

					INR, Crore
Year	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**
Factor @7% p.a.	*1.28*	*1.21*	*1.14*	*1.07*	*1.0*
PEL	2,853.31	3,019.52	Excluded	2,673.26	NA
MIPL	324.44	365.43		401.52	NA
Total	3,177.75	3,385.05		3,074.78	NA

The net worth of both the partners of the JV for the last 3 financial years is positive and the combined Net Worth of the last financial year is more than 450 crore. Hence the bidder meets the criteria

(iii) Working Capital

*The working capital of the bidder/JV (current assets minus current liabilities) shall be at **least INR 200 crore.***

For this purpose, a certificate from a Chartered Accountant should be submitted. Only Audited Balance Sheet or CA certificate based on the Audited Balance Sheet shall be considered. Provisional balance sheet will not be considered.

Observation

The audited balance sheet for the year 2022-23 has not been provided . The same needs to be sought from the bidder. However, based on the unaudited balance sheet:

I. The PEL's working capital is **Rs 1332.65 crore (for FY 2022-23)**
II. The MIPL's working capital is **Rs 300.66 crore (for FY 2022-23)**

The bidder meets this criterion SUBJECT TO providing the audited balance sheet.

3.6 BID CAPACITY

The available Bid Capacity of the bidder (Sole bidder or JV as specified in Article 4.1 C (vi) below) at the time of submission of Price Bid, calculated as under should ***not be less than the 5000 crores***

For the purpose of this qualification, the work done outside of India by companies of Indian origin, either as Sole Contractor or Lead Partner of the Joint Venture can be considered, provided that, the bidder furnishes a certificate issued by the client, giving the physical and financial details of the work done. Such a certificate needs to be necessarily authenticated by the Indian Embassy/Mission in the country where such work has been claimed to be done. Acceptance of this certificate, however, will be the sole discretion of KBLPA.

The cost of executed works carried out outside India in (B) above shall be converted into INR equivalent. For this purpose, the cost of executed works carried out outside India shall be converted into INR equivalent at the rate of exchange of the foreign currency to Indian Rupees. (SBITT Selling Rate applicable on the date of opening of Price Bid) will be applied.

Observation

The bid capacity of PEL is **23,355 Crore** and that of MIPL is **5,500 Crore**

The bidder meets this criterion

PART B- DATA SHEETS

Data Sheet-1: Bidder's Appreciation of the Project

As per tender provisions, bidders are required to submit a report consisting Bidder's appreciation of the project, which should include a section on the site inspection carried out prior to Bidding to demonstrate awareness and understanding of all the principal technical and logistic aspects etc. required for completion of Works.

The Lead Partner, M/s Patel Engineering Ltd, has visited the site twice. The bidder has appreciated the site conditions prevailing at various locations of the Project. The bidder has submitted the Project Appreciation narrating access to the site. Status of existing project roads and new permanent and temporary roads proposed to be constructed, transport logistics, availability of resources, local facilities and services in the project area, construction material, muck disposal sites, power, water supply, communication facilities, local taxes & laws and availability of explosive its storage and handling.

The bidder has touched on different aspects of the Project in his submission and covered the scope of work in brief. **However, regarding land, the bidder has mentioned that Land required for the construction of the project components including access roads, dumping sites, quarry & borrow areas shall be handed over to the Contractor by the Employer free of encumbrances as per the provisions of the bid documents. But the above is not as per**

the provisions of the tender. The Employer is to provide land only for the construction of the project components including access roads and for designated dumping sites. No land for quarry sites / borrow areas is to be provided by the Employer.

The bidder has assumed to utilize submergence area for contractor's construction facilities like roads, plants, camps, offices etc. However, as clarified in the pre-bid , this utilization is subject to permission from PTR and other relevant authorities like PCB etc.

The bidder has proposed to utilize the rock material excavated from the project components for production of coarse & fine aggregate by installing a suitable capacity Aggregate processing plant at site. However, this will depend on the suitability of the excavated muck and complying with relevant standards. Further, the bidder has also mentioned that an adequate quantity of suitable material will be available from this excavation and obtaining rock materials for the production of aggregates from any other locations shall have additional financial implications and shall be dealt with separately. This is not acceptable and the bidder needs to withdraw such an assertion, which is not in line with the tender provision as deliberated in the above paras.

The bidder has mentioned that while carrying out the excavation works, the muck generated will be stockpiled in the nearby vicinity for reusing the same for the production of aggregates or as filling materials and considering this has taken an average lead of 3Kms for disposal of excavated materials. **However, this is not in line with tender provisions, as per that the muck is to be disposed in designated areas only and lead to be considered accordingly. Hence, the bidder is required to withdraw this assumption.**

The bidder has mentioned that they have studied the site conditions and tender documents in detail and have evolved the best design and methodology of construction considered in their opinion and formulated the construction schedule as well as the price estimate as per the information made available to them in bid documents and expect that no substantial variation, especially in Geology and other ground/site conditions, shall be encountered. **However, any variation if met with during execution shall have an effect both on time and cost and therefore shall be dealt with separately as per the actual situation.**

However, this is not in line with tender provisions. The Price includes all the probable risks identified in the Risk Allocation Schedule and not allocated to the Employer. Hence, this needs to be withdrawn by the bidder.

Data Sheet –2: Bidder's Proposed Organizational Setup for the Project

The Bidder has submitted the Preliminary Overall Project Management Organisation Chart and Organisation Chart for Planning D&E services, Civil Works, HM works and Narrative description of the Organisation Chart. The relation between Head office and site Management has also been shown.

Data Sheet –3: An Outline of the Project Components along with Drawings.

The bidders are required to submit, in outline, descriptions of proposed project components along with relevant drawings. The information should be submitted in sufficient detail to allow assessment of the general adequacy of the Bidder's proposal. Sketches, drawings and diagrams should be included where necessary for clarification of the description. These drawings of the successful bidder shall form part of the Contract as 'Tender Drawings'.

Dam:

The proposed Daudhan dam site falls in zone II indicating low seismicity of the area. The values of horizontal and vertical seismic coefficients adopted are 0.06 g & 0.04 g respectively, which have been approved by NCDSP. One no. Inspection gallery of size 2.25 m (H) x 1.50 m (W) at EL 260.00 m and one no. foundation gallery of size 2.50 m (H) x 2.00 m (W) at 3m above deepest foundation level varying from approximately EL 225.51 m (for overflow section) to approximately EL 196.00 m (For NOF section) have been envisaged.

Overflow Section (Spillway)

The overflow section has been designed to pass peak flood of 57,202 m^3/s (PMF) with crest level at EL 236.00 m and MWL at EL 288.00 m. An auxiliary spillway is provided with its crest at El 286.00 m.

Non-Overflow Section

The top width of the non-overflow section is proposed as 8m (gross). The right NOF section shall be of concrete blocks. Foundation treatment for overflow and non-overflow shall be as per the approved design and drawing. The right flank is resting on the hill slope. Varying from impervious core to semi-pervious shell material, the size of core depends upon the availability of impervious material.

The material of the embankment portion is mainly CI & CL. The 0.6 m thick sand drains at 5 m intervals have been proposed in the u/s draw-down portion to relieve pore pressure in the event of draw down. The parameters of the earthen portion of the dam shall be as per the approved design and drawing.

The foundation treatment has been decided based on the geological interpretation carried out from the data of drill holes and other investigations. To control the under seepage cut off trench and grout curtain in three rows staggered at 3 m c/c up to a depth half the hydraulic head measured above the base of the cut-off trench up to FRL can be considered. In addition, peripheral grouting to be carried out up to FRL. At the time of pre-construction/construction the depth of curtain shall be decided in consultation with geologist. The post-grouting permeability should be less than 5 lugeons for which additional curtain grouting holes may have to be drilled at lesser spacing than 3m to achieve less than 5 lugeons permeability. The permeability shall be checked in the holes grouted and the middle of the two grouted holes. The detailed investigation is to be carried out at construction stage for suggesting treatment to control seepage through right abutment. Based on the investigation, foundation treatment needs to be provided in consultation with the geologist.

Earthquake coefficients an a_h 0.06g and a_v as 0.04g have got approved by the National Committee of Seismic Design Parameters (NCSDP).

Energy Dissipation Arrangement

Due to low TWL at Dam toe and further consolidated by sound rock at the d/s of riverbed, a ski-jump type spillway is considered appropriate according to IS- 7365:1985. The jet coming down the spillway is thrown sufficiently away from the toe of the dam. Considering hard rock at d/s of the bucket, no specific scouring arrangement is being proposed. However, based on

site condition and model studies the contractor shall design and propose the energy dissipation arrangement during construction stage, taking sufficient precaution in design.

Openings through Daudhan Dam

In addition to the sluice spillways, four openings, in all, are proposed to be provided in the concrete section of the Daudhan dam. Two openings act as intake for the dam toe PH-I and other two openings act as river sluices to release water to meet d/s requirement when the PH-I is not in operation. A provision has been kept to pass continuous flow of water for the d/s requirement. It has been planned to release a water of 40 m^3/sec through sluice when the water level in reservoir reduces to below EL 252.0 m. Accordingly two number of sluices size 1.6 m x 2.4 m have been proposed at EL 238.0 m.

Lowering of Bucket Lip Level

The bidder has mentioned that in bid drawings, the bucket invert is envisaged at EL 236.00 m, whereas the maximum tail water level is EL 241.00 m corresponding to flood discharge of 57,202 m^3/s (PMF), which implies that the clear flip action cannot be achieved in the case of PMF for the proposed layout. The bucket invert and crest level of the sluice spillway in bid drawings are proposed at same level i.e., at EL 236.00 m. Therefore, d/s part of seal beam of the radial gate, the glacis and bucket of the spillway will remain under water even under gate closed condition.

The bucket radius, bucket invert level is also revised while lowering of bucket lip level. The proposed arrangement will be verified for its efficacy through a physical model study during the detailed design and engineering phase.

Shape of Glacis of Auxiliary Spillway Bay

An auxiliary spillway bay is indicated within a double pier at the centre of the spillway portion. The crest is envisaged at EL 286.00 m, 2 m lower than the FRL. The objective of providing the auxiliary spillway is to pass the floating debris such as logs, tree trunk during passage of flood. However, glacis of the auxiliary spillway bay is kept very steep followed by a flat horizontal apron. This arrangement is not an ideal one to pass the floating debris. In pre-bid design a circular arc in vertical plane is proposed covering the entire spillway so that floating debris can glide all along its path through the auxiliary spillway bay.

Extension of Intermediate Pier upto Bucket Lip

In bid drawings all piers are extended upto bucket lip level. In pre-bid drawings the piers are extended for every three sluice spillway bays and thereby reducing specific discharge. The piers are tapered in the direction of flow. For remaining bays, the pier is terminated after 5m downstream of trunnion beams and cut water shape is provided.

Reduction of width of Double Pier

In bid drawings all double piers of 5m width are envisaged. In pre-bid drawings width of double pier is proposed 4m. In doing so, individual block width of spillway bay is reduced by 2m. However, pier width of 5m is retained for auxiliary spillway bay.

Location of river sluice

In bid drawings, two river sluices are envisaged within a pier, however location is not shown in the dam body. The gate arrangement of these river sluices is provided from the top of the dam. For such a small opening and high head, the proposed arrangement is not viewed as an ideal one, in view of the difficulty of the regulation of the gate. In pre-bid drawings the river sluices are therefore proposed at the NOF section (Block-69) in the right bank. Bonnet type of gates is proposed to regulate the flow for river sluices. The gate chamber of bonnet gates is accessed by a gallery from a stair cum elevator shaft. The outlet of the river sluice is training wall of the spillway bay so that it can discharge the flow in the ski-jump bucket.

Earthen / Embankment Dam

The embankment dam proposed in the Ken-Betwa Link Project has top level of 293.00m with top width of 8 m and the height of the dam varies along its length. The zoned type of embankment dam has been proposed to minimize the amount of seepage water through dam. The central core has a top level of 291.00m with top width of 4m and side slopes of 1H:2V. The central core material shall be extended up to 7m depth below the foundation of embankment dam, which will function as a partial cut off for embankment dam. An inclined filter layer is proposed at upstream and downstream face of core, while a horizontal filter layer is proposed at downstream of central core extended up to toe drain.

In view of proposed provision of filter, the phreatic line will be started from the FRL (EL.288.00m) at upstream and follow the path of the proposed compacted fine filter material from the downstream face of impervious core material. Similarly, a horizontal compacted filter layer works as a transition layer for flow of water from foundation material to embankment dam or vice-versa. A drainage system is envisaged at bottom of the downstream face of embankment dam. Typical section of embankment dam is presented.

Seepage and Stability of embankment dam has been carried out for maximum water level at upstream side of EL 288.00 m. Stability Analysis of embankment dam is checked for various loading conditions as per provision of IS 7894.

Intake Structures

For PH-I:

Two independent intake openings in the concrete Dam portion have been proposed for the two units of PH-I non-overflow portion of Daudhan dam. The intake structure proposed on the u/s face of the dam body is of semi-circular type. The c/c distance between the two intake structures is 20 m. The intake structure mainly comprises of concrete piers, rib beams, metallic trash racks, bell-mouth entry, emergency and service gates and a maintenance platform at the top. The concrete piers and rib beams have been provided with suitable cut water and ease water shapes for streamlining the water flow. Each intake shall be designed for a maximum discharge of 82 m^3/s.

The MDDL for power generation in Daudhan Reservoir for PH-I would be EL 252.0 m. The operating platform for trash rack cleaning is provided at EL 293.0 m i.e. at Deck level for ease of maintenance in all seasons. The trash racks are provided up to EL 252.00 m. A concrete deck

is provided for the opening between the concrete piers. The trash rack grooves extend beyond EL 252.0 m up to the top of the dam.

For PH-II/Lower Level Tunnel:

The Intake of PH-II is located on the left bank, around 300 m u/s of Daudhan dam in the reservoir spread area. An independent intake structure, u/s face sloping at around 10° has been provided. The intake structure mainly comprises of concrete structure with side walls & piers, rib beams, metallic trash racks, bell-mouth entry, emergency and service gates and a maintenance platform at the top. The concrete piers and rib beams have been provided with suitable cut water and ease water shapes for streamlining the water flow. The openings in intake shall be designed for a discharge of 65.19 m^3/s.

The MDDL for power generation in Daudhan Reservoir for PH-II would be EL 260.0 m. The operating platform for mechanical trash rack cleaning is provided at EL 293.0 m i.e. at Deck level for ease of maintenance in all seasons. The trash racks have been provided up to EL 254.525 m.

For Upper Level Tunnel:

The Intake of Upper Level Tunnel is also located on the left bank u/s of Daudhan dam and 90 m further u/s of Lower Level Tunnel intake in the reservoir spread area. An independent intake structure, u/s face sloping at around 10° has been envisaged. The intake structure mainly comprises of concrete structure with piers, rib beams, metallic trash racks, bell-mouth entry, emergency and service (regulating) gates and a maintenance platform at the top. The concrete piers and rib beams have been provided with suitable cut and ease water shapes for streamlining the water flow. The intake is designed for a maximum discharge of 159.90 m^3/s.

The operating platform for mechanical trash rack cleaning is provided at EL 293.00 m, above MWL/FRL for ease of maintenance in all seasons.

Tunnels

Head Race Tunnel for PH-II/Lower Level Tunnel:

A 5.5 m dia concrete lined, modified horse-shoe shaped HRT is proposed. The length of HRT is 1008 m and at a slope of 1: 175. The excavation of the tunnel is proposed to be carried out by conventional drill and blast method from both ends, i.e. the intake end and pressure shaft end. No adit is proposed.

The tunneling media expected in HRT include massive sandstone, gravely pebbly conglomerate and inter bedded sequence of sandstone and slaty shale. For more geological details, concerned section may be referred. The rock support system which has been designed basically consists of shotcrete, rock bolts and steel ribs.

During excavation, 75 mm dia, 4000 mm long drainage holes are proposed in seepage zones. The HRT is concrete lined, 350 mm thick. A typical scheme of contact and consolidation grouting has been proposed.

Upper-Level Tunnel for Ken-Betwa Link canal:

The Upper Level Tunnel is an irrigation tunnel to divert water from the Daudhan reservoir into the Ken-Betwa Link canal. The discharge through the tunnel will vary depending upon the

water demand throughout the year. The 1928.91 m long tunnel is 8.5 m diameter D-shape and at a longitudinal slope of 1:745. The invert level at the start of the tunnel is EL 255.30.0 rn and at the end of the exit portal is EL 252.70 m.

Since, the excavation of the Upper Level Tunnel is proposed to be carried out from the intake end and exit portal side - hence no provision for adit is made. The tunnelling media expected along the tunnel include massive sandstone, gravely- pebbly conglomerate and interbedded sequence of sandstone and slatey shale and foliated quartzite. For more geological details, concerned section may be referred. The rock support system which has been designed basically consists of shotcrete, rock bolts and steel ribs.

During excavation, 75 mm dia, 4000 mm long drainage holes is to be provided as required in seepage zones. The tunnel is lined with 400mm thick concrete. A typical scheme of contact and consolidation grouting has been proposed.

Surge Shaft

For PH-II/HRT/Lower Level Tunnel

A 60 m high, restricted orifice type open surge shaft of 18 m finished diameter (Top EL 305.0m) has been proposed at the end of HRT to take care of the surges arising from the various operating conditions of the power plant. Three pressure shafts are emanating from the surge shaft bottom leading to the individual units. For isolating the pressure shaft/penstock for maintenance, separate gates have been proposed for each pressure shaft at surge shaft bottom. An orifice of 3.5 m diameter has been proposed in the orifice slab of the surge shaft satisfying the codal provision. The thickness of orifice slab is 2.0 m. 16 mm thick steel liner has been proposed around the orifice in the orifice slab.

The diameter of surge shaft has been checked as per Thoma Area. The diameter of surge shaft is kept as 26.50m. Single pressure shaft will off take from surge shaft, which will be trifurcated before powerhouse. The gate slot provided for gate will act as orifice, therefore central orifice not required. As per increased diameter of surge shaft, the upsurge level works out to be EL 291.11 m. Therefore, the top of surge shaft is kept at EL 294.50m.

Penstock

For PH-I

The penstocks originate after the transition in Intake of PH-I. The center line of penstock is at EL 243.0 m, aligned horizontal to the intake. The steel liner starts from the end of transition. The horizontal penstock is sloping at an angle of 55° as it leaves the d/s sloping face of the dam body to align almost parallel to the d/s sloping face. After the bottom vertical bend, the penstock runs horizontal. The center line of the lower horizontal penstock is EL 222.0 m which is also the center line of spiral casing. Since the powerhouse - I is not in the scope of the present proposal, the scope of the work is limited to point of emergence of the penstocks from the body of the dam. The contractor is required to provide the bulkheads designed to withstand the water pressure corresponding to the maximum water level with the mandatory factor of safety.

The internal diameter of penstocks is proposed as 4.5 m. The c/c distance between the two penstocks is 20 m. The steel liner is to be designed for full internal pressure including water

hammer. The steel liner thickness can vary from 16 mm to 20 mm along the length of the penstock.

For PH-II

Three 2.4 m finished diameter, steel-lined pressure shafts are emanating from the bottom of the surge shaft. The pressure shaft is laid horizontal from the surge shaft up to the Powerhouse with center line EL 240.0 m. The length of the steel-lined pressure shaft from surge shaft (after transition) to exit portal is 113.55 m. The length of other two pressure shafts from surge shaft (after transition) up to the exit portal including the horizontal bend is 119.6 m. Thereafter it is exposed for a length of 15 m and embedded in concrete for a length of 25 m. In the exposed reach of 15 m, it is proposed to provide a T- junction in the penstock fitted with a Howell Bunger Valve for bypassing the water to the tailrace d/s whenever the powerhouse is closed. The steel liner is to be designed for internal pressure including water hammer and checked for external pressure. The steel liner thickness proposed for the pressure shaft up to exit portal is 12 mm and thereafter up to D-line of the Powerhouse is 14 mm.

Instead of three separate pressure tunnel each of 2.4m diameter, one combined pressure tunnel of 4.15m is envisaged. At the exit portal, a junction is provided to accommodate a 3.0m diameter Howell Bunger Valve for bypassing the water to the tailrace d/s whenever the powerhouse shall be closed. Downstream of that junction, a trifurcation is envisaged.

The bidder has enclosed drawings for different components of the Project. However, the drawings of supports in different classes of rock, there are some variations, for which undertaking may obtained from the bidder that supports in different class of rock shall be as per the tender document.

Data Sheet –4: Management of Planning, Design and Engineering Works

The bidders are required to submit description of proposed management of Planning, Design and Engineering services including sequence to be used for the same, Key Design and Engineering activities, identification of Key experts along with their deployment schedule.

The bidder has proposed to engage M/s AFRY and M/s SMEC as sub-contractors for PDE work. The bidder submitted description of proposed management of Planning, Design and Engineering services including sequence to be used for the same, Key Design and Engineering activities, i.e. almost complete proposal except identification of Key experts along with their deployment schedule. However, the bidder has the option to propose PDE Agency within 30 days of issue of LoA, hence, such details may be obtained at that stage.

Data Sheet –5A: Construction Methodology of Civil Component Works

The bidder has mentioned that the construction schedule and the bid price are based on the construction methodology and geology as per the bid documents. This methodology and the construction schedule are also subject to the Owner fulfilling all obligations and commitments as per bid documents/prebid clarifications. **Any changes or variations in the above matters during execution of the project shall be dealt separately as per actual situation. The bidder may be asked to confirm that any variation is to be dealt as per tender conditions as mentioned in Risk Allocation Schedule.**

The bidder has submitted description of proposed methods, sequences, facilities and layouts to be used for execution of civil works covering the following:

Mobilization and Establishment of Construction Facilities

As soon as the order for commencement is received by the Contractor, the mobilization will begin and the initial mobilization will be completed as indicated in the Construction Schedule. However, the mobilization of remaining facilities will continue according to the requirement of works based on the Construction Schedule. Along with the mobilization of equipment and manpower, Contractor will also start establishing the construction facilities required for the execution of works as per the scope of work including installation of crushing plant, other plant & equipment, workshops, work sheds, stores, accommodation of staff & workmen etc. All logistics and facilities will be planned according to project locations and the component works involved in each location. As far as possible, all temporary installations of the Contractor will be accommodated within the land provided by the Employer.

Quarry/ Borrow Area/ Source of Material

The bidder has mentioned that as per the information provided in the bid document, the employer shall provide the quarry area free of encumbrances to the contractor for sourcing of construction materials and aggregates required for the construction of works. **However, this is not as per tender provisions as elaborated in above paras and needs to be withdrawn.**

Aggregate Production

The aggregates required for the construction of the project will be obtained by crushing and screening the material in Aggregate Processing Plant of adequate capacity installed near to the site. Suitable material for production of aggregates obtained from the excavation works will be directly taken to the Plant. The dumpers will directly unload the material into the hopper arrangement available at the Plant.

The bidder has proposed a total capacity of 900TPH Aggregate Processing Plant out of which 200TPH to be provided to cater the aggregate requirement during initial stage and a 700TPH aggregate crushing & screening plant during major concreting works, so that a total capacity of 900TPH.

The crushed aggregates will be stockpiled near to the crushing plant or batching plant area according to the availability of space to meet the minimum stock as per the requirement of works and will be loaded into the batching plant bins as necessary for the production of concrete.

Concrete Production

The concrete and shotcrete required in the project will be produced in batching plant of adequate capacity installed at location as suitable to the work requirement. The major requirement of Concrete in the project will be for the Dam Works and for other works like Intake and Upper & Lower Tunnels. The preliminary calculation for capacity of Concrete Batching Plant for the dam concreting is included in the respective chapter of Dam concreting. However, for taking up concreting in other components like, Intake and Upper & Lower Tunnel etc., Batching Plant of $60m^3$/hr (2 x $30m^3$/Hr) will be installed in the initial stage of the project.

However, the final configuration and locations of concrete batching plants will be decided after award of the contract and after detailed study of land availability, matching with the total capacity requirement proposed. The batching plant will deliver the concrete directly to the transit mixers/ concrete conveying system, which will finally feed the concrete to the concreting arrangement of respective location.

River Diversion Scheme

Considering the topography and location of Daudhan Dam, River Diversion is proposed to be done in two stages. River diversion will be carried out in the lean season.

In 1st stage river diversion, river will be allowed to flow in its natural course with construction of temporary protection bunds, if required, on the left bank to facilitate the excavation & concreting of Left Bank NOFs & 12 OF Blocks including HM Works. The river diversion is designed for a discharge of 1200m^3/s, the water during non-monsoon period is expected to flow through the portion of dam and necessary temporary protection bunds will be constructed on left bank, if required, corresponding to the diversion discharge.

In the second stage diversion, U/s and D/s Coffer dams are proposed.

Excavation and concreting of components

The Dam is proposed to be excavated and concreted in two stages. However, the bidder has proposed Roller Compacted Concrete Dam in place of conventional dam, which is not in line with the tender provisions.

The bidder has provided excavation and concreting methodology for all components of work and mentioned that sufficient arrangement for cooling / heating of aggregates will be provided.

Structures required to link Upper & Lower Level Tunnels to Canal System:

The project also involve construction of 1 No of Tail Race Canal, emanating from Power House-II, for carrying the water to the Ken Lower Branch Canal (KLBC). The construction of Outlet Portal will suffice for the purpose of linking ULT with KBLC and construction of Tail Race Canal will suffice for the purpose of linking HRT with KLBC.

Data Sheet 5B: Construction Methodology of HM Component Works

The bidder has submitted Construction Methodology of HM Component Works through proposed sub-contractors M/s Texmaco and M/s PES. However, as per tender provisions , the bidder has option to propose sub-contractor(s) for HM works within 90 days of issue of LoA.

Data Sheet-6A: Infrastructure for execution of scope of work w.r.t. "Planning, Design & Engineering"

The Bidders are required to give detailed description of infrastructure with respect to proposed deployment of computer hardware and software, in-house technical knowhow and documentation to execute the works under head "Planning, Design & Engineering"

One of the proposed sub-contractor of the bidder M/s AFRY has mentioned that for office, Laptops installed with required Softwares, and high speed internet connection shall be provided to all the experts. For printing the reports/memo/drawings, they have adequate nos. of advance printers available in their office. For time to time site visits, Laptops shall be carried by the

experts during such visits. Internet connectivity shall be made available thru Wi-Fi Flash drives. Alternatively, experts may also use the internet connection available locally.

Other sub-contractor M/s SMEC has shown availability of technical staff and design softwares.

Data Sheet-6B: Design plan for Planning Design and Engineering:

The Bidders are required to propose a detailed design plan i.e. process inputs/interface, process method and process output along with timelines for each step envisaged for executing the scope of work for scope of work w.r.t. "Planning, Design & Engineering".

The bidder through proposed sub-contractor has provided sequence of activities with timelines.

Data Sheet-6C: Format of Drawing Block

The bidder has proposed format of drawing block showing "Title of drawing", "purpose of drawing" , "Legends" , "Notes" , "Reference to other drawings", Names of preparing, reviewing and approving officials name.

Data Sheet-6D: An outline of quality assurance system for the execution of scope of work w.r.t. "Planning, Design & Engineering"

The bidder has attached Certificate of ISO 9001:2015 for Quality Management System and flow charts for checking / controlling quality of output and cited various tools available with them for Quality Control.

Data sheet-7: Details of Hydro-Mechanical Plant & Machinery

The bidders are required to submit the detailed description of the Hydro-mechanical Plant & Machinery proposed and should also include in his submission, for these Plant & Machinery, the description of their manufacturing activities-transportation to site and erection at the site in detail including interface activities with the Civil Works.

The bidder through its sub-contractor has provided list of HM equipment, description of their manufacturing activities their handling and their installation at site. However, the bidder has proposed only one set of stoplogs against requirement of five. This has to be corrected.

Data sheet 8: Deployment of Construction Equipment

The Bidders are required to list out all critical construction equipment, which would be proposed for the construction works. This should include their numbers, capacities and whether equipments proposed are to be purchased new or old. In respect of old equipment, year of manufacture and current ownership is to be stated. Construction equipment should be preferably new.

The bidder has enclosed a list of equipment for construction with their numbers, capacities and whether to be purchased new or old. The bidder has proposed three types of equipment, i.e. from the lead partner, from other partner and to be hired / leased. The bidder has proposed almost all equipment with the above three options. The bidder has mentioned that the equipment mobilized will be of manufacturing year 2018 or later or remaining life > 50% of the scheduled life of equipment.

Data sheet-9: Construction Schedule of the Project

The Bidders are required to submit a Master Control Network within the Time for Completion dates, which shall form part of Overall Agreement so as to complete the work within 72 months. The bidder has proposed the achievement of Contract Milestones as below:

Sl. No.	Description	Target month proposed by the bidder
Milestone-1	Completion of Coffer Dam	34
Milestone-2A	Completion of Cut-off trench of Daudhan Earthen Dam	49
Milestone-2B	Completion of Excavation (Dam Foundation) of Daudhan Concrete Dam	34
Milestone-3	Completion of Concreting of KBLC - Upper Tunnel	42
Milestone-4	Completion of Excavation of Lower Tunnel	30
Milestone-5	Completion of Concreting of Surge Shaft	42
Milestone-6	Completion of Concreting of Daudhan Concrete Dam	69
Milestone-7	Completion of Fill Placement of Daudhan Earthen Dam	69
Milestone-8	Completion of Gate Installation of Daudhan Concrete Dam	72

Data sheet-10: An Outline of Quality Assurance System for the Project

The bidders are required to submit, an outline, description of proposed Quality Assurance System for the implementation of the project in line with the QAP for Civil and HM works provided in the Volume-III of tender document.

The bidder has proposed Quality Assurance System for Civil and HM works, which include audit provisions and customer feedback.

PART C - ANOMOLIES REQUIRING CLARIFICATIONS

1) Regarding the land, the bidder has mentioned that Land required for the construction of the project components including access roads, dumping sites, quarry & borrow areas shall be handed over to the Contractor by the KBLPA free of encumbrances as per the provisions of the bid documents. But the above is not as per the provisions of the tender. The KBLPA is to provide land only for the construction of the project components including access roads and for designated dumping sites. **No land for quarry sites / borrow areas is to be provided by the Employer.**
2) The bidder has assumed to utilize submergence area for contractor's construction facilities like roads, plants, camps, offices etc. **However, as clarified in the pre-bid , this utilization is subject to permission from PTR and other relevant authorities like PCB etc.**
3) Further, the bidder has also mentioned that adequate quantity of suitable material will be available from this excavation and obtaining rock materials for production of aggregates from any other locations shall have additional financial implications and shall be dealt separately. **This is not in line with tender provision as deliberated in above paras.**

4) The bidder has mentioned that while carrying out the excavation works, the muck generated will be stock piled in the nearby vicinity for reusing the same for production of aggregates or as filling materials and considering this has taken an average lead of 3 Kms for disposal of excavated materials. **However, this is not in line with tender provisions, as per that the muck is to be disposed in designated areas only** and lead to be considered accordingly. Hence, the bidder is required to withdraw this assumption.

5) The bidder expects that no substantial variation, especially in Geology and other ground/site conditions, shall be encountered. However, the bidder assumes that any variation if met with during execution shall have effect both on time and cost and therefore shall be dealt separately as per actual situation. **However, this is not in line with tender provisions.**

6) The bidder has proposed to engage M/s AFRY and M/s SMEC as sub-contractors for PDE work. The bidder submitted description of proposed management of Planning, Design and Engineering services including sequence to be used for the same, Key Design and Engineering activities, i.e. almost complete proposal **except identification of Key experts along with their deployment schedule**. However, this may be the due to the reason that the bidder has the option to propose PDE Agency within 30 days of issue of LoA, hence, such details can only be provided at that stage. The bidder may be asked to confirm the same accordingly.

7) The bidder holds that this methodology and the construction schedule are also subject to the Owner fulfilling all obligations and commitments as per bid documents/prebid clarifications. Any changes or variations in the above matters during execution of the project shall be dealt separately as per actual situation. The bidder may be asked to reaffirm through the undertaking (Annexure 7) that any variation is to be dealt as per tender conditions as mentioned in Risk Allocation Schedule.

8) As per the information provided in the bid document, the employer shall provide the quarry area free of encumbrances to the contractor for sourcing of construction materials and aggregates required for the construction of works. **However, this is not as per tender provisions as elaborated in above paras**.

9) The bidder through its sub-contractor has provided list of HM equipment, description of their manufacturing activities their handling and their installation at site. **However, the bidder has proposed only one set of stoplogs against requirement of five. This has to be corrected.**

10) **clause 4(C) (x) of NIT requires for clearly spelt out role and responsibility of JV partners and stipulates the execution of the respective components of work by the partners for which they have Specific Construction Experience. The JV agreement has not mentioned which components are proposed to be executed by respective partners.**

11) The Audited balance sheets of the JV partners for the year 2022-23 need to be provided.

OBSERVATIONS AND RECOMMENDATIONS

1) The KBLP JOINT VENTURE, MUMBAI is formed by M/s Patel Engineering Limited as Lead Partner (66%) & M/S Mahalakshmi Infra projects Pvt. Ltd as minor partner (34%).
2) The bidder has not defined roles and responsibilities for the work as per tender conditions and have not submitted JV Agreement accordingly.
3) During the last three years, the both the partners of the JV have not been declared ineligible/ suspended/ blacklisted/ banned/debarred
4) Both the partners of the JV are Make in India compliant
5) No corporate insolvency resolution process has been admitted against the partners
6) The bidder has submitted the requisite tender fee and the Bank Guarantee
7) The partners have submitted the Power of Attorney and the other partner has submitted the PoA in favour of the lead partner
8) The bidder meets the financial criteria
9) The bidder has considered different projects to meet different subsets of conditions which appears to be a violation of the condition and to be considered by the TEC. **The Specific Experience Criteria (Civil) of Para 3.1.2 does not seem to have been met fully**. **The TEC may please consider and if the TEC so decides, the above-mentioned clarifications will be sought from the bidder.**
10) It is recommended that a generic declaration may be signed by all the bidders conveying their unequivocal acceptance of the conditions stipulated in the tender Documents and the confirmation that their quoted prices are after taking into cognizance of the Scope of Work, the Owner's Requirements and probable Risks as identified in Risk Allocation Schedule. A sample of the same is appended as Annexure 7.

ANNEXURE 2 – NCC LIMITED (BID 2 OF 6)

PART A- QUALIFICATION REQUIREMENTS

6. ELIGIBILITY AND SUFFICIENCY OF THE SUBMITTED DOCUMENTS

a) **The Nagarjuna Construction Co. Ltd. (NCC)** (hereinafter called as "the bidder" in Annexure 2) is classified as "Sole Bidder with the subcontractors" in accordance with Para 4 of the ITB. Certificate of Incorporation, AoA & MoA are placed from *page 1 to 28 of file "2.ConstitutionLegalStatusPOA".*

b) During the last three years, the bidder has not been declared ineligible/ suspended/ blacklisted/ banned/debarred by appropriate agencies of the Government of India or Governments of MP and UP from participation in the Tender Processes of all of its entities *(Page 54-55 of vol.6).*

c) The bidder has>70% Make in India status and has submitted the declaration to this effect in Form 6 *(certificate attached at page 2937).*

d) No corporate insolvency resolution process has been admitted against the bidder*(Page 54-55 of vol.6).*

e) The bidder has submitted the BG No 02657GOPG2335001for Rs 10.0 Crore issued in on 18.12.2023 and valid till 17.06.2025 (548days) available at *Page 3-9 of vol.1*. The bidder has also submitted the Scanned copy of DD/Banker's cheque towards the cost of the Tender fee of Rs 40,000 through DD No 157959 dated 04.03.2024 available at *Page 2 of Vol 1*.

f) The bidder has submitted the Power of Attorney POA dated 16.12.2023 in favour of Mr. CH. Somaraju, Director (Tech) with the copy of the resolution dated 11.12.2023. The PoA is placed at Page 50-51 of vol.6 and the copy of the resolution dated 14.11.2018 is placed on page 52 of volume 6.

g) The bidder has submitted undertaking dated 05.03.2024 towards Anti-profiteering Clause of GST Act / Rules *(Page 28 of volume 6)*

7. QUALIFICATION REQUIREMENTS

3.1.1 GENERAL EXPERIENCE

(a) Technical

Criteria

*The lead bidder (Sole Contractor or **Lead Partner of the Joint Venture**) should have General Construction Experience as Prime Contractor or Partner of JV or Sub-contractor approved by the employer, of executing a major Civil Structure (Dam/Tunnel) in a Water Resources/ Hydro Power Development Project for a period of at least two (2) years in preceding ten (10) years. In case of tunnelling works, the experience of tunnelling of highway tunnel / railway tunnel/Metro tunnel shall also be considered.*

Observation

The bidder has been involved in the following projects

	Project	**Status**	**Period**	**Cost (Crore)**
1	GNSS Flood Flow Canal-Owk Tunnel II Package 30/2006- Investigation design, Excavation and Lining of Owk Tunnel-II for feeding of Owk Reservoir from Km 57.700 of G.N.S.S *Page 10-12 of vol 3*	Sole bidder	2007-08 - 2018-19	451.82
2	Construction of Access Controlled Nagpur – Mumbai Super Communication Expressway *Page 13-15 of Vol 3*	Sole bidder	2018-19 to 2022-23	2836.76
3	Providing Drinking Water to Chevella, Vikarabad, Parigi, Tandur and Maheshwaram constituencies in Ranga Reddy from Srisalam Reservoir *Page 16 of vol 3*	Sole bidder	2016-17 to 2018-19	**1445.00**

The bidder has constructed Tunnel in a Water Resources Projects mentioned at Sl No 1 and 3. Thus this criterion has been met by the lead bidder.

(b) Financial

Criteria

*The main bidder (Sole Contractor or the **Lead partner of the Joint Venture**) should have successful experience as Sole Contractor or Partner of the JV or sub-contractor approved by the employer of having successfully or substantially completed, during last 20 years, either of the following works:*

i. *Major components of three Water Resources / Hydropower/infrastructure projects with cost of executed works not less than INR 700 crore each OR*
ii. *Major components of two Water Resources/Hydropower/ infrastructure projects with cost of executed works not less than INR 1000 crore each OR*
iii. *Major components of one Water Resources/Hydropower/ infrastructure projects with cost of executed works not less than INR 1500 crore.*

Provided that

d) *The start and completion date for the above experience should fall within the preceding twenty (20) years reckoned from the last day of the month previous to the one in which Tender is invited*
e) *The substantially completed works for the above purpose means the works for which at least 80 percent payments of the contract value have been received. For contracts under which the applicant participated as a joint venture member or sub-contractor, only the applicant's share, by value, shall be considered to meet this requirement.*

f) For arriving at cost of similar work, the value of work executed shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated from the date of completion of the work to the date of Bid opening.

Observation

The bidder has completed the following works

	Project	**Status**	**Period**	**Cost of executed work (Crore)**	**Ref**
1	Construction of Access Controlled Nagpur –Mumbai Super Communication Expressway,	Sole bidder	2018-19 to 2022-23	**2836.76**	13-15 of vol 3

Having completed one single infrastructure project, the Financial Experience Criteria have been fully met by the bidder.

3.1.2 SPECIFIC EXPERIENCE

A. CIVIL WORKS

*In addition to meeting the criteria of General Experience (Para 3.1.1), the bidder (Sole Contractor or the **Joint Venture collectively**) should have successful specific experience of having successfully or substantially completed, during last 20 years, all of the following works:*

(i) a) Concrete Dam with gated Spillway

At least one concrete dam of height not less than 15 m from the deepest foundation level to the crest level, with a gated Spillway and necessarily having a foundation gallery and instrumentation/inspection gallery AND

(i)(b) Earthen dam/ Rockfill/Composite Dam

At least one earth/rockfill/composite dam of height at the dam axis not less than 15 m from deepest foundation level to the top

(ii) Earthwork and concreting

Completion of following quantities in water resources/infrastructure projects, necessarily inclusive of that in (i) above, in the last 20 years

(a) gross combined excavation of 4,00,000 cum AND

(b) gross combined earth filling of 20,00,000 cum AND

(c) gross combined concreting of 9,00,000 cum with at least 3,00,000 cum of concreting achieved in a year at least once

*For the purpose of this qualification, **not more than five projects, necessarily including those in (i) above, shall be considered***

For contracts under which the applicant participated as a joint venture member or subcontractor, only the applicant's share, by value, shall be considered to meet this requirement.

(iii) Tunnelling

Completion of tunnel excavation and lining of at least one tunnel of minimum finished diameter of 5.5 m and length not less than 1000 m. For this purpose, experience of tunnelling of Highway tunnel/ Railway tunnel/Metro tunnel shall also be considered.

Para 4(D)(i) The Lead Partner to fully and necessarily meet the following:

- *Average annual turnover not less than 51 %of the criteria specified under financial capacity ,*
- *Working Capital criteria*
- *General construction experience criteria specified for the tender.*
- *Specific Experience Criteria for the Dam (3.1.2 (i)A) or (3.1.2 (i)B)*

Provided that the start and completion date for the above specific construction experience should fall within the preceding twenty (20) years reckoned from the last day of the month previous to the one in which Tender is invited.

Observation

a) For meeting the requirement of experience in **concrete dam**, the bidder partner has submitted the experience in the construction of the 27.66 m high **Gandikota dam** across Penna River with foundation and instrument gallery with gated spillway. This was done as a JV partner with 50% share of the bidder *(Page 20-23 of Vol 3)*

b) For meeting the requirement of experience in **earthfill/rockfill/composite dam** the bidder has submitted the experience as a sole bidder in the Formation of Western Earthen Bund, construction of spillway in Western Earthen Bund and excavation of surplus course channel in Formation of balancing reservoir of 1.514 TMC in Ramatheetham Village, Package II . The height of the Bund is 25m *(Pages 24-26 of Vol 3)*

c) For meeting the requirement of experience in **gross combined excavation** the bidder has submitted the following:

Project	**Share**	**Qty (cum)**	**Quantity (cum)**
1. Construction of **Gandikota Concrete Dam*** across Penna River including excavation of GNSS Main Canal *(Page No. 20-23 of vol.3)*	50%	50% of 99,34,712	49,67,356
2. Formation of balancing reservoir of 1.514TMC Ramatheertham Village, Pacage II:- Formation of Western Earthen Bund, construction of spillway in Western Earthen Bund and excavation of surplus course channel	100%	1,46,802	1,46,802

(Page No.24-26 of vol.3)			
3. Formation of Venkatadri Reservoir bund from 0.0km to 6.9/6.77 km *(Page No.27-33 of vol.3)*	80%	(80% of 14,45,909	11,56,727
Total			**62,70,885**

The work at Sl No 1 meets the criteria of 4 lakh cum of excavation

d) For meeting **gross combined earth filling** the bidder has submitted 4,17565,46 Cum

Project	**Share**	**Qty (cum)**	**Quantity (cum)**
Construction of **Gandikota Concrete Dam*** across Penna River including excavation of GNSS Main Canal *(Page No.20-23 of vol.3)*	50%	-	0 cum
Formation of balancing reservoir of 1.514TMC Ramatheertham Village, Package II:- Formation of Western Earthen Bund, construction of spillway in Western Earthen Bund and excavation of surplus course channel (Page No.24-26 of vol.3)	100%	15,65,737	15,65,737
Formation of Venkatadri Reservoir bund from 0.0km to 6.9/6.77 km *(Page No.27-33 of vol.3)*	80%	(80% of 2,49,3 7,254	1,99,49,803
Construction of Access controlled Nagpur-Mumbai Expressway *(Page No.34-38 of vol.3)*	100%	2,02,41,006	2,02,41,006
Total			**4,17,56,546**
* These are the projects mentioned in criteria i(a) and i(b) to and are to be mandatorily included in the five projects			

The bidder meets the criteria

e) For meeting **gross combined concreting,** the bidder has submitted the following

Project	**Share**	**Qty (cum)**	**Quantity (cum)**
Construction of **Gandikota Concrete Dam*** across Penna River including excavation of GNSS Main Canal *(Page No.20-23 of vol.3)*	50%	50% of 2,35,179	1,17,589
Formation of balancing reservoir of 1.514TMC Ramatheertham Village, Pacage II:- Formation of Western Earthen Bund,	100%	38,654	38,654

construction of spillway in Western Earthen Bund and excavation of surplus course channel *(Page No.24-26 of vol.3)*			
Construction of Access controlled Nagpur-Mumbai Expressway *(Page No.34-38 of vol.3)*	100%	2,02,41,006	15,83,055
Total			**17,39,298**
	6,79,981 in one year 2020-21		
* These are the projects mentioned in criteria i(a) and i(b) to and are to be mandatorily included in the five projects			

f) For meeting experience in **tunnelling** the bidder has submitted the following:

Name of project: GNSS Flood Flow Canal - Owk Tunnel-II - Investigation Design, Excavation and Lining of Owk Tunnel-II for feeding to Owk Reservoir from KM 57.700 of G.N.S.S. Flood Flow Canal including construction of Adit. *(Page 43 of Vol 3)*

- Excavated Diameter: 12.65m
- Finished Diameter: 11 m
- Total Length: 3884m (50% of 7769 m)

3.2 HYDRO-MECHANICAL WORKS:

The bidder has submitted (Page 49 of Vol 3) that as per Corrigendum 01 page 3 of 22 dated 18.09.2023 the same can be provided within 90 days of the issue of LoA. Hence this aspect has not been seen in further details

3.4 DESIGN AND ENGINEERING WORKS:

The bidder has submitted (Page 49 of Vol 3) s per Corrigendum 01 page 3 of 22 dated 18.09.2023 the same can be provided within 30 days of the issue of LoA. Hence this aspect has not been seen in further details

3.5 FINANCIAL CAPACITY

(i) Turnover

*Minimum average annual construction turnover of the **sole bidder or the Joint Venture** as specified in Article 3.1 (C) in the preceding 3 years shall be **INR 1,500 crore**. For arriving at the turnover of the years prior to 2021 -22 , the same shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum*

*While calculating the average turnover for the last three years , the bidder can exercise an option of **excluding the year 2020-21 as pandemic year** and include **either** (a) the year 2018-19 with the weightage of (1.28) or (b)the year 2022-2023 (with the weightage of 1.0, provided Audited Balance sheet or CA Certificate based on Audited Balance Sheet is available). **This option permits only the year 2020-2021 to be excluded** and the continuous three years period with the exclusion of 2020-21 will be considered.*

The JV Partner to have average annual turnover not less than 20% of the criteria specified under financial capacity.

Observation

				INR, Crores
Year	**2020-21**	**2021-22**	**2022-23**	**Average**
Factor @7% p.a.	*1.14*	*1.07*	*1.0*	
Turnover	8,271.46	10,625.13	13,351.32	10,749.30

The average turnover of the bidder for the past continuous three years is >1500 crore. Hence the requirement has been met.

(ii) Net Worth

*Net worth (paid up share capital + reserves & surplus) of the bidder (**and each partner of JV in case of JV**) of last 3 financial years should be **positive** and Net Worth of the **bidder or JV of last Financial Year should not be less than 450 crore**. While calculating the Net Worth for the last three years , the bidder can exercise an option of **excluding the year 2020-21 as pandemic year** and include either the year 2018-19 with the weightage of (1.28) or the year 2022-2023 (with the weightage of 1.0, if Audited Balance sheet or CA Certificate based on Audited Balance Sheet is available). This option permits only the year2020-2021 to be excluded and the continuous three years period with the exclusion of 2020-21 will be considered.*

Observation

					INR, Crores
	2018-19	**2019-20**	**2020-21**	**2021-22**	**2022-23**
Factor @7% p.a.	*1.28*	*1.21*	*1.14*	*1.07*	*1.0*
Net worth	-	6177.81	6121.41	6209.39	6321.90

The net worth of the bidder for the last three years is positive and is more than 450 crore for the last Financial Year. Hence the bidder meets the criteria

(iii) Working Capital

*The working capital of the bidder/JV (current assets minus current liabilities) shall be at **least INR 200 crore for FY 2022-23.***

For this purpose, a certificate from a Chartered Accountant should be submitted. Only Audited Balance Sheet or CA certificate based on Audited Balance Sheet shall be considered. Provisional balance sheet will not be considered.

Observation

The bidder's working capital is **Rs 3104.56 Crore *for FY 2022-23* and thus, the bidder meets this criterion**

3.6 BID CAPACITY

The available Bid Capacity of the bidder (Sole bidder or JV as specified in Article 4.1 C (vi) below) at the time of submission of Price Bid, calculated as under should ***not be less than the 5000 crores***

For the purpose of this qualification, the work done outside of India by companies of Indian origin, either as Sole Contractor or Lead Partner of the Joint Venture can be considered, provided that, the bidder furnishes a certificate issued by the client, giving the physical and financial details of the work done. Such a certificate needs to be necessarily authenticated by Indian Embassy/Mission in the country where such work has been claimed to be done. Acceptance of this certificate, however, will be the sole discretion of KBLPA.

The cost of executed works carried out outside India in (B) above shall be converted into INR equivalent. For this purpose, the cost of executed works carried out outside India shall be converted into INR equivalent at the rate of exchange of the foreign currency to Indian Rupees. (SBITT Selling Rate applicable on the date of opening of Price Bid) will be applied.

Observation

The bid capacity of the bidder is **96,099.29 Crore**

The bid capacity is >5000 crore and hence the bidder meets this criterion

PART B- DATA SHEETS

Data Sheet-1: Bidder's Appreciation of the Project

As per tender provisions, bidders are required to submit a report consisting Bidder's appreciation of the project, which should include a section on the site inspection carried out prior to Bidding to demonstrate awareness and understanding of all the principal technical and logistic aspects etc. required for completion of Works.

M/s NCC has visited site 2-3 times. The bidder has submitted the Project Appreciation narrating the objective of the Project, Project location and access thereto, project geology, prevailing climatic conditions and project geology.

The bidder has mentioned that Quarries for coarse aggregate nearby the project location is physically verified and material is suitable for construction purposes. Further, crushed sand is proposed to be used for all construction activates. The bidder has also proposed to use muck from Dam and Tunnel excavation for aggregate production, if found suitable.

Regarding working hours, the bidder has opined that during the following two stages of construction, 6 AM- 6 PM working time lines may please be relaxed keeping in view requirement of continuity in construction activities:

1. Closing of Coffer Dam
2. Completion of Block Concreting in single pour

The bidder has mentioned that in addition to above activities, it is kindly to be noted that this project has significant volume of concrete works, which are in general preferred to be executed during the cooler hours of the day as per Indian Standards to avoid cracking in

concrete. The bidder has mentioned that, though, all measures will be taken for controlling the temperature of the concrete before placement, it is observed that working hours will be very limited due to hot climatic conditions of the project site., therefore, in the interest of the project, it is opined that maximum working hours may please be allowed for entire project duration to have quality execution at the desired rate of progress.

Data Sheet –2: Bidder's Proposed Organizational Setup for the Project

The Bidder has submitted the Preliminary Overall Project Management Organisation Chart including Organisation Chart for Planning, Design & Engineering services, Civil Works and HM works. The bidder has provided Narrative description of Organisation Chart. The relation between Head office and site Management has also been shown.

The bidder has also undertaken that it will deploy required manpower to complete the Contract in scheduled time and enclosed a tentative list of manpower along with their qualification & experience.

Data Sheet –3: An Outline of the Project Components along with Drawings.

The bidders are required to submit, in outline, descriptions of proposed project components along with relevant drawings. The information should be submitted in sufficient detail to allow assessment of the general adequacy of the Bidder's proposal. Sketches, drawings and diagrams should be included where necessary for clarification of the description. These drawings of the successful bidder shall form part of the Contract as 'Tender Drawings'.

The bidder has included all major components of the work i.e. Left concrete non over-flow dam of 820 m length, Sluice spillway for a length of 495.45 m, Right concrete non over-flow dam of 160 m length, Earthen embankment dam for a length of 528.55 m, Auxiliary spillway, River sluice, Intake for powerhouse -1, Lower level tunnel (approach for powerhouse -2) and Upper level tunnel to link Ken-Betwa link canal.

Apart from above major components, the bidder has also included the following structures/facilities:

1. Office and Residential Building
2. 33kv Power Supply line to Dam Location

The bidder has enclosed drawings of the major components of the work.

However, the connecting structure between Surge Shaft and LBC has not been touched. The bidder may be asked to confirm that the scope of work will be as per tender conditions.

Data Sheet –4: Management of Planning, Design and Engineering Works

The bidders are required to submit description of proposed management of Planning, Design and Engineering services including sequence to be used for the same, Key Design and Engineering activities, identification of Key experts along with their deployment schedule.

The bidder has mentioned that as per tender provisions (including corrigendum), they confirm that the details of the proposed subcontractor for PDE along with Management of

Planning, Design and Engineering Works will be submitted by them within 30 days of issue of LoA.

Data Sheet –5A: Construction Methodology of Civil Component Works

The bidder has submitted description of proposed methods, sequences, facilities and layouts to be used for execution of civil works covering the following:

Topographic Survey & Geotechnical Investigation

The bidder has mentioned using various techniques in conducting topographic survey for establishing Temporary Benchmarks and ground control points. The bidder has mentioned to undertake geological investigations.

Concrete Production

The bidder has mentioned that they will provide, operate, and maintain at the Site automatic batching equipment to determine and control the amount of each individual material entering the concrete. Batching equipment will be designed for such capacities, which will permit performance of the concrete work in accordance with Contractual Construction Program.

Water, cement, admixtures, fine aggregate and coarse aggregate will be measured separately and not cumulatively. The accuracy of the measuring devices will be maintained so that the indicated measure does not vary by more than 1 percent from true measure throughout their range of use.

River Diversion Scheme

The bidder has mentioned that diversion flood of 1,117.6 cumecs is considered for concrete dam construction and for embankment dam construction, the 100 year return period flood , which is 30,794 cumecs will be considered.

The river diversion and construction activities are planned in four phases.

Excavation and concreting of structures

The bidder has described excavation and concrete sequencing of all major structures.

Earthen Dam

The bidder has enclosed the construction methodology of earthen dam.

However, the bidder has not proposed suitable structure for connecting Lower Level Tunnel with Left Bank Canal (LBC) and its construction methodology.

Data Sheet 5B: Construction Methodology of HM Component Works

The bidder has mentioned that as per tender provisions (including corrigendum), they confirm that the details of the proposed subcontractors for HM works along with Construction Methodology of HM Component Works will be submitted by them within 90 days of issue of LoA.

Data Sheet-6A: Infrastructure for execution of scope of work w.r.t. "Planning, Design & Engineering"

The Bidders are required to give detailed description of infrastructure with respect to proposed deployment of computer hardware and software, in-house technical knowhow and documentation to execute the works under head "Planning, Design & Engineering"

The bidder has mentioned that as per tender provisions (including corrigendum), they confirm that the details of the proposed subcontractor for PDE will be submitted by them within 30 days of issue of LoA.

Data Sheet-6B: Design plan for Planning Design and Engineering:

The Bidders are required to propose a detailed design plan i.e. process inputs/interface, process method and process output along with timelines for each step envisaged for executing the scope of work for scope of work w.r.t. "Planning, Design & Engineering".

The bidder through proposed sub-contractors has provided sequence of activities with timelines.

Data Sheet-6C: Format of Drawing Block

The bidder has proposed format of drawing block showing "Title of drawing", "purpose of drawing", "Notes", "Reference to other drawings", Names of preparing, reviewing and approving officials name.

Data Sheet-6D: An outline of quality assurance system for the execution of scope of work w.r.t. "Planning, Design & Engineering"

The bidder has mentioned that they confirm that the details of the proposed subcontractor (along with quality assurance system for the execution of scope of work w.r.t. "Planning, Design & Engineering) will be submitted by them within 30 days of issue of LoA as per tender conditions.

Data sheet-7: Details of Hydro-Mechanical Plant & Machinery

The bidders are required to submit the detailed description of the Hydro-mechanical Plant & Machinery proposed and should also include in his submission, for these Plant & Machinery, the description of their manufacturing activities-transportation to site and erection at site in detail including interface activities with the Civil Works.

The bidder has confirmed that the details of the proposed subcontractor (along with Details of Hydro-Mechanical Plant & Machinery) will be submitted by them within 90 days of issue of LoA for Hydro-Mechanical works and TRCM.

Data sheet 8: Deployment of Construction Equipment

The Bidders are required to list out all critical construction equipment, which would be proposed for Construction works. This should include their numbers, capacities and whether equipments proposed are to be purchased new or old. In respect of old equipment, year of manufacture and current ownership is to be stated. Construction equipment should be preferably new.

The bidder has enclosed a tentative list of construction equipment with their numbers, capacities and has undertaken that they will deploy adequate construction equipment for completing the Contract in scheduled time.

Data sheet-9: Construction Schedule of the Project

The Bidders are required to submit a Master Control Network within the Time for Completion dates, which shall form part of Overall Agreement so as to complete the work within 72 months. The bidder has proposed the achievement of Contract Milestones as below:

Sl. No.	Description	Proposed target month by the bidder
Milestone-1	Completion of Coffer Dam	11
Milestone-2A	Completion of Cut-off trench of Daudhan Earthen Dam	33
Milestone-2B	Completion of Excavation (Dam Foundation) of Daudhan Concrete Dam	43
Milestone-3	Completion of Concreting of KBLC - Upper Tunnel	42
Milestone-4	Completion of Excavation of Lower Tunnel	32
Milestone-5	Completion of Concreting of Surge Shaft	41
Milestone-6	Completion of Concreting of Daudhan Concrete Dam	69
Milestone-7	Completion of Fill Placement of Daudhan Earthen Dam	71
Milestone-8	Completion of Gate Installation of Daudhan Concrete Dam	71

Data sheet-10: An Outline of Quality Assurance System for the Project

The bidders are required to submit, an outline, and description of proposed Quality Assurance System for the implementation of the project in line with the QAP for Civil and HM works provided in the Volume-III of tender document.

The bidder has proposed Quality Assurance System for Civil and HM works, which include testing methods and formats.

PART C - ANOMOLIES REQUIRING CLARIFICATIONS

1. The bidder observed that working hours will be very limited due to hot climatic conditions of the project site., therefore, in the interest of the project, it is opined that maximum working hours may please be allowed for entire project duration to have quality execution at the desired rate of progress. The bidder needs to be made clear about the limited working hours
2. In Data Sheet No 3, the connecting structure between Surge Shaft and LBC has not been touched. The bidder may be asked to confirm that the scope of work will be as per tender conditions.

3. **In Data sheet 5A, the bidder has not proposed suitable structure for connecting Lower Level Tunnel with Left Bank Canal (LBC) and its construction methodology. This may be clarified.**
4. The bidder has mentioned that considering the normal temperatures, the time available is short for concreting

OBSERVATIONS AND RECOMMENDATIONS

a) The Nagarjuna Construction Co. Ltd. (NCC) (hereinafter called as "the bidder" in Annexure 2) is classified as "Sole Bidder with the subcontractors".

b) During the last three years, the both the partners of the JV have not been declared ineligible/ suspended/ blacklisted/ banned/debarred

c) The bidder is Make in India compliant

d) No corporate insolvency resolution process has been admitted against the bidder

e) The bidder has submitted the requisite tender fee and the Bank Guarantee

f) The bidder has submitted the Power of Attorney

g) The bidder meets the financial criteria

h) It is recommended that a generic declaration may be get signed by all the bidders conveying their unequivocal acceptance of the conditions stipulated in the tender Documents and the confirmation that their quoted prices are after taking into cognizance of Scope of Work, the Owner's Requirements and probable Risks as identified in Risk Allocation Schedule. A sample of the same is appended as Annexure 7.

ANNEXURE 3- DILIP BUILDCON LIMITED, BHOPAL (BID 3 OF 6)

PART A- QUALIFICATION REQUIREMENTS

1 ELIGIBILITY AND SUFFICIENCY OF THE SUBMITTED DOCUMENTS

a) The **Dilip Buildcon Limited**, **Bhopal** (hereinafter called as "the bidder" in Annexure 3) is a sole bidder. The bidder is classified as "Sole bidder with the subcontractors" in accordance with Para 4 of the ITB. Fresh Certificate of Incorpration due to change from Private Ltd. Company to Public Limited Company from Registrar of Companies, Madhya Pradesh & Chhatisgarh, Ministry of Corporate Affairs, GoI, is enclosed at page-8, Vol-4. MoA is placed at page-10 and AoA at page-27 of Vol-4.

b) During the last three years, the bidder has not been declared ineligible/ suspended/ blacklisted/ banned/debarred by appropriate agencies of the Government of India or Governments of MP and UP from participation in the Tender Processes of all of its entities. *Declaration is placed at Page 592 of Vol 2.*

c) The bidder has 100% Make in India status. *Certificate by the CA at Page 595 of Vol 2.*

d) No corporate insolvency resolution process has been admitted against the both the partners of the JV. *Declaration at Page 592 of Vol 2.*

e) The bidder has submitted the BG No 1223IG 8003998123 for Rs 10.0 Crore issued on 18.12.2023 and valid till 15.03.2025 (370 days). *Copy placed at Page 605 of Vol-1*. The bidder has also submitted the Scanned copy of DD/Banker's cheque towards the cost of Tender fee of Rs 40,000 through DD No 0283073 revalidated on 02.03.2024.*Copy placed at Page 3 of Vol-1.*

f) The bidder has submitted the Power of Attorney 07.10.23 in favour of **Mr Kundan Kumar Das** , along with the copy of the resolution dated February 12, 2021 as per Article 5.5(a), indicating that the person(s) signing the Bid has the authority to sign the Bid and that the Bid is binding upon the Bidder during the full period of its validity in accordance with Article 17. *Copy placed at Page 610 of Vol 2.*

g) The bidder has submitted undertaking dated 04.03.2024 towards Anti-profiteering Clause of GST Act / Rules *(Page 625, volume 6)*

2. QUALIFICATION REQUIREMENTS

3.1.1 GENERAL EXPERIENCE

(a) Technical

Criteria

*The lead bidder (Sole Contractor or **Lead Partner of the Joint Venture**) should have General Construction Experience as Prime Contractor or Partner of JV or Sub-contractor approved by the employer, of executing a major Civil Structure (Dam/Tunnel) in a Water Resources/ Hydro Power Development Project for a period of at least two (2) years in*

preceding ten (10) years. In case of tunnelling works, the experience of tunnelling of highway tunnel / railway tunnel/Metro tunnel shall also be considered.

Observation

The bidder has submitted the duly certified General Construction Experience as under. *Details placed at Page 89 of Volume 3*:

Sl. No.	Name of Project	Bidder's share in work	Period	Contract price (Cr)
1.	Construction of Central Spillway, Earthen Dam & Its Allied Works and Supply and erection of radial gates for **Mohanpura Major Multipurpose Project , M.P**	100%	2014-18	**440.29**
2.	Construction of Central Spillway, Earthen Dam & Its Allied works and supply and Erection of radial, gates for **Kundalia Major Multipurpose Project, M.P**	100%	2015-18	**270.00**
3.	Survey, planning, design & construction of **Navnera Barrage** Including Hydro-Mechanical Works, across river Kalisindh, Rajasthan	100%	2018-in progress	**664.28**
4.	Construction of Access Controlled **Nagpur -Mumbai Super Communication Expressway** (Maharashtra Samruddhi Mahamarg) in the State Of Maharashtra on EPC Mode	100%	2019-22	**2160.64**

The Sl No 4 is not a water resources project and hence not considered by the Committee. However, the criteria of executing a major Civil Structure (Dam/Tunnel) in a Water Resources in the last 10 years has been met by the sole bidder by considering the remaining three projects.

(b) Financial

Criteria

*The main bidder (Sole Contractor or the **Lead partner of the Joint Venture**) should have successful experience as Sole Contractor or Partner of the JV or sub-contractor approved by the employer of having successfully or substantially completed, during last 20 years, either of the following works:*

i. Major components of three Water Resources / Hydropower/infrastructure projects with cost of executed works not less than INR 700 crore each OR

ii. Major components of two Water Resources/Hydropower/ infrastructure projects with cost of executed works not less than INR 1000 crore each OR

iii. *Major components of one Water Resources/Hydropower/ infrastructure projects with cost of executed works not less than INR 1500 crore.*

Provided that

a) *The start and completion date for the above experience should fall within the preceding twenty (20) years reckoned from the last day of the month previous to the one in which Tender is invited*
b) *The substantially completed works for the above purpose means the works for which at least 80 percent payments of the contract value have been received. For contracts under which the applicant participated as a joint venture member or sub-contractor, only the applicant's share, by value, shall be considered to meet this requirement.*
c) *For arriving at cost of similar work, the value of work executed shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated from the date of completion of the work to the date of Bid opening.*

Observation

The bidder has submitted the duly certified General Construction Experience as under. *Details placed at Page 89 of Volume 3:*

Sl. No.	Name of Project	Bidder's share in work	Period	Contract price (Cr)
1.	Construction of Central Spillway, Earthen Dam & Its Allied Works and Supply and erection of radial gates for **Mohanpura Major Multipurpose Project , M.P**	100%	2014-18	**440.29**
2.	Construction of Central Spillway, Earthen Dam & Its Allied works and supply and Erection of radial, gates for **Kundalia Major Multipurpose Project, M.P**	100%	2015-18	**270.00**
3.	Survey, planning, design & construction of **Navnera Barrage** Including Hydro-Mechanical Works, across river Kalisindh, Rajasthan	100%	2018-in progress	**664.28**
4.	Construction of Access Controlled **Nagpur -Mumbai Super Communication Expressway** (Maharashtra Samruddhi Mahamarg) in the State Of Maharashtra on EPC Mode	100%	2019-22	**2160.64**

Having completed a single infrastructure project of >1500 crore, as mentioned at Sl No 4, the Financial Experience Criteria have been fully met.

3.1.2 SPECIFIC EXPERIENCE

A. CIVIL WORKS

*In addition to meeting the criteria of General Experience (Para 3.1.1), the bidder (Sole Contractor or the **Joint Venture collectively**) should have successful specific experience of having successfully or substantially completed, during last 20 years, all of the following works:*

At least one concrete dam of height not less than 15 m from the deepest foundation level to the crest level, with a gated Spillway and necessarily having a foundation gallery and instrumentation/inspection gallery AND

(i)(b) Earthen dam/ Rockfill/Composite Dam

At least one earth/rockfill/composite dam of height at the dam axis not less than 15 m from deepest foundation level to the top

(ii) Earthwork and concreting

Completion of following quantities in water resources/infrastructure projects, necessarily inclusive of that in (i) above, in the last 20 years

(a) gross combined excavation of 4,00,000 cum AND
(b) gross combined earth filling of 20,00,000 cum AND
(c) gross combined concreting of 9,00,000 cum with at least 3,00,000 cum of concreting achieved in a year at least once

For the purpose of this qualification, ***not more than five projects, necessarily including those in (i) above, shall be considered***

For contracts under which the applicant participated as a joint venture member or subcontractor, only the applicant's share, by value, shall be considered to meet this requirement.

(iii) Tunnelling

Completion of tunnel excavation and lining of at least one tunnel of minimum finished diameter of 5.5 m and length not less than 1000 m. For this purpose, experience of tunnelling of Highway tunnel/ Railway tunnel/Metro tunnel shall also be considered.

Para 4(D)(i) The Lead Partner to fully and necessarily meet the following:

- *Average annual turnover not less than 51 %of the criteria specified under financial capacity ,*
- *Working Capital criteria*
- *General construction experience criteria specified for the tender.*
- *Specific Experience Criteria for the Dam (3.1.2 (i)A) or (3.1.2 (i)B)*

Provided that the start and completion date for the above specific construction experience should fall within the preceding twenty (20) years reckoned from the last day of the month previous to the one in which Tender is invited.

Observation

a) For meeting the experience in construction of concrete dam and earthen dam, the bidder has claimed following experience as **sole bidder**

S. No.	Name of Project	Name of Contract	Contract value Cr	Year of completion
1	Mohanpura Major Multipurpose Project *(Page 116 of Vol 3)*	**48.05 m high Mohanpura Composite Gravity Concrete Dam** consists of 311.0 m overflow portion along with 145.5 m non overflow portion along with surplusing arrangement, erection of radial gates with hydraulic type hoisting arrangement, including gantry crane, stoplog arrangement, inspection bridge for radial gates, deck slab bridge with control room, power pack room, earthen dam 2243 m long with instrumentation. The bidder has also constructed a **Homogeneous Earthen Dam of Height 47.65 m** in the same project	440.29	2018
2	Kundalia Major Multipurpose Project *(Page 116 of Vol 3)*	**56.00 m high Kundalia Composite Gravity Concrete Dam** consists of 225 m overflow portion .along with 120m non overflow portion along with surplusing arrangement, erection of radial gates with hydraulic type hoisting arrangement, including gantry crane, stoplog arrangement, inspection bridge for radial gates, deck slab bridge with control room, power pack room, earthen dam 2387 m long on left and 268 mts on right flank, saddle dam on left flank of 2100 m long. The bidder has also constructed a **Homogeneous Earthen Dam of Height 35 m** in the same project	270.00	2018

b) For meeting the requirement of experience in **gross combined excavation, Gross combined Filling and the concreting** the bidder has submitted the following

Sl. No.	Name of Project	Quantity in cum		
		Excavation	**Filling**	**Concreting**
1.	Mohanpura Major Multipurpose Project *(Pg 102, 116)*	7,23,681	25,31,170	8,37,051
2.	Kundalia Major Multipurpose Project, *(Pg 104, 119)*	8,30,900	17,57,7,79	4,79,091

3.	Nagpur -Mumbai Super Communication Expressway *(Pg 110, 123)*	3,86,634	90,12,959	3,60,023
4.	Churhat Bypass of Rewa Sidhi Section of NH 75E *(Pg 128)*	1590545	-	182045
	Total	**35,31,760**	**1,15,44,129**	**18,58,210**

c) In Mohanpura Major Multipurpose Project, the certified concreting achieved in a year was **4,60,528.35 Cum F.Y.-16-17***(page 118 of volume 3).* In Kundalia Major Multipurpose Project, the certified concreting achieved in a year was **3,12,356.29 Cum F.Y.-15-16***(page 121 of volume 3)*

d) For meeting the experience in tunnelling the bidder has submitted the experience in construction of tunnel of finished Diameter- 18.457 m, and Total Length of 4560 m (Tube-1 -2280 m & Tube-2 -2280 m in Churhat Bypass of Rewa Sidhi Section of NH 75E *(Page 128 of volume 3)*

Though the bidder seems to have met the Specific Experience Criteria (Civil) of Para 3.1.2 , there is an ambiguity in the certificates in support of his claim. From the available documents it could not be explicitly ascertained whether the concrete dam has indeed been constructed by the bidder, claimed to be constructed by the bidder has the instrumentation and inspection galleries. Moreover, the certificates issued by the Project Authority mentions the spillway and not the dam body. This needs to be clarified. **Only subject to satisfactory clarification, the bidder meets the criteria for concrete dam**

3.2 HYDRO-MECHANICAL WORKS:

a) The bidder has mentioned its own experience in HM works but also mentioned that as per Corrigendum 01 page 3 of 22 dated 18.09.2023 the same can be provided within 90 days of the issue of LoA*(Page 132 , 135 , 139 of Vol 3).* **Hence this aspect has not been seen in further details**

3.4 DESIGN AND ENGINEERING WORKS:

a) The bidder has mentioned that as per Corrigendum 01 page 3 of 22 dated 18.09.2023 the same can be provided within 30 days of the issue of LoA*(Page 143 of Vol 3).* **Hence this aspect has not been seen in further details**

3.5 FINANCIAL CAPACITY

(i) Turnover

*Minimum average annual construction turnover of the **sole bidder or the Joint Venture** as specified in Article 3.1 (C) in the preceding 3 years shall be **INR 1,500 crore**. For arriving at the turnover of the years prior to 2021 -22 , the same shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum*

While calculating the average turnover for the last three years , the bidder can exercise an option of ***excluding the year 2020-21 as pandemic year*** *and include* ***either*** *(a) the year 2018-19 with the weightage of (1.28) or (b)the year 2022-2023 (with the weightage of 1.0, provided Audited Balance sheet or CA Certificate based on Audited Balance Sheet is available).* ***This option permits only the year 2020-2021 to be excluded*** *and the continuous three years period with the exclusion of 2020-21 will be considered.*

The JV Partner to have average annual turnover not less than 20% of the criteria specified under financial capacity.

Observation *(Pg 89 vol 3)*

The bidder has not used the option of excluding 2020-21 and submitted the turnover of last three years as (brought to the level of 2022-23 @7% p.a.):

				INR, Crore
Year	**2020-21**	**2021-22**	**2022-23**	**Average**
Factor @7%	1.14	1.07	1.00	
Turnover	**10,391.45**	**9,492.86**	**9,923.69**	**9,936.00**

The average annual construction turnover of the sole bidder in the preceding 3 years is more than the required 1500 crore.

(ii) Net Worth

*Net worth (paid up share capital + reserves & surplus) of the bidder (****and each partner of JV in case of JV****) of last 3 financial years should be* ***positive*** *and Net Worth of the* ***bidder or JV of last Financial Year should not be less than 450 crore****. While calculating the Net Worth for the last three years , the bidder can exercise an option of* ***excluding the year 2020-21 as pandemic year*** *and include either the year 2018-19 with the weightage of (1.28) or the year 2022-2023 (with the weightage of 1.0, if Audited Balance sheet or CA Certificate based on Audited Balance Sheet is available). This option permits only the year2020-2021 to be excluded and the continuous three years period with the exclusion of 2020-21 will be considered.*

Observation

The bidder has not used the option of excluding 2020-21 and submitted the Net Worth of last three years as (brought to the level of 2022-23 @7% p.a.):

			INR, Crore
Year	**2020-21**	**2021-22**	**2022-23**
Factor @7%	1.14	1.07	1.00
Net Worth	**4465.61**	**4639.66**	**4603.14**

The net worth of bidder is positive in last three Financial Years and is more than 450 crore in last Financial Year. Hence the bidder meets the criteria

(iii) Working Capital

The working capital of the bidder/JV (current assets minus current liabilities) shall be at ***least INR 200 crore.***

For this purpose, a certificate from a Chartered Accountant should be submitted. Only Audited Balance Sheet or CA certificate based on Audited Balance Sheet shall be considered. Provisional balance sheet will not be considered.

Observation

The bidders working capital is Rs **1742.03 crore for FY 2022-23.**

The bidder's working capital is more than 200 crore and hence meets this criterion

3.6 BID CAPACITY

The available Bid Capacity of the bidder (Sole bidder or JV as specified in Article 4.1 C (vi) below) at the time of submission of Price Bid, calculated as under should ***not be less than the 5000 crores***

For the purpose of this qualification, the work done outside of India by companies of Indian origin, either as Sole Contractor or Lead Partner of the Joint Venture can be considered, provided that, the bidder furnishes a certificate issued by the client, giving the physical and financial details of the work done. Such certificate needs to be necessarily authenticated by Indian Embassy/Mission in the country where such work has been claimed to be done. Acceptance of this certificate, however, will be a sole discretion of KBLPA.

The cost of executed works carried out outside India in (B) above shall be converted into INR equivalent. For this purpose, the cost of executed works carried out outside India shall be converted into INR equivalent at the rate of exchange of the foreign currency to Indian Rupees. (SBITT Selling Rate applicable on the date of opening of Price Bid) will be applied.

Observation

The bid capacity of the bidder is **1,00,613.70 Cr and the bidder meets this criterion**

PART B- DATA SHEETS

Data Sheet 1 – Bidders appreciation of the project

As per tender provisions, bidders are required to submit a report consisting Bidder's appreciation of the project, which should include a section on the site inspection carried out prior to Bidding to demonstrate awareness and understanding of all the principal technical and logistic aspects etc. required for completion of Works.
This sheet contains the history of the project and still mentions the height of the dam as 77 m, length of concrete portion as 798 m and earthen dam as 1233 m. This sheet has been prepared casually and mostly cut and paste information

Data Sheet -2: Bidder's Proposed Organizational Setup for the Project

The organisation is headed by the Managing Director to whom the Project Head will report. Three Divisions, namely, Tender, QS and Design work under him at the HO and the Project Manager at the site will report to him. All the staff at the site will report to him.

The proposed Organisational chart is given on Page 657

Data Sheet -3: An Outline of the Project Components along with Drawings.

The bidders are required to submit, in outline, descriptions of proposed project components along with relevant drawings. The information should be submitted in sufficient detail to allow assessment of the general adequacy of the Bidder's proposal. Sketches, drawings and diagrams should be included where necessary for clarification of the description. These drawings of the successful bidder shall form part of the Contract as 'Tender Drawings'.

The bidder has attached Drawings of components. The Bye Pass arrangement at page 667-668 and instrumentation drawings on *page 675-676* are also enclosed.

Data Sheet -4: Management of Planning, Design and Engineering Works.

The bidder has proposed a management design, engineering and planning unit headed by Irrigation HOD and HO (design & planning) . A total of six teams will work under them namely survey team, geotech team, tunnel design team, dam design team, bridge design team and HM design team.

The design unit will be headed by Design Director with six teams working under him, namely, Survey Team, Geotech Team, Structure Design Team, Dam Design Team, Tunnel Design Team And HM Design Team

Data Sheet -5A: Construction Methodology of Civil Component Works

A. MOBILIZATIONS (Para 6)

Mobilize in two stages from the date of award of works, initial mobilization of equipments readily available will be in the first 03 months to kick start the activities on the scheduled time and balance mobilization will be carried out as per the construction schedule.

B. LAYOUT OF OFFICE, STORES, WORKSHOPS AND CAMPS (Para 7.4)

Bidder presumes that Client will provide required land for contractors all temporary establishments, disposal yards, access roads etc. at free of cost. Suitable benches will be developed near various locations as per the requirement. Fabrication and reinforcement yard will be equipped with open yards for material storage. Fabricated materials will be transported to the location using trucks/trailers.

Excavated materials will not be dumped anywhere other than at designated muck dumping locations **which are already identified and are to be provided by WRD**

C. PRODUCTION OF CONCRETE & AGGREGATES

Aggregate processing plant will be installed near quarry site location to meet the aggregate requirement at different locations of project. It will be installed near left bank on upstream of Dam. Requirement of aggregates will be met from nearby RBM & rock

quarries. The suitable excavated muck shall also be used to produce aggregates. Dam. The bidder states that "*As informed by WRD during Prebid site visit, requirement of aggregates will be met from nearby RBM & rock quarries. The suitable excavated muck shall also be used to produce aggregates. RBM will be used by screening and balance oversized will be processed to get the required size.".(Pg 696 of volume 5).* **The Committee is unaware of any such discussion as the same is not held with the owner of the project, i.e., KBLPA**

D. CONCRETE BATCHING & MIXING PLANT

One concrete production unit will be set up at the dam, for uninterrupted and independent concrete production centers to cater to the needs of concrete and shotcrete activity. Cement will be stored in cement Silos. As per the mix design requirement, the required grade of concrete will be produced in batching plant. **Concrete will be transported using transit mixers of 6 cum capacity at various, locations. It is not clear how concreting in such a large quantity will be achieved using this method**

E. RIVER DIVERSION COFFER DAM

Temporary earthen dyke will be constructed if required to divert the water, to start the work for river diversion. The excavation of dam in stage wise will also be commenced after the river diversion in stage wise manner.

F. METHODOLOGY FOR DAM EXCAVATION

After diversion of substantial river water through diversion tunnel site clearance, open excavation in soil and rock for dam shall be commenced. As per plan the left NOF, OF and energy dissipation locations shall be taken up for excavation concurrently. Excavation will be carried out from top to bottom by developing benches at various levels. The overburden material shall be excavated by a hydraulic excavator. The hard rock shall be excavated by drilling and blasting methods. The hauling of excavated muck shall be carried out by dumpers. Excavated material shall be shifted to the dumping area or material stacking yard near the crushing plant.

G. CONCRETE PLACING

Concreting will be carried out using a combination of concrete pump and transit mixer. Concrete from batching plant to the placement location will be transported by using a transit mixer of 6 cum capacity. It is proposed to cast the foundations of each block of dam raft in one single pour as per the construction joints shown in the drawings. Concrete will be placed in layers of 500mm thickness**. The bidders states, without giving details that** *"The placement temperature of concrete will be maintained as per technical specification, and proper compaction of concrete will be done using immersion-type vibrators."*. The Equipment that may be used for concrete work are Tower cranes /Tele belt/ Boom placer, Concrete carrying dumpers/Transit Mixer, Tyre mounted mobile cranes and needle vibrators

H. PRESSURE SHAFT

The excavation of the pressure shaft is proposed to be done using conventional drilling and blasting followed by mucking through a Mini hydraulic excavator and Mini

Dumpers. Depending on Rock Strata. As per working hours of **16 to 18 hrs per day** and the varying rock condition of the shaft, as per the above estimated cycle times, an average progress of **12m to 15m/month/full face** *(Page 720 of volume 5)* can be achieved. **The figures of 12-15 m per month needs to be cross checked for some inadvertent error.**

I. SURGE SHAFT

Excavation of surge shaft by full face sinking will be carried out by mechanical means using excavator. To facilitate excavation by sinking method, two cranes will be erected at the working platform at the level. Approx. 10-ton capacity tower crane will be used for the transportation of men and light material, while 30-ton goliath crane will be used for shifting heavy equipment and removal of muck. The excavation methodology comprises of excavating the shaft by advancing 2.0m to 2.5m depth by mechanical means using excavator and removal of the muck by tower crane and goliath crane with the help of approx. 6 cum to 8 cum buckets respectively, followed by the installation of primary and secondary support.

Once the excavation is complete and the junction is supported, the orifice slab including the starter ring beam will be constructed by using conventional staging and shuttering. The concrete lining will begin from bottom upwards. With approx. **18-20 hrs working time in a day** and a single set of slip forms, a progress of 1.5 to 2.0 m per day or an average progress of about 40m to 45m/month can be achieved.

J. TUNNELING

The typical "drill and blast" sequence of excavation illustrated earlier will be adopted for underground tunnel construction. As per the rock condition of the tunnel and with above cycle time, an average progress of 65m to 75m/month/face can be achieved. Considering 2 face excavation, all the construction activities of the lower-level tunnel would be planned and staged for optimum utilization of equipment for the planned time period.

The bidder in Data sheet-5A has mentioned that "*As stipulated in the tender document's milestones will be followed and can be changed as per the Suit to Site conditions and detailed Milestone will be finalized during the Pre award discussion with Department."* However, milestones are to be proposed by the bidders at tender stage and thereafter these are fixed and any delay in achievement of them due to delays attributable to the contractor will attract Liquidated Damages. **Hence, this Data Sheet is to be submitted afresh by the bidder**

Data Sheet 5B: Construction Methodology of HM Component Works

The bidder has submitted Construction Methodology of HM Component Works. However, the bidder has opted to propose sub-contractor(s) for HM works within 90 days of issue of LoA.

Data Sheet-6A: Infrastructure for execution of scope of work w.r.t. "Planning, Design & Engineering"

The Bidders are required to give detailed description of infrastructure with respect to proposed deployment of computer hardware and software, in-house technical knowhow and documentation to execute the works under head "Planning, Design & Engineering"

The bidder has mentioned availability of computer hardware and software, in-house technical knowhow and documentation to execute the works under head "Planning, Design & Engineering"

Data Sheet-6B: Design plan for Planning Design and Engineering:

The Bidders are required to propose a detailed design plan i.e. process inputs/interface, process method and process output along with timelines for each step envisaged for executing the scope of work for scope of work w.r.t. "Planning, Design & Engineering".

The bidder has provided only site deployment infrastructure details. Hence, design plan needs to be obtained as per tender provisions **at present or at the time of proposing sub-contractor for PDE work as per tender provisions.**.

Data Sheet-6C: Format of Drawing Block

The bidder has proposed format of drawing block.

Data Sheet-6D: An outline of quality assurance system for the execution of scope of work w.r.t. "Planning, Design & Engineering"

The bidder has only provided definitions of some terms and no Quality Management System for checking / controlling quality of output is available in the document. **Hence, the bidder needs to be intimated either to provide the same at present or at the time of proposing sub-contractor for PDE work as per tender provisions.**

Data sheet-7: Details of Hydro-Mechanical Plant & Machinery

The bidders are required to submit the detailed description of the Hydro-mechanical Plant & Machinery proposed and should also include in his submission, for these Plant & Machinery, the description of their manufacturing activities-transportation to site and erection at site in detail including interface activities with the Civil Works.

The bidder has not provided the requisite details.

Data sheet 8: Deployment of Construction Equipment

The Bidders are required to list out all critical construction equipment, which would be proposed for the construction works. This should include their numbers, capacities and whether equipments proposed are to be purchased new or old. In respect of old equipment, year of manufacture and current ownership is to be stated. Construction equipment should be preferably new.

The bidder has enclosed a list of equipment for construction with their numbers, capacities, year of manufacture , ownership status and their condition. Some of the proposed equipment are as old as manufactured in 2011. **The tender document stipulates that**

deployed equipment should be preferably new. A declaration in this regard needs to be sought from the bidder

Data sheet-9: Construction Schedule of the Project

The Bidders are required to submit a Master Control Network within the Time for Completion dates, which shall form part of Overall Agreement so as to complete the work within 72 months. The bidder has proposed the achievement of Contract Milestones as below:

CONSTRUCTION SHEDULE

	Work	Start Month	End Month	Month
	Mobilization Works			
	Mobilization of Site	0	03	3.0
	Design & Survey Work			
	Land Acquisition Work, Forest Work ,& Other Permission from Relevant Authority for Project	1	24	24.0
	Investigations & Survey	1	11	11.0
	Submission of designs & drawings	02	16	15.0
	Approval of designs & drawings	03	18	16.0
	Infrastructure Works			
	Access of Road Widening	61	71	11.0
	Construction Project Area Road	04	08	5.0
	Construction of Office and residential Building	05	28	24.0
	River Diversion Work			
	Diversion Channel Excavation	05	09	4.0
	Construction of Coffer Dams	07	11	5.0
	Civil concrete work for Dam Phase -I & Phase-II			
	Foundation & U/S, D/S Excavation	10	64	55.0
	Construction of Overflow work.	10	65	56.0
	Construction of Non-Overflow work.	15	60	46.0
	Construction of Pier Work	17	60	47.0
	Construction of Breast wall Work	17	65	49.0
	Construction of Pier Work	17	64	48.0
	Construction of Training Wall work.	53	60	8.0
	Construction of Spillway Bridge work.	26	36	11.0
	Construction of Spillway Bridge work.	57	65	9.0
	Construction of Misc work.	66	72	7.0
	Earthen Dam			
	Foundation Excavation	22	30	9.0
	Cut of Trench	24	30	7.0
	Filling Work (with a break of 3+5 months in between)	28	59	24.0
	Civil Concrete work (For Lower Tunnel)			
	Portal Construction (with a break of 6+7+5 +5 months)	10	62	30.0
	Excavation	15	43	29.0
	Concrete Work	38	48	11.0
	Grouting & Cleaning	40	51	12.0
	Civil Concrete work (For Upper Tunnel)			
	Portal Construction			0.0

	Work	Start Month	End Month	Month
	Excavation	15	43	29.0
	Concrete Work	38	48	11.0
	Grouting & Cleaning	40	50	12.0
	Surge Shaft (PH2)			
	Open Excavation	14	16	3.0
	Pilot Shaft Excavation	17	18	2.0
	Enlargement	19	24	6.0
	Concrete Work	26	32	7.0
	Surge Shaft and Pressure Shaft (PH2)			
	Open Excavation	14	16	3.0
	Pilot Shaft Excavation	17	18	2.0
	Enlargement	19	23	6.0
	Concrete Work	26	32	7.0
	HM Works			
	Supply of Materials	7	20	14.0
	Fabrication of Radial gates Work	7	34	28.0
	Fabrication of Intake Gates Work	14	19	6.0
	Fabrication of Stop Log .Emergency Gate & Vertical gates for Dam & Intake Gate Work	20	33	15.0
	Fabrication of Miscellaneous Work i.e Gantry Crane. Hoist Support Structure Walkway etc	35	46	12.0
	Brought out Items (Hydraulic Cylinder, Trunion , Hub, Bouch, Rubber Seal ,Rope Drum etc.)	14	59	30.0
	Electrical .Instrumentation & Misc Work			
	33 KV Line Power supply	7	14	8.0
	Supply & Installation of Electric Sub. Station	7	13	7.0
	Procurement of electro-mechanical items like pumps, motors, transformers etc.	26	26	11.0
	Supply & Installation of Instrumentation Work	14	41	27.0

However, the bidder has not mentioned the list of 8 milestones as required under Data sheet-9 and needs to be sought from him.

Data sheet-10: An Outline of Quality Assurance System for the Project

The bidders are required to submit, an outline, description of proposed Quality Assurance System for the implementation of the project in line with the QAP for Civil and HM works provided in the Volume-III of tender document.

The bidder has mentioned that the Quality System has been designed to ensure that the Quality Policy, objectives, and the requirements of ISO 9001:2008 are implemented. The bidder has enclosed Quality Management chart and a Quality Control document.

PART C - ANOMOLIES REQUIRING CLARIFICATIONS

1. The bidder has claimed the experience in concrete dam construction in Mohanpura and Kundalia projects. However , no certificate has been produced to this effect. The Government of MP officers have clarified that the Mohanpura and Kundalya are

composite dams, having the concrete portion also. However, clarifications and certificates need to be sought from the bidder.

2. The construction methodology and the diversion program is not as comprehensive as expected. The bidder also did not provide the details of the machinery and equipment and only gave the inventory of the total machinery that he has in his inventory. The bidder claims that with this methodology, the time schedule will be met.

3. The bidder has presumed that the client will provide the required land for contractors all temporary establishments, disposal yards, access roads etc. free of cost. **This contravenes the tender provisions**

4. The bidder has stated that materials will not be dumped anywhere other than at designated muck dumping locations which are already identified and are to be provided by WRD**.** The KBLPA is not aware of this assurance given by MPWRD and needs to be clarified from them.

5. The bidder states that "*As informed by WRD during Prebid site visit, requirement of aggregates will be met from nearby RBM & rock quarries. The suitable excavated muck shall also be used to produce aggregates. RBM will be used by screening and balance oversized will be processed to get the required size. (Pg 696)"*. **However, no such assurance ever has been given by the KBLPA**.

6. The bidder has mentioned that the placement temperature of concrete will be maintained as per technical specifications, and proper compaction of concrete will be done using immersion-type vibrators. However no details of cooling plant has been provided. A clarification needs to be sought from the bidder.

7. The bidder mentions that *"As per working hours of 16 to 18 hrs per day and the varying rock condition of the shaft, as per the above estimated cycle times, an average progress of 12m to 15m/month/full face can be achieved."* In this regard, it is to be mentioned that KBLPA has expressly mentioned the working hours of 12 hours, hence, this assumption is incorrect. Secondly, the average progress of 12 to 15 meters per month appears to be inadequate. In excavation of the surge shaft too, the bidder has assumed the wrong working hours and needs to be clarified.

8. The bidder has mentioned that while carrying out the excavation works, the muck generated will be stock piled in the nearby vicinity. **However, this is not in line with tender provisions, as per that the muck is to be disposed in designated areas only**.

9. The bidder has mentioned that Staff colony will be developed on the bank of river. It needs to be explicitly clarified that the same will be developed at the designated place meeting the PTR requirements.

10. The bidder states that the materials arising out of clearing and grubbing operations and found to be unsuitable for use shall be shifted /stacked based on the site condition at stretch of road. **This appears to contravene the tender provisions**

11. The bidder has stated that the excavated material shall be shifted to dumping area or material stacking yard near crushing plant**. This needs to meet the tender conditions.**

12. The bidder in Data sheet-5A has mentioned that "As stipulated in the tender document's milestones will be followed and can be changed as per the Suit to Site conditions and

detailed Milestone will be finalized during the Pre award discussion with Department.". However, milestones are to be proposed by the bidders at tender stage and thereafter these are fixed and any delay in achievement of them due to delays attributable to the contractor will attract Liquidated Damages. Hence, this needs to be withdrawn by the bidder.

13. Data Sheet-6B: The Bidder needs to give / propose a detailed design plan i.e. process inputs/interface, process method and process output along with timelines for each step envisaged for executing the scope of work for scope of work w.r.t. "Planning, Design & Engineering". **This has not been given and needs to be sought from the bidder**

14. Data Sheet -7:The bidder has not provided the requisite details **and needs to be sought from the bidder**

15. Data Sheet - 8: The bidder has enclosed a list of equipment for construction with their numbers, capacities, year of manufacture , ownership status and their condition. Some of the proposed equipment are as old as manufactured in 2011. The tender document stipulates that deployed equipment should be preferably new. **A declaration in this regard needs to be sought.**

16. Data Sheet -9: Date of achievement month for 8 milestones not provided **and needs to be sought from the bidder**

OBSERVATIONS AND RECOMMENDATIONS

1. Dilip Buildcon is a sole bidder and is Make in India compliant
2. During the last three years, the bidder has not been declared ineligible/ suspended/ blacklisted/ banned/debarred
3. No corporate insolvency resolution process has been admitted against the bidder
4. The bidder has submitted the requisite tender fee and the Bank Guarantee. The name of the project in the bank guarantee needs to be corrected
5. The bidder has submitted the Power of Attorney
6. The bidder meets the financial criteria
7. The bidder has introduced several hidden conditions which are beyond the terms prescribed in ITB. It is recommended that a generic declaration may be get signed by all the bidders conveying their unequivocal acceptance of the conditions stipulated in the tender Documents and the confirmation that their quoted prices are after taking into cognizance of Scope of Work, the Owner's Requirements and probable Risks as identified in Risk Allocation Schedule. A sample of the same is appended as Annexure 7.
8. **Subject to clarification on experience in construction of the concrete dam, the bidder has met the qualification requirement and also the financial criteria.**

ANNEXURE 4 - MEIL-RITHWIK JOINT VENTURE (BID 4 OF 6)

PART A- QUALIFICATION REQUIREMENTS

1. ELIGIBILITY AND SUFFICIENCY OF THE SUBMITTED DOCUMENTS

a) **The MEIL-RITHWIK JOINT VENTURE** (hereinafter called as "the bidder" in Annexure 4) is formed by Megha Engineering & Infrastructures Limited, as Lead Partner (74%) & Rithwik Projects Private Limited as other partner (26%). The JV agreement is available at Page No 131 (vol 3) of the bid. The bidder is classified as "Joint Venture with the subcontractors" in accordance with Para 4 of the ITB.

b) In respect of the lead partner, M/s Megha Engineering & Infrastructures Limited, the Certificate of Incorporation is attached at page 5 of file "Legal_Status_and_Authority_of_Signatory". MoA is enclosed at page 7 and AoA at page 7 of file "Legal_Status_and_Authority_of_Signatory".

c) In respect of the other partner, M/s Rithwik Projects Private Limited, fresh Certificate of Incorporation due to change in name from "Rithwik Projects Limited" to "Rithwik Projects Private Limited", is attached at page 82 of file "Legal_Status_and_Authority_of_Signatory". MoA is enclosed at page 85 and AoA at page 97 of file "Legal_Status_and_Authority_of_Signatory".

d) The bidder with following subcontractors proposed

1)	PES Engineers Private Limited	: Hydro-Mechanical Works
2)	Bekem Infra Projects Pvt Limited	: Hydro-Mechanical Works
3)	GMW Private Ltd	: Hydro-Mechanical Works (TRCM)
4)	AFRY India Private Limited	: Design & Engineering Works

e) During the last three years, the both the partners of the JV have not been declared ineligible/ suspended/ blacklisted/ banned/debarred by appropriate agencies of the Government of India or Governments of MP and UP from participation in the Tender Processes of all of its entities *(Page 1339 Vol 3).*

f) Both the partners of the JV have >50% Make in India status and has submitted the declaration to this effect in Form 6 (Page 1442-23 of Vol 3).

g) No corporate insolvency resolution process has been admitted against the both the partners of the JV (Page 1339 Vol 3).

h) The bidder has submitted the **BG No 0008NDLG0022 6024 for Rs 2.0 Crore** issued on 02-03-2024 and valid till 01.06.2025 and **BG No 240133IBGB00018 for Rs 8.0Crore** valid till 01.06.2025. *The copies are available at Page77 and 83of Vol 3*. The bidder has also submitted the DD/Banker's cheque towards the cost of Tender fee through DD No 52765574 dated 04.03.2023 for Rs 40,000. A *copy of the same is available at page 2 of volume 3.*

i) The lead partner has submitted the Power of Attorney issued on 14 December 2018 in favour of Mr. M. G. Prasanna Kumar, Associate Vice President , valid and in force until

revocation of the same by the company in writing. A copy of the resolution dated December 08 , 2018 is also placed. The PoA is placed at *Page 5 of Vol 3* and the copy of the resolution dated 14.11.2018 is placed on *page 9 of volume 3*.

j) RPPL has submitted the Power of Attorney issued on 7 February 2024 in favour of Mr. K. Venkateswara Rao, Sr. GM with the copy of the resolution dated 01.02.2023. *The PoA is placed at Page 17 and the copy of the resolution dated 15.12.2023 is placed on page 19 of volume 3.*

k) On behalf of the Joint venture, the lead partner, i.e. MEIL, has submitted undertaking dated 05.03.2024 towards Anti-profiteering Clause of GST Act / Rules *(Page 2 of volume 6)*

2. QUALIFICATION REQUIREMENTS

3.1.1 GENERAL EXPERIENCE

(a) Technical

Criteria

*The lead bidder (Sole Contractor or **Lead Partner of the Joint Venture**) should have General Construction Experience as Prime Contractor or Partner of JV or Sub-contractor approved by the employer, of executing a major Civil Structure (Dam/Tunnel) in a Water Resources/ Hydro Power Development Project for a period of at least two (2) years in preceding ten (10) years. In case of tunnelling works, the experience of tunnelling of highway tunnel / railway tunnel/Metro tunnel shall also be considered.*

Observation

The Lead Partner of the Joint Venture (MIEL) has been involved in construction of following projects *(page 552-575 of Vol 3)*

Sl No	Name of the Project		Cost in Crore
1.	Ranganayaksagar Reservoir (80% share)	:	349
2.	Annaram Barrage Project	:	2780
3.	Sundilla Barrage Project	:	2665
4.	Pranaiiita-Chevella Lift Irrigation Scheme - Link- II - Package – 8 (PCIL-8) (90% share)	:	4680

MEIL has done tunnelling of 11 m dia , 8.23 km long for PCLI8 (2008-18) . Thus this criterion of General Construction Experience of executing a major Civil Structure (Dam/Tunnel) in a Water Resources Project has been met.

(b) Financial

Criteria

*The main bidder (Sole Contractor or the **Lead partner of the Joint Venture**) should have successful experience as Sole Contractor or Partner of the JV or sub-contractor approved by the employer of having successfully or substantially completed, during last 20 years, either of the following works:*

i. *Major components of three Water Resources / Hydropower/infrastructure projects with cost of executed works not less than INR 700 crore each OR*

ii. *Major components of two Water Resources/Hydropower/ infrastructure projects with cost of executed works not less than INR 1000 crore each OR*

iii. *Major components of one Water Resources/Hydropower/ infrastructure projects with cost of executed works not less than INR 1500 crore.*

Provided that

a) *The start and completion date for the above experience should fall within the preceding twenty (20) years reckoned from the last day of the month previous to the one in which Tender is invited*

b) *The substantially completed works for the above purpose means the works for which at least 80 percent payments of the contract value have been received. For contracts under which the applicant participated as a joint venture member or sub-contractor, only the applicant's share, by value, shall be considered to meet this requirement.*

For arriving at cost of similar work, the value of work executed shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated from the date of completion of the work to the date of Bid opening.

Observation

The Lead Partner of the Joint Venture (MIEL) has been involved in construction of following projects *(page 552-575 of Vol 3)*

Sl No	Name of the Project		Cost in Crore
1.	Annaram Barrage Project (2016-20)	:	2780
2.	Sundilla Barrage Project (2016-20)	:	2665
3.	Pranaiiita-Chevella Lift Irrigation Scheme - Link- II - Package – 8 (PCIL-8)- 90% share (2008-18)	:	4680

The lead partner has met the condition of completing a single infrastructure project of>1500 crore and hence the Financial Experience Criteria have been fully met.

3.1.2 SPECIFIC EXPERIENCE

A. CIVIL WORKS

*In addition to meeting the criteria of General Experience (Para 3.1.1), the bidder (Sole Contractor or the **Joint Venture collectively**) should have successful specific experience of having successfully or substantially completed, during last 20 years, all of the following works:*

(i) a) Concrete Dam with gated Spillway

At least one concrete dam of height not less than 15 m from the deepest foundation level to the crest level, with a gated Spillway and necessarily having a foundation gallery and instrumentation/inspection gallery AND

(i)(b) Earthen dam/ Rockfill/Composite Dam

At least one earth/rockfill/composite dam of height at the dam axis not less than 15 m from deepest foundation level to the top

(ii) Earthwork and concreting

Completion of following quantities in water resources/infrastructure projects, necessarily inclusive of that in (i) above, in the last 20 years

(a) gross combined excavation of 4,00,000 cum AND
(b) gross combined earth filling of 20,00,000 cum AND
(c) gross combined concreting of 9,00,000 cum with at least 3,00,000 cum of concreting achieved in a year at least once

For the purpose of this qualification, ***not more than five projects, necessarily including those in (i) above, shall be considered***

For contracts under which the applicant participated as a joint venture member or subcontractor, only the applicant's share, by value, shall be considered to meet this requirement.

(iii) Tunnelling

Completion of tunnel excavation and lining of at least one tunnel of minimum finished diameter of 5.5 m and length not less than 1000 m. For this purpose, experience of tunnelling of Highway tunnel/ Railway tunnel/Metro tunnel shall also be considered.

Para 4(D)(i) The Lead Partner to fully and necessarily meet the following:

- *Average annual turnover not less than 51 %of the criteria specified under financial capacity ,*
- Working Capital criteria
- General construction experience criteria specified for the tender.
- Specific Experience Criteria for the Dam (3.1.2 (i)A) or (3.1.2 (i)B)

Provided that the start and completion date for the above specific construction experience should fall within the preceding twenty (20) years reckoned from the last day of the month previous to the one in which Tender is invited.

Each partner shall meet at least one specific experience criteria

Observation

(i) (a) Concrete Dam with Gated Spillway

MEIL	RPPL
NA -	Construction of Civil works of 97.5 m high Dam, Spillway and power House works of Koteshwar Hydroelectric Project Period 2002-2011
In this regard, THDC has certified that *(Pg 586 of vol 3):*	

i. The work of "construction of civil work of Dam Spillway and Power House at Koteshwar was awarded to M/s PCL Intertech Lenhydro Consortium JV in 2002.
ii. M/s Rithwik Swathi JV was recognized as authorized sub-contractor of M/s PCL Intertech Lenhydro Consortium JV in 2006. Later, M/s Swathi, one of the partners of M/s RSJV, withdrew from the joint venture.
iii. Thus M/s Rithwik Projects Limited remained sole approved sub contractor thereafter, and was declared as authorized sub contractor of M/s PCL in 2010.
iv. Subsequently M/s PCL intertech Lenhydro Consortium JV, have informed in 2011 that name of M/s Rithwik Projects Limited have been changed to M/s Rithwik Projects Pvt Ltd.

However, the Certificate issued by THDC Ltd, *available at Page 594 of volume 3,* makes no mention that the RPPL had been involved in the construction of main Dam. This aspect needs to be critically considered.

Moreover, the certificate issued by THDC *(page 586 of volume 3)* indicates work of Koteshwar project was started in 2002. Some work was done in 2002-03 *(Page 588 of Volume 3)*. In such a case, the criteria that *" the start and completion date for the above specific construction experience should fall within the preceding twenty (20) years reckoned from the last day of the month previous to the one in which Tender is invited."* is not met.

However, the same certificate mentions that M/s Rithwik Swathi JV was recognized as authorized sub-contractor of M/s PCL Intertech Lenhydro Consortium JV in 2006. Thus it needs to be deliberated whether the JV partner meets the 20 years criteria or not..

Irrespective of the same, the list of work in the certificate issued by THDC **make no mention that the RPPL was involved in construction of the dam. Hence , there is an ambiguity that needs to be clarified.**

(i)(b) Earthen dam/ Rockfill/Composite Dam

MEIL has been involved in the construction of the Formation of **Sri Ranganayaka Sagar** (Inanbad Reservoir) under Kaleshwaram Project with a capacity of 3.00 TMC. It involved the construction of 32.625 m high Rangayaka Sagar Dam at the cost of 437 crore of which the bidder has 80% share. Period 2017-2020 *(Pg 549 of Vol 3)*

(ii) Earthwork and concreting

Gross combined excavation

MEIL		**RPPL**	
Project	**Qty (cum)**	**Project**	**Qty (cum)**
Rangayaka Sagar*	95,11,402	Koteshwar HEP*	74,26,037
Annaram Barrage	4,85,111	Bansagar	37,25,564
Sundilla Barrage	6,69,629	PVNRKSS	22,54,010
Total	**1,06,66,142**		**1,34,05,611**
Page 549 – 573, Volume 3		*Page 584-616, Volume 3*	

The criteria of excavation of 4,00,000 cum is met using any one project from the above

Gross combined earth filling

MEIL		RPPL	
Project	**Qty (cum)**	**Project**	**Qty (cum)**
Rangayaka Sagar*	10,01,157	Koteshwar HEP*	1,19,778
Annaram Barrage	80,14,124	Bansagar	23,26,658
Sundilla Barrage	1,06,39,399	NRKSS	1,70,542
Total	**1,96,54,680**		**26,16,978**
Page 549 – 573, Volume 3		*Page 584-616, Volume 3*	

For this qualification of earth filling of 20,00,000 cum, only five projects necessarily including Rangayaka Sagar and Koteshwar HEP can be considered. However, the criterion can be met by Sundila barrage project alone.

Concreting

MEIL		RPPL	
Project	**Qty (cum)**	**Project**	**Qty (cum)**
Annaram Barrage	7,31,843	Koteshwar HEP	9,92,315
Sundilla Barrage	6,59,638	PVNR KSS	5,26,831
Total	**13,91,481**		**15,19,226**
Single Year	**5,12,255 (2018-19)**		**3,60,004 (2008-09)**
Page 557 – 573, Volume 3		*Page 584-616, Volume 3*	

Tunnelling

MEIL has done tunnelling of 11 m dia , 8.23 km long for PCLI8 and 7 m dia , 2.51 m long for Veligonda project (Pg 574-582)

The bidder meets the Specific Experience Criteria (Civil) of Para 3.1.2

3.2 HYDRO MECHANICAL WORKS:

(i) General Experience

*The bidder solely or through a Joint Venture Partner or through the sub-contractor shall be required to have an experience as a prime contractor or as partner in a JV or as a Sub-contractor approved by the employer of executing a gross quantity of at least **5000 MT of Hydro-mechanical components** of work in water resources/hydro-power projects in last 20 years. For contracts under which the applicant participated as a joint venture member or sub-contractor, only the applicant's share, by value, shall be considered to meet this requirement.*

Observation

The Joint venture has proposed PES and **BEKEM** as sub-contractors for HM work, having executed the following works:

PES		BEKEM	
Project	**Qty (MT)**	**Project**	**Qty (MT)**
Mangdechhu (2012-19)	10,492.43	Varkhede Barrage (2018-21)	2,297
		Polavaram (2018-21)	3,788
		Mid Manair Reservoir	504
	10,492.43		**6,589**
Page 619-636, Volume 3		*Page 638-651, Volume 3*	

This criterion has been met through proposed sub contractors

ii) **Specific Experience**

The bidder solely or through a Joint Venture Partner or through the sub-contractor shall be required to have a specific experience in designing, manufacturing, installation, testing & commissioning of the following Hydro Mechanical items having ratings as below in preceding 20 years

(i) Radial Gate (Submerged/ Crest):

Designing, Manufacturing, installation, testing & commissioning of Radial Gate operated by hydraulic hoist or rope drum hoist with AxH = 2664 m3 or more

(ii) Vertical lift gate

Designing, Manufacturing, installation , testing and commissioning of Fixed Wheel type Vertical Lift Gate operated by hydraulic hoist or rope drum hoist with AXH= 576 m3 or more

Observation

Value of A x H (m^3)				
	PES		**BEKEM**	
Radial Gate	Mangdechhu (2012-19)	7,794 m^3	Polavaram (2018-21)	6,747 m^3
Vertical Lift Gate	Mangdechhu (2012-19)	675 m^3	Sri Maheshwar 2007-12	1,281 m^3
	Page 619-636, Volume 3		*Page 541, 638-651, Volume 3*	

(iii) Trash Rack Cleaning Machine (TRCM)

Experience of Designing, manufacturing, supply, installation, testing & commissioning of Trash Rack Cleaning Machine (TRCM) with following technical features:

- *Trash handling capacity 1000 kg,*
- *Rack bucket width 1,5 m*
- *Integrated Hydraulic Grappler/Gripper with lifting capacity 500 kg & outreach /depth 6m*

Observation

BEKEM	GMW
Jorthang HEP Trash Capacity -1000 Kg Rack Bucket - 2.445 m Grapper - 500 kg (Grip Engineers)	**Sawra Kuddu** Trash Capacity - 1200 Kg Rack Bucket - 2.5 m Grapper - 1200 kg - 8m depth **Sainj HEP** Trash Capacity - 2000 Kg Rack Bucket - 4.0 m Grpper - 5500kg - 20m Depth
Page 541, 661-676, Volume 3	*Page 678-683, Volume 3*

The bidder meets this Qualification Criterion

3.4 DESIGN AND ENGINEERING WORKS:

The bidder solely, through a Joint Venture Partner or through the sub-contractor shall be required to have an experience in:

i. Design and Engineering of at least one completed concrete dam of height not less than 40 m and an earth fill/ rockfill/composite dam of height not less than 35 m in preceding 20 years

ii. *Design and Engineering of at least one tunnel of more than 5.50 m diameter*.

Observation

AFRY which is a proposed sub-contractor has been associated with

- Design of Dam of Chuzachen HEP - 48m High
- Nikachhu HEP - 42m High.
- The Subcontrator has also been associated with the design of tunnel of Kutehr HEP - 6.2m Dia and Pinnapuram - 8.5m Dia *(Page 691-703 of volume 3)*

This criterion has been met

3.5 FINANCIAL CAPACITY

(i) Turnover

*Minimum average annual construction turnover of the **sole bidder or the Joint Venture** as specified in Article 3.1 (C) in the preceding 3 years shall be **INR 1,500 crore**. For arriving at the turnover of the years prior to 2021 -22 , the same shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum*

*While calculating the average turnover for the last three years , the bidder can exercise an option of **excluding the year 2020-21 as pandemic year** and include **either** (a) the year 2018-19 with the weightage of (1.28) or (b)the year 2022-2023 (with the weightage of 1.0, provided Audited Balance sheet or CA Certificate based on Audited Balance Sheet is available). **This option permits only the year 2020-2021 to be excluded** and the continuous three years period with the exclusion of 2020-21 will be considered.*

The JV Partner to have average annual turnover not less than 20% of the criteria specified under financial capacity.

Observation

				INR, Crore
Year	**2020-21**	**2021-22**	**2022-23**	**Average**
MEIL	23,376.53	25,736.25	24,563.25	**24,558.68**
RPPL	1,281.32	1,208.47	1,714.6	**1,401.46**
JV	**24,657.85**	**26,944.72**	**26,277.85**	**25,960.13**

The average annual construction turnover of the JV in the preceding 3 years is more than the required 1500 crore and the same of JV Partner >300 crore. Hence the bidder meets this criterion

Net Worth

Net worth (paid-up share capital + reserves & surplus) of the bidder (and each partner of JV in case of JV) of last 3 financial years should be positive and Net Worth of the bidder or JV of last Financial Year should not be less than 450 crore.

Observation

			INR, Crore
Year	**2020-21**	**2021-22**	**2022-23**
MEIL	18,168.02	20,268.37	21,262.73
RPPL	538.96	555.92	621.04

The net worth of bidder is positive in last three Financial Years and is more than 450 crore in last Financial Year. Hence the bidder meets the criteria.

(ii) Working Capital

The working capital of the bidder/JV (current assets minus current liabilities) shall be at least INR 200 crore.

For this purpose, a certificate from a Chartered Accountant should be submitted. Only Audited Balance Sheet or CA certificate based on Audited Balance Sheet shall be considered. The provisional balance sheet will not be considered.

Observation

a) The MEIL working capital is Rs 10,294.37 crore for Financial Year 2022-23.
b) The RPPL's working capital is Rs 711.48 crore for Financial Year 2022-23.

The working capital of the JV is > INR 200 crore. Hence the bidder meets this criterion

3.6 BID CAPACITY

The available Bid Capacity of the bidder (Sole bidder or JV as specified in Article 4.1 C (vi) below) at the time of submission of Price Bid, calculated as under should not be less than the 5000 crore:

For the purpose of this qualification, the work done outside of India by companies of Indian origin, either as Sole Contractor or Lead Partner of the Joint Venture can be considered, provided that, the bidder furnishes a certificate issued by the client, giving the physical and financial details of the work done. Such certificate needs to be necessarily authenticated by Indian Embassy/Mission in the country where such work has been claimed to be done. Acceptance of this certificate, however, will be a sole discretion of KBLPA.

The cost of executed works carried out outside India in (B) above shall be converted into INR equivalent. For this purpose, the cost of executed works carried out outside India shall be converted into INR equivalent at the rate of exchange of the foreign currency to Indian Rupees. (SBITT Selling Rate applicable on the date of opening of Price Bid) will be applied.

Observation

The bid capacity of the MEIL and RPPL is **1,55,911.29 crore and 13472.31 crore** respectively. Hence t**he bidder meets this criterion**

DATA SHEET-1: BIDDER'S APPRECIATION OF THE PROJECT

As per tender provisions, bidders are required to submit a report consisting Bidder's appreciation of the project, which should include a section on the site inspection carried out prior to Bidding to demonstrate awareness and understanding of all the principal technical and logistic aspects etc. required for completion of Works.

The lead partner of the JV M/s Megha Engineering & Infrastructures Ltd. (NEIL) has visited the site. The bidder has submitted the Project Appreciation narrating the following:

The bidder has briefly described about the Project, mentioned availability of land and how he will make necessary arrangement as below:

"The Land required for Project Components shall be provided by the Owner on "as is where is basis" without any cost to the Contractor. The Contractor shall make his own arrangements to develop infrastructure for all their requirement during the construction. The necessary residential and labour camps including other facilities like water supply, sanitation etc. are to be developed by the Contractor at his own cost. The Contractor shall arrange Private land for his use near proposed Daudhan Project site along the Gangau-Palkohan road. The Contractor shall make his own arrangements of land for his infrastructure and other facilities in these areas as per the availability and site conditions and also outside the Panna Tiger Reserve area. All the camps facility area main works areas etc. are required to be fenced and protected by the Contractor at his own cost."

The bidder has also mentioned that the muck disposal areas need to be developed preferably quite away from the MWL line along the river course and outside of the boundary of core and buffer zone of Panna Tiger Reserve in **a** series of terraces of boulder crater walls and masonry walls wherever needed and the responsibility of adherence to various regulations of the authorities for muck disposal vests with the contractor.

Regarding the construction material, the bidder has placed the list of quarries and the borrow areas mentioned in the tender document. However, it has been clarified by KBLPA in the pre-

bid meeting and also through the amendment that KBLPA shall bear no responsibility. **This has not been mentioned by the bidder.**

The bidder has also mentioned Power arrangement and source of water as per bid document.

Data Sheet –2: Bidder's Proposed Organizational Setup for the Project

The Bidder has submitted the Preliminary Overall Project Management Organisation Chart and Organisation Chart for Planning, Design & Engineering services, Civil Works, HM works and Narrative description of Organisation Chart. The relation between Head office and site Management has also been shown.

In addition to the staff for execution of work, the bidder has also proposed post of **ESMP Manager, for taking** precautionary methods & various checks and measures and to ensure that all the necessary measures are implemented to protect the environment and to mitigate adverse impacts all to the satisfaction of the engineer.

Data Sheet –3: An Outline of the Project Components along with Drawings.

The bidders are required to submit, in outline, descriptions of proposed project components along with relevant drawings. The information should be submitted in sufficient detail to allow assessment of the general adequacy of the Bidder's proposal. Sketches, drawings and diagrams should be included where necessary for clarification of the description. These drawings of the successful bidder shall form part of the Contract as 'Tender Drawings'.

Concrete Dam:

The bidder has proposed minor modification in slopes of U/s and D/s slopes of NoF and Auxiliary Block as below:

NOF Block	As per tender	As proposed by bidder
U/S Slope	0.15(H):1(V)	0.2(H):1(V)
D/S Slope	5(H):1(V)	0.7(H):1(V)
Auxiliary Block		
D/S Slope	0.85(H): 1(V) 0.7(H):1(V)	

Overflow Section (Spillway):

The FRL / MWL of the dam is at EL.288.00 m. Top of the dam is at 293.00 m. Typical cross section of Spillway is given.

Non-Overflow Section

The FRL / MWL of the dam is at EL.288.00 m. Top of the dam is at 293.00 m. Typical cross section of NOF dam is given.

Earthen Dam:

Typical cross section of earth dam is given.

Intakes, Tunnels, Surge shaft and Pressure shaft

The project includes three Intakes, two tunnels, lower tunnel of diameter 5.5 m and length 1.008 Km and upper tunnel of 8.5 m diameter and 1.928 Km. The surge shaft is 18 m diameter, 60 m deep. Three numbers of 120 m long, 2400mm finished diameter pressure shaft is considered.

The bidder has calculated size of Intakes and attached drawings. The bidder has described, Lower-Level tunnel, upper level tunnel and Surge shaft. The bidder has mentioned that they envisage one combined pressure tunnel of dia 4.15m instead of three separate pressure tunnel each of 2.4m diameter. The bidder has mentioned that at the exit portal, a junction is provided to accommodate a 3.0m diameter Howell Bunger Valve for bypassing the water to the tailrace d/s whenever the powerhouse shall be closed and Downstream of that junction, a trifurcation is envisaged.

However, the bidder has not mentioned that how it will be connected to LBC. Further, the bidder has not mentioned anything about 33 kv line and construction of Office / residential quarters.

Data Sheet –4: Management of Planning, Design and Engineering Works

The bidders are required to submit description of proposed management of Planning, Design and Engineering services including sequence to be used for the same, Key Design and Engineering activities, identification of Key experts along with their deployment schedule.

The bidder has proposed to engage M/s AFRY as sub-contractors for PDE work. The bidder submitted description of proposed management of Planning, Design and Engineering services including sequence to be used for the same, Key Design and Engineering activities. As per the tender provisions, the bidder has option to propose PDE Agency within 30 days of issue of LoA as per tender provisions. As such the sub-contractors are proposed not to be evaluated at this stage. However, this needs to be confirmed by the bidder.

Data Sheet –5A: Construction Methodology of Civil Component Works

The bidder has submitted description of proposed methods, sequences, facilities and layouts to be used for execution of civil works covering the following:

River Diversion Scheme

The bidder has proposed following river diversion scheme:

Gangau weir Maximum submergence is at Elevation 230.50 m. Considering a free board of 1.m, the top level of sheet pile and the top level of the bridge is considered as 231.5m. The river is to be diverted in 2 stages to take up the construction.

***Stage 1**:In Stage 1, river is diverted through the river space far overflow blocks 42 to 52.*

The construction is to be taken up from overflow block 55 to 68 and is to be raised up to an Elevation of 245.00 m and non-overflow concrete blocks from 69 to 76 may be raised. The Earthen Dam shall also be raised up to an elevation of 245.00 m. This Earthen Dam at u/s and d/s shall act as coffer dam so that 1 in 100 years monsoon flood shall be passed from left bank. This coffer dam is part of main Earthen Dam. 1 in 25 years non monsoon flood of 1200 cumec and 1 in 100 years monsoon flood of 31000 cumec shall be passed through channel of width 210 m.

The Sheet pile wall is constructed. Since NSL is different at different levels, the sheet pile will have overburden at some region. There may not be requirement of riverbed material support dyke. In the section 3-3, NSL is at lower elevation, so the top of sheet pile is kept at 231.50 m and there is a requirement of overburden material. The detailing of the sections provided are typical.

***Stage 2**:1 in 25 years non monsoon flood of 1200 cumec shall be passed through constructed right overflow bays from 56 to 68. If 1 in 100 years monsoon flood of 31000 cumec comes overtopping maybe allowed through right bank bays. Head over spillway crest is 3.5 m due to which water level upstream of overflow bays is 239.50 m.*

Left Overflow Bays from 42 to 54 shall be constructed in this stage. Earthen Dam may be raised up to dam top Elevation 293.00 m. non-overflow blocks shall also be constructed up to dam top Elevation 293.00 m.

In this stage, the Sheet pile wall shall be constructed with its top level at 241.00 m.

Excavation and concreting of components

The bidder has proposed that Dam Concreting is to be carried out with **Conventional Concrete or** by any other alternative suitable method (Roller compacted concrete) subject to meeting all the technical criteria and the basic objective, Design and specifications and standards with approval of the KBLPA/Owner's representative. The bidder has mentioned that based on the high concrete placement rate, the dam construction can be planned to complete the works in faster way by adopting suitable placement concrete method.

The bidder has provided excavation and concreting methodology for all components of work including arrangement for cooling of aggregates.

However, the bidder has not described the By-pass arrangement from outlet portal of the Lower Level tunnel to the link canal.

Data Sheet 5B: Construction Methodology of HM Component Works

The bidder has submitted Construction Methodology of HM Component Works through proposed sub-contractors M/s PES Engineers Private Limited and M/s Bekem Infra Projects Pvt. Ltd. However, as per tender provisions, the bidder has option to propose sub-contractor(s) for HM works within 90 days of issue of LoA. Bidder may be asked to confirm the above.

Data Sheet-6A: Infrastructure for execution of scope of work w.r.t. "Planning, Design & Engineering"

The Bidders are required to give detailed description of infrastructure with respect to proposed deployment of computer hardware and software, in-house technical knowhow and documentation to execute the works under head "Planning, Design & Engineering"

The proposed sub-contractor M/s AFRY India Private Ltd. of the bidder has mentioned about office space, Laptops installed with required Softwares and INTERNET connection for working of personnel. For printing the reports/memo/drawings, they have adequate nos. of advance printers available in their office. For time to time site visits, Laptops shall be carried by the experts during such visits. Internet connectivity shall be made available thru Wi-Fi Flash drives. Alternatively, experts may also use the internet connection available locally.

The sub-contractor have shown availability of technical staff and design softwares. However, as per tender provisions, the bidder has option to propose sub-contractor for Planning, Design & Engineering works within 30 days of issue of LoA. **Bidder may be asked to confirm the above.**

Data Sheet-6B: Design plan for Planning Design and Engineering:

The Bidders are required to propose a detailed design plan i.e. process inputs/interface, process method and process output along with timelines for each step envisaged for executing the scope of work for scope of work w.r.t. "Planning, Design & Engineering".

The bidder through proposed sub-contractor has provided sequence of activities with timelines.

Data Sheet-6C: Format of Drawing Block

The bidder has proposed format of drawing block but it does not include important details like "purpose of drawing", "Notes", "Reference to other drawings", Names of preparing, reviewing and approving officials name.

Data Sheet-6D: An outline of quality assurance system for the execution of scope of work w.r.t. "Planning, Design & Engineering"

The bidder has attached Certificate of Quality Management System and flow charts for checking / controlling quality of output and cited various tools available with them for Quality Control.

Data sheet-7: Details of Hydro-Mechanical Plant & Machinery

The bidders are required to submit the detailed description of the Hydro-mechanical Plant & Machinery proposed and should also include in his submission, for these Plant & Machinery, the description of their manufacturing activities-transportation to site and erection at site in detail including interface activities with the Civil Works.

The bidder through its sub-contractors has provided list of HM equipment, description of their manufacturing activities their handling and their installation at site. The bidder has proposed five set of stoplogs as per the provision.

Data sheet 8: Deployment of Construction Equipment

The Bidders are required to list out all critical construction equipment, which would be proposed for Construction works. This should include their numbers, capacities and whether equipments proposed are to be purchased new or old. In respect of old equipment, year of manufacture and current ownership is to be stated. Construction equipment should be preferably new.

The bidder has enclosed a list of construction equipment and mentioned that these will be deployed progressively at site as per construction requirement. The bidder has given undertaking under Note of Data Sheet-8 that *"We herewith undertake to Mobilize the required no. of equipment of specified capacity in the design and methodology to the site as per approved construction schedule."*

However, completed data sheet-8 containing details as mentioned first para above is required from the bidder.

Data sheet-9: Construction Schedule of the Project

The Bidders are required to submit a Master Control Network within the Time for Completion dates, which shall form part of Overall Agreement so as to complete the work within 72 months. The bidder has proposed the achievement of Contract Milestones as below:

The bidder did not provide target dates for Milestones as per Data Sheet-9 and merely mentioned that *"Work will be Completed in Contract Period of 72 Months and the Tentative Construction Schedule is enclosed."* **It is a deviation from the tender conditions.**

Data sheet-10: An Outline of Quality Assurance System for the Project

The bidders are required to submit, an outline, description of proposed Quality Assurance System for the implementation of the project in line with the QAP for Civil and HM works provided in the Volume-III of tender document.

The bidder has proposed Quality Assurance System for Civil and HM works, which include various formats and check frequencies.

PART C - ANOMOLIES REQUIRING CLARIFICATIONS

1. Regarding the construction material, the bidder has placed the list of quarries and the borrow areas mentioned in the tender document. However, it has been clarified by KBLPA in the pre-bid meeting and also through the amendment that KBLPA shall bear no responsibility. This has not been mentioned by the bidder.
2. The bidder has proposed minor modification in slopes of U/s and D/s slopes of NoF and Auxiliary Block. However, it may be clarified that any proposed changes needs to be approved by the KBLPA. Who will have the right to accept the proposal without any obligation.
3. The bidder has mentioned that at the exit portal, a junction is provided to accommodate a 3.0m diameter Howell Bunger Valve for bypassing the water to the tailrace d/s whenever the powerhouse shall be closed and Downstream of that junction, a trifurcation is envisaged.
4. The bidder has not mentioned that how the tunnel will be connected to LBC. Further, the bidder has not mentioned anything about 33 kv line and construction of Office / residential quarters.
5. The bidder has mentioned that based on the high concrete placement rate, the dam construction can be planned to complete the works in faster way by adopting suitable placement concrete method. However it needs to be brought out that any such proposed changes will be examined by the KBLPA in the construction stage and the right to accept the proposal will vest with KBLPA which shall be under no obligation, whatsoever, to accept the proposal. ,if accepted , no additional payment beyond the amount as per contract agreement is claimed by the contractor
6. The sub-contractor have shown availability of technical staff and design softwares. However, as per tender provisions, the bidder has option to propose sub-contractor for Planning, Design & Engineering works within 30 days of issue of LoA. Bidder may be asked to confirm the above.

7. The bidder did not provide target dates for Milestones as per Data Sheet-9 and merely mentioned that *"Work will be Completed in Contract Period of 72 Months and the Tentative Construction Schedule is enclosed."* It is a deviation from the tender conditions and needs to be withdrawn.

OBSERVATIONS AND RECOMMENDATIONS

1. The MEIL-RITHWIK JOINT VENTURE is formed by Megha Engineering & Infrastructures Limited, as Lead Partner (74%) & Rithwik Projects Private Limited as minor partner (26%).
2. During the last three years, the both the partners of the JV have not been declared ineligible/ suspended/ blacklisted/ banned/debarred
3. Both the partners of the JV are Make in India compliant
4. No corporate insolvency resolution process has been admitted against the partners
5. The bidder has submitted the requisite tender fee and the Bank Guarantee
6. The partners have submitted the Power of Attorney and the other partner has submitted the PoA in favour of the lead partner
7. The bidder meets the financial criteria
8. The other partner of the JV has average annual turnover>300 cr (20% of the specified) and meets at least one specific experience criteria (concrete dam), subject to observation mentioned at Page 57 of this document
9. The bidder has proposed a number of modifications in the design. A clarification in this regard may to be issued, if appropriate.
10. It is recommended that a generic declaration may be get signed by all the bidders conveying their unequivocal acceptance of the conditions stipulated in the tender Documents and the confirmation that their quoted prices are after taking into cognizance of Scope of Work, the Owner's Requirements and probable Risks as identified in Risk Allocation Schedule. A sample of the same is appended as Annexure 7.
11. **The experience claimed in construction of concrete dam has ambiguity and needs to be deliberated**

ANNEXURE 5- HCC-RVNL JOINT VENTURE (BID 5 of 6)

PART A- QUALIFICATION REQUIREMENTS

1. ELIGIBILITY AND SUFFICIENCY OF THE SUBMITTED DOCUMENTS

a) **The HCC-RVNL JOINT VENTURE** (hereinafter called as "the bidder" in Annexure 5) is formed by M/s Hindustan Construction Company Limited as Lead Partner (65%) &Rail Vikas Nigam Ltd as minor partner (35%). The JV agreement is available at *Page No 2947 (vol 6)*of the bid. The bidder is classified as "Joint Venture with the subcontractors" in accordance with Para 4 of the ITB.

b) In respect of the lead partner, the Certificate of incorporation is enclosed at page 17, MoA at page 24 and AoA at *page 39.*

c) In respect of the other partner, the Certificate of incorporation is enclosed at page 71, MoA at page 73 and AoA at *page 83.*

d) During the last three years, the both the partners of the JV have not been declared ineligible/ suspended/ blacklisted/ banned/debarred by appropriate agencies of the Government of India or Governments of MP and UP from participation in the Tender Processes of all of its entities *(Page 564).*

e) The JV have >95% Make in India status and has submitted the declaration to this effect in Form 6 *(Page 565 of Vol 3).*

f) No corporate insolvency resolution process has been admitted against the JV *(Page 47 and 568 of Vol 3).*

g) The bidder has submitted the BG No 1352 NDLG00101424 for Rs 10.0 Crore issued on 14.12.2023 and valid till 25.06.2025 (557days) *(Page 5, volume 1).* The bidder has also submitted the Scanned copy of DD/Banker's cheque towards the cost of Tender fee of Rs 40,000 through DD No 500286 for Rs 40,000 on dated 17.10.2023 *(Page 3, Volume 1)*

h) The lead partner has submitted the Power of Attorney issued on July 11, 2023 in favour of Mr. Mangesh Ghogale, Sr. General Manager with the copy of the resolution dated 04.09.2023. The period of validity of this PoA, is 4 October 2025. The PoA is placed at *Page 124 of Volume 2* and the copy of the resolution is placed on *page 127 of volume 2.*

i) RVNL has submitted the Power of Attorney issued on 09.01.23 in favour of Mr. Suryansh Gupta DGM/Civil/BD, with the copy of the resolution dated 10.02.2023, validated on 04.03.2024. The PoA is placed at Page 128, volume 2 and the copy of the resolution dated is placed on page 130 of volume 2.

j) Ms RVNL has given the PoA to the lead partner, to do on behalf of the Joint Venture, all or any of the acts, deeds or things necessary or incidental to the Joint Ventures bid for the contract. *(Page 135 of Vol 2)*

k) On behalf of the Joint venture, the lead partner, i.e. HCC, has submitted undertaking dated 04.03.2024 towards Anti-profiteering Clause of GST Act / Rules *(Page 2339 of volume 4)*

2. QUALIFICATION REQUIREMENTS

3.1.1 GENERAL EXPERIENCE

(a) Technical

Criteria

*The lead bidder (Sole Contractor or **Lead Partner of the Joint Venture**) should have General Construction Experience as Prime Contractor or Partner of JV or Sub-contractor approved by the employer, of executing a major Civil Structure (Dam/Tunnel) in a Water Resources/ Hydro Power Development Project for a period of at least two (2) years in preceding ten (10) years. In case of tunnelling works, the experience of tunnelling of highway tunnel / railway tunnel/Metro tunnel shall also be considered.*

Observation

The Lead Partner of the Joint Venture (HCC) has been involved in construction of the following projects*(Page 324 of Vol 3)*

SN	Name of the Project	Share	Year of completion
	Kishanganga HEP	98%	2018
	Godavari Lift Irrigation Scheme, Phase-I, Stage-I	88.32%	2013
	Godavari Lift Irrigation Scheme, Phase-II, Stage-I	51%	2016
	Chamera Hydroelectric Project, Stage- III, Lot-1, 231 MW	100%	2012
	Pare HE Project (2x55 MW), Package-I, Civil Works	100%	2018
	Teesta Low Dam Project-Stage IV, Package: Lot-I (4x40MW)	100%	2016
	Uri-ll H E. Project of 240 MW (Uri- II: Lot-1)	100%	2013

Thus this criterion has been met by the lead bidder.

(b) Financial

Criteria

*The main bidder (Sole Contractor or the **Lead partner of the Joint Venture**) should have successful experience as Sole Contractor or Partner of the JV or sub-contractor approved by the employer of having successfully or substantially completed, during last 20 years, either of the following works:*

iv. Major components of three Water Resources / Hydropower/infrastructure projects with cost of executed works not less than INR 700 crore each OR

v. Major components of two Water Resources/Hydropower/ infrastructure projects with cost of executed works not less than INR 1000 crore each OR

vi. *Major components of one Water Resources/Hydropower/ infrastructure projects with cost of executed works not less than INR 1500 crore.*

Provided that

a) The start and completion date for the above experience should fall within the preceding twenty (20) years reckoned from the last day of the month previous to the one in which Tender is invited

b) The substantially completed works for the above purpose means the works for which at least 80 percent payments of the contract value have been received. For contracts under which the applicant participated as a joint venture member or sub-contractor, only the applicant's share, by value, shall be considered to meet this requirement.

c) For arriving at cost of similar work, the value of work executed shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated from the date of completion of the work to the date of Bid opening.

Observation

The Lead Partner of the Joint Venture (HCC) has been involved in construction of the following projects *(Page 324 of Vol 3)*

SN	Name of the Project	Share	Year of completion	Cost Crore
1.	Kishanganga HEP	98%	2018	2944.30
2.	Godavari Lift Irrigation Scheme, Phase-I, Stage-I	88.32%	2013	954.69
3.	Godavari Lift Irrigation Scheme, Phase-II, Stage-I	51.0%	2016	976.23
4.	Chamera Hydroelectric Project, Stage- III, Lot-1, 231 MW	100%	2012	722.80

The Financial Experience Criteria have been fully met by the lead bidder by considering only Kishenganga HEP which is >1500 crore. The lead bidder has also done three projects >700 crore

3.1.2 SPECIFIC EXPERIENCE

A. CIVIL WORKS

*In addition to meeting the criteria of General Experience (Para 3.1.1), the bidder (Sole Contractor or the **Joint Venture collectively**) should have successful specific experience of having successfully or substantially completed, during last 20 years, all of the following works:*

(i) a) Concrete Dam with gated Spillway

At least one concrete dam of height not less than 15 m from the deepest foundation level to the crest level, with a gated Spillway and necessarily having a foundation gallery and instrumentation/inspection gallery AND

(i)(b) Earthen dam/ Rockfill/Composite Dam

At least one earth/rockfill/composite dam of height at the dam axis not less than 15 m from deepest foundation level to the top

(ii) Earthwork and concreting

Completion of following quantities in water resources/infrastructure projects, necessarily inclusive of that in (i) above, in the last 20 years

(a) gross combined excavation of 4,00,000 cum AND
(b) gross combined earth filling of 20,00,000 cum AND
(c) gross combined concreting of 9,00,000 cum with at least 3,00,000 cum of concreting achieved in a year at least once

For the purpose of this qualification, ***not more than five projects, necessarily including those in (i) above, shall be considered***

For contracts under which the applicant participated as a joint venture member or subcontractor, only the applicant's share, by value, shall be considered to meet this requirement.

(iii) Tunnelling

Completion of tunnel excavation and lining of at least one tunnel of minimum finished diameter of 5.5 m and length not less than 1000 m. For this purpose, experience of tunnelling of Highway tunnel/ Railway tunnel/Metro tunnel shall also be considered.

Para 4(D)(i) The Lead Partner to fully and necessarily meet the following:

- *Average annual turnover not less than 51 %of the criteria specified under financial capacity ,*
- *Working Capital criteria*
- *General construction experience criteria specified for the tender.*
- *Specific Experience Criteria for the Dam (3.1.2 (i)A) or (3.1.2 (i)B)*

Provided that the start and completion date for the above specific construction experience should fall within the preceding twenty (20) years reckoned from the last day of the month previous to the one in which Tender is invited.

Observation

a) For meeting the requirement of experience in **concrete dam**, the lead partner has submitted the experience in the construction
   - 64 m high Chamera- III HEP Concrete Gravity Dam *(Pg 363 of Volume 3)*
   - 63 m high Pare HEP stage-I Concrete Gravity Dam *(Pg 378 of Volume 3*) and
   - 45 m high Teesta Low Dam Project- Stage- IV RCC Dam *(Page 410 of Volume 3).*

   The drawings show that the dams of Chamera- III and Pare HEP stage-I have the foundation gallery and instrumentation/inspection gallery.

b) For meeting the requirement of experience in **earthfill/rockfill/composite dam** the Lead Partner has submitted the experience in the construction of the 37 m high Kishanganga HEP Rockfill/ Composite Dam (Pg 337 of Volume 3)

c) For meeting the requirement of experience in **gross combined excavation** the bidder has submitted the following*(Page 331 of Volume 3)*

Project	**By**	**Qty (cum)**	**Quantity (cum)**
Kishanganga HEP (3x110MW)* 2009 - 2018)	HCC (98%)	98% of 2,024,369.00	19,83,881.62
Pare HEP (2x55 MW). 2009 - 2018*	HCC 100%	9,15,543.00	9,15,543.00
Teesta Low Dam St III	HCC 100%	3,624,553.28	3,624,553.28
Godavari Lift Irrigation Scheme Phase -II 2005 - 2016)	HCC 51%	33,05,621.92	16,85,866.71
Chamera-lll HEP 231MW 2005 -2012)	HCC 100%	7,67,458.00	7,67,458.00
TOTAL			**89,77,302.61**
*These are the projects mentioned in criteria i(a) and i(b) to and are to be mandatorily included in the five projects			

d) For meeting the requirement of experience in **gross combined filling** the bidder has submitted the following *(Page 331 of Volume 3)*

Project	**By**	**Qty (cum)**	**Quantity (cum)**
Kishanganga HEP (3x110MW)* 2009 - 2018)	HCC (98%)	98% of 2,54,000.00	2,48,920
Pare HEP (2x55 MW). 2009 - 2018*	HCC 100%	9,15,543.00	38,783.97
Teesta Low Dam St III	HCC 100%	3,624,553.28	7,87,065.62
Godavari Lift Irrigation Scheme Phase -II 2005 - 2016)	HCC 51%	41,46,552.16	21,14,741.602
Chamera-lll HEP 231MW 2005 -2012)	HCC 100%	7,67,458.00	59,144.99
TOTAL			**32,48,656.18**
*These are the projects mentioned in criteria i(a) and i(b) to and are to be mandatorily included in the five projects			

e) For experience in **concreting**, the lead bidder has submitted the following experience*(Page 333 of Volume 3)*

Project	**By**	**Qty (cum)**	**Quantity (cum)**
Kishanganga HEP (3x110MW)* 2009 - 2018)	HCC (98%)	98% of 4,06,980.00	3,98,840.4
Pare HEP (2x55 MW). 2009 - 2018*	HCC 100%	9,15,543.00	2,64,520
Teesta Low Dam St III	HCC 100%	3,624,553.28	8,35,277.75
Godavari Lift Irrigation Scheme Phase -II 2005 - 2016)	HCC 51%	1,26,032.52	64,276.58
Chamera-lll HEP 231MW 2005 -2012)	HCC 100%	7,67,458.00	3,23,101
TOTAL			**19,55,911.27**
*These are the projects mentioned in criteria i(a) and i(b) to and are to be mandatorily included in the five projects			

The bidder has achieved Gross concreting of 3,14,125 cum in 2009-10 and 3,10,487 cum in 2008-09.

f) For experience in **Tunnelling**, the lead bidder has submitted the following experience *(Page 333 of Volume 3)*

- The HCC has accomplished turnkey execution of HRT of Kishanganga HEP (3x110MW) of length 8.51 km of finished dia of 6.24m by DBM & 14.73 km of finished dia of 5.20m by TBM (Total Length: 8.51 Km) – Ref Page 334
- RVNL has submitted following experience in tunnelling:*(Page 335 of Vol 3)*
    - Construction of New BG Line Between Obulavaripalli- Venkatachalam Road Junction (95 Km) and By Pass line between Venkatachalam Road Junction-Kommarapudi (4km). (2009-19). Rail Tunnel: Total Tunnel Length: 7.594 Km, Tunnel Dia: 8m
    - Construction of 5 Tunnels and 2 Cut & Covers Tunnels between Barkhera-Bundi on Bhopal - Itarsi Section of Bhopal Divi.WCR. (2019-23) - 98% Completed. Rail Tunnel:T1 Tunnel Length: 2.273 Km, Tunnel Dia: 8.3m & 13.2 m

The bidder meets the Specific Experience Criteria (Civil) of Para 3.1.2with both the bidders meeting at least one specific Experience Criteria (Civil) of Para 3.1.2

3.2 HYDRO-MECHANICAL WORKS:

The bidder has mentioned *(Page 470, Volume 3)* that as per Corrigendum 01 page 3 of 22 dated 18.09.2023 the same can be provided within 90 days of the issue of LoA. Hence this aspect has not been seen in further details.

3.4 DESIGN AND ENGINEERING WORKS:

The bidder has mentioned (Page 475, Volume 3) that as per Corrigendum 01 page 3 of 22 dated 18.09.2023 the same can be provided within 30 days of the issue of LoA. Hence this aspect has not been seen in further details

3.5 FINANCIAL CAPACITY

(i) Turnover

*Minimum average annual construction turnover of the **sole bidder or the Joint Venture** as specified in Article 3.1 (C) in the preceding 3 years shall be **INR 1,500 crore**. For arriving at the turnover of the years prior to 2021 -22 , the same shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum*

*While calculating the average turnover for the last three years , the bidder can exercise an option of **excluding the year 2020-21 as pandemic year** and include **either** (a) the year 2018-19 with the weightage of (1.28) or (b)the year 2022-2023 (with the weightage of 1.0, provided Audited Balance sheet or CA Certificate based on Audited Balance Sheet is available). **This option permits only the year 2020-2021 to be excluded** and the continuous three years period with the exclusion of 2020-21 will be considered.*

The JV Partner to have average annual turnover not less than 20% of the criteria specified under financial capacity.

Observation

				INR, Crore
Year	**2020-21**	**2021-22**	**2022-23**	**Average**
HCC	2,667.21	4,532.05	4,916.83	4,038.70
RVNL	17,560.16	20,738.43	20,278.37	19,525.65

(ii) Net Worth

*Net worth (paid up share capital + reserves & surplus) of the bidder (**and each partner of JV in case of JV**) of last 3 financial years should be **positive** and Net Worth of the **bidder or JV of last Financial Year should not be less than 450 crore**. While calculating the Net Worth for the last three years , the bidder can exercise an option of **excluding the year 2020-21 as pandemic year** and include either the year 2018-19 with the weightage of (1.28) or the year 2022-2023 (with the weightage of 1.0, if Audited Balance sheet or CA Certificate based on Audited Balance Sheet is available). This option permits only the year2020-2021 to be excluded and the continuous three years period with the exclusion of 2020-21 will be considered.*

Observation

			INR, Crore
Year	**2020-21**	**2021-22**	**2022-23**
HCC	640.36	438.00	664.63
RVNL	5660.76	6025.61	6479.15

The net worth of both the partner of the JV is positive in last three years and the combined Net worth is more than 450 crore in last Financial Year. Hence the bidder meets the criteria.

(iii) Working Capital

The working capital of the bidder/JV (current assets minus current liabilities) shall be at ***least INR 200 crore.***

For this purpose, a certificate from a Chartered Accountant should be submitted. Only Audited Balance Sheet or CA certificate based on Audited Balance Sheet shall be considered. Provisional balance sheet will not be considered.

Observation

The HCC's working capital is **Rs 569.96** crore in FY 2022-23. The RVNL's working capital is **Rs 4,553.01** crore in FY 2022-23. **The bidder meets this criterion**

3.6 BID CAPACITY

The available Bid Capacity of the bidder (Sole bidder or JV as specified in Article 4.1 C (vi) below) at the time of submission of Price Bid, calculated as under should ***not be less than the 5000 crores***

For the purpose of this qualification, the work done outside of India by companies of Indian origin, either as Sole Contractor or Lead Partner of the Joint Venture can be considered, provided that, the bidder furnishes a certificate issued by the client, giving the physical and financial details of the work done. Such certificate needs to be necessarily authenticated by Indian Embassy/Mission in the country where such work has been claimed to be done. Acceptance of this certificate, however, will be a sole discretion of KBLPA.

The cost of executed works carried out outside India in (B) above shall be converted into INR equivalent. For this purpose, the cost of executed works carried out outside India shall be converted into INR equivalent at the rate of exchange of the foreign currency to Indian Rupees. (SBITT Selling Rate applicable on the date of opening of Price Bid) will be applied.

Observation

The bid capacity of HCC and RVNL is **55,216 Crore and 2,19,067 Crore** respectively

The bidder meets this criterion

PART B- DATA SHEETS

Data Sheet-1: Bidder's Appreciation of the Project

As per tender provisions, bidders are required to submit a report consisting Bidder's appreciation of the project, which should include a section on the site inspection carried out prior to Bidding to demonstrate awareness and understanding of all the principal technical and logistic aspects etc. required for completion of Works.

The Lead Partner, M/s HCC has visited site thrice. The bidder has submitted the Project Appreciation narrating the following:

1. Introduction.
2. Brief Scope of the project
3. Location of the site and Access to the site from railhead and highways and large cities
4. Project roads (Permanent & temporary).
5. Transportation and erection of heavy construction equipment's.
6. Quarries for aggregate and sand.
7. Geology
8. Source of cement, steel, explosives and other material and cement transport.
9. Rainy season, river flow and riverbanks
10. Disposal areas
11. Location / land for site installations like crushing plant, batching plant, site offices, stores, workshop and colony for officers, staff and workers etc.
12. Water and power supply.
13. Communication, medical, banks, post office

The bidder has described scope of work in brief and referred Owner's requirement. The bidder has addressed access to site. Status of existing project roads and new permanent and temporary roads proposed to be constructed , transport logistics, availability of resources, local facilities and services in the project area, construction material, muck disposal sites, power, water supply, communication facilities, local taxes & laws and availability of explosive its storage and handling.

The bidder has mentioned that Rock and Sand quarries have been identified by KBLPA and mentioned in Volume 1; Annex 2 of Project Profile; page 85 of 121. However, as per tender provisions, Employer takes no responsibility, if no quarry sites is available out of that mentioned in Project Profile. Necessary amendment to that effect had already been issued.

Data Sheet –2: Bidder's Proposed Organizational Setup for the Project

The bidder has mentioned that the Joint Venture will be managed by the Management Committee, and Project management team ("**Project Management Team**"). The Project Management Team will comprise of a Project Manager, Deputy Project Manager, Commercial Manager, Planning Manager, Contract Manager, and Quality and Health, Safety and Environment (HSE) Manager. Project Manager shall be nominated by the Lead Party and Deputy Project Manager shall be nominated by the other Party. However, their appointments are subject to approval by the Management Committee. Finance Manager, Planning Manager, Contract Manager, and Quality and HSE Managers shall be appointed by the Project Manager.

The Bidder has submitted the Preliminary Overall Project Management Organisation Chart and Organisation Chart for Planning D&E services, Civil Works, HM works and Narrative description of Organisation Chart. The relation between Head office and site Management has also been shown.

Data Sheet –3: An Outline of the Project Components along with Drawings.

The bidders are required to submit, in outline, descriptions of proposed project components along with relevant drawings. The information should be submitted in sufficient detail to allow assessment of the general adequacy of the Bidder's proposal. Sketches, drawings and diagrams should be included where necessary for clarification of the description. These drawings of the successful bidder shall form part of the Contract as 'Tender Drawings'.

Concrete Dam:

Roller compacted concrete will be placed in the core of both NOF and OF dams.

Spillway section of dam consists of 27 bays. Pier width is considered as 3.50m. Hence, width of spillway block is 3.5m+8.35m+3.5m= 15.35m. Width of end pier is taken as 4.50m. Therefore, total length of spillway corresponds to (25 x 15.35m) + (2 x 16.35m) = 416.45m. Accordingly, the length of the NOF block has been increased to 1061.81m. Hence, total length of NOF & OF dam = 416.45m + 1061.81m = 1478.26m

Overflow Section (Spillway)

The FRL / MWL of the dam is at EL.288.00 m. Top of the dam is at 293.00 m. The length of the overflow section is 416.45 m long. The height of the dam is 92 m. Thickness of breast wall is considered as 6.0m. Typical cross section of OF dam is given.

Non-Overflow Section

The FRL / MWL of the dam is at EL.288.00 m. Top of the dam is at 293.00 m. The length of the non-overflow section of the dam is 1061.80 m. Typical cross section of NOF dam is given.

Earthen Dam:

The earth dam is right flank and the length of the dam is 524.20 m. Typical cross section of earth dam is given.

Intakes, Tunnels, Surge shaft and Pressure shaft

The project includes three Intakes, two tunnels, lower tunnel of diameter 5.5 m and length 1.008 Km and upper tunnel of 8.5 m diameter and 1.928 Km. The surge shaft is 18 m diameter, 60 m deep. Three numbers of 120 m long, 2400mm finished diameter pressure shaft is considered. The pressure shafts are considered in fair (Class-III, 75%) and Poor (class-IV, 25%).

The bidder has enclosed drawings for different components of the Project and these covers almost all components which are not mentioned in text e.g. Howell Bunger Valve.

Data Sheet –4: Management of Planning, Design and Engineering Works

The bidders are required to submit description of proposed management of Planning, Design and Engineering services including sequence to be used for the same, Key Design and Engineering activities, identification of Key experts along with their deployment schedule.

The bidder has proposed to engage M/s AFRY and M/s SMEC as sub-contractors for PDE work. The bidder submitted description of proposed management of Planning, Design and Engineering services including sequence to be used for the same, Key Design and Engineering activities. However, the bidder has the mentioned that they shall submit more details pertaining to PDE Agency within 30 days of issue of LoA as per tender provisions.

Data Sheet –5A: Construction Methodology of Civil Component Works

The bidder has mentioned that the construction schedule and the bid price are based on the construction methodology and geology as per the bid documents. This methodology and the construction schedule are also subject to the Owner fulfilling all obligations and commitments as per bid documents/prebid clarifications. Any changes or variations in the above matters during execution of the project shall be dealt separately as per actual situation. The bidder may be asked to confirm that any variation is to be dealt as per tender conditions as mentioned in Risk Allocation Schedule.

The bidder has submitted description of proposed methods, sequences, facilities and layouts to be used for execution of civil works covering the following:

Mobilization and Establishment of Construction Facilities

As soon as the order for commencement is received by the Contractor, the mobilization will begin and the initial mobilization will be completed as indicated in the Construction Schedule. However, the mobilization of remaining facilities will continue according to the requirement of works based on the Construction Schedule. Along with the mobilization of equipment and manpower, Contractor will also start establishing the construction facilities required for the execution of works as per the scope of work including installation of crushing plant, other plant & equipment, workshops, work sheds, stores, accommodation of staff & workmen etc. All logistics and facilities will be planned according to project locations and the component works involved in each location. As far as possible, all temporary installations of the Contractor will be accommodated within the land provided by the Employer.

Quarry/ Borrow Area/ Source of Material

As per the information provided in the bid document, the employer shall provide the quarry area free of encumbrances to the contractor for sourcing of construction materials and aggregates required for the construction of works. However, this is not as per tender provisions as elaborated in above paras and needs to be withdrawn.

Aggregate Production

The aggregates required for the construction of the project will be obtained by crushing and screening the material in Aggregate Processing Plant of adequate capacity installed near to the site. Suitable material for production of aggregates obtained from the excavation works will be directly taken to the Plant. The dumpers will directly unload the material into the hopper arrangement available at the Plant.

The bidder has proposed a total capacity of 900TPH Aggregate Processing Plant out of which 200TPH to be provided to cater the aggregate requirement during initial stage and a 700TPH aggregate crushing & screening plant during major concreting works, so that a total capacity of 900 TPH.

The crushed aggregates will be stockpiled near to the crushing plant or batching plant area according to the availability of space to meet the minimum stock as per the requirement of

works and will be loaded into the batching plant bins as necessary for the production of concrete.

Concrete Production

The concrete and shotcrete required in the project will be produced in batching plant of adequate capacity installed at location as suitable to the work requirement. The major requirement of Concrete in the project will be for the Dam Works and for other works like Intake and Upper & Lower Tunnels. The preliminary calculation for capacity of Concrete Batching Plant for the dam concreting is included in the respective chapter of Dam concreting. However, for taking up concreting in other components like, Intake and Upper & Lower Tunnel etc., Batching Plant of $60m^3$/hr (2 x $30m^3$/Hr) will be installed in the initial stage of the project.

However, the final configuration and locations of concrete batching plants will be decided after award of the contract and after detailed study of land availability, matching with the total capacity requirement proposed. The batching plant will deliver the concrete directly to the transit mixers/ concrete conveying system, which will finally feed the concrete to the concreting arrangement of respective location.

River Diversion Scheme

River diversion for construction of Daudhan Dam is planned in two stages, in Stage-I, cofferdam shall be constructed in left and right banks of the river. On the left bank, coffer dam shall be constructed at block 58 of the overflow dam body. The length of the left coffer dam is 750 m. On the right bank coffer dam shall be placed at the block 69 of the overflow block. Length of the right coffer dam is 575 m. Top level of both the coffer dams in Stage-I is EL.232.0 m. The Stage-I coffer dams facilitate construction of all NOF blocks and construction of Overflow dam up to block 54 on left bank and part of the rockfill dam on right bank.

The layout of the coffer dam in plan is indicated in the enclosed drawings. The cross sections of the Coffer dam in Stage-I are indicated in the enclosed drawings. In Stage-I, 12000 m3/sec diversion discharge is considered. The corresponding water level in the river will be about 230.0 m. Diversion discharge calculation in Stage-I has been carried out through probabilistic approach and engineering judgment giving due weightage to last 32 years of Annual Monsoon Discharge in m3/sec as per available Gangau Weir Discharge Data.

The coffer dam will be built with selected rockfill materials with central concrete core, 1.0m thick of M15 grade concrete. The central concrete core will be embedded 1.0 m into the rock.

The proposed discharge is to be routed through a channel at the left bank having cross-section 2098 sqm and bottom at 216m & top 232m.

In Stage-II, coffer dam shall be constructed on right bank, intersecting the overflow block 54. This facilitates construction of remaining overflow blocks from 55 to 68C and NOF blocks from 69 to 76 and remaining part of earth fill dam. Top level of the coffer dam U/S of the dam axis is at EL.239.0 m. The length of this U/S coffer dam is 860 m. Top level of the coffer dam D/S of the dam axis is at EL.230.0 m. The length of the D/S coffer dam is 320 m. Construction stage under sluices are provided in 8 overflow blocks between block 43 to block 50. The cross-sectional area of under sluices is 3 m x 6 m = 18 m^2. The centre line of the under-sluice openings

is at EL.224.50 m. 250 mm thick high-performance concrete of M40 grade will be provided in the periphery of the under sluice.

In Stage-II diversion, the diversion discharge is taken as 2600 m3/sec. If the flow rate in the river exceeds 2600 m3/sec, then the over topping of the coffer dam occurs. The diversion discharge flows through construction stage under sluices in the already constructed overflow dam and on the glacis of spillway.

In the Stage-II, during monsoon period as there will be overtopping of the coffer dam, provision for 300 mm thick RCC face slab of M20 grade concrete has been envisaged. This RCC face slab ensures that there will not be any erosion in the coffer dam. In both stages of the coffer dam construction, the top width is provided as 4.0 m. The side slopes of coffer dam are considered as 1.5 horizontal and 1 vertical.

Data Sheet 5A: Construction Methodology of Civil Works

Excavation and concreting of components

The Dam is proposed to be excavated and concreted in two stages. The bidder has proposed Roller Compacted Concrete Dam in place of conventional dam, which is not in line with the tender provisions.

The bidder has provided excavation and concreting methodology for all components of work including arrangement for cooling of aggregates.

To bypass PH-II, the bidder has proposed erection of Bypass pipes. A Howell Bunger valve shall be erected at the end of Bypass pipe to dissipate energy of water while it gets discharged into the downstream channel/ Ken lower branch canal.

For working out cycle time, the Contractor has considered 20 hrs working period, which is not in line with working hours mentioned in Tender as per PTR conditions. Accordingly, bidder is required to consider working hrs as per tender or keep cycle time in such a way that cold joints are not formed un-necessarily.

Data Sheet 5B: Construction Methodology of HM Component Works

The bidder has submitted Construction Methodology of HM Component Works through proposed sub-contractors M/s Precision Infratech Pvt. Ltd. and M/s PES. However, as per tender provisions, the bidder has option to propose sub-contractor(s) for HM works within 90 days of issue of LoA. Fresh submission at that stage may be more appropriate. Bidder may be asked to confirm the above.

Data Sheet-6A: Infrastructure for execution of scope of work w.r.t. "Planning, Design & Engineering"

The Bidders are required to give detailed description of infrastructure with respect to proposed deployment of computer hardware and software, in-house technical knowhow and documentation to execute the works under head "Planning, Design & Engineering"

One of the proposed sub-contractor of the bidder M/s AFRY has mentioned that for office, Laptops installed with required Softwares, and high speed internet connection shall be provided to all the experts. For printing the reports/memo/drawings, they have adequate nos. of advance printers available in their office. For time to time site visits, Laptops shall be carried by the

experts during such visits. Internet connectivity shall be made available thru Wi-Fi Flash drives. Alternatively, experts may also use the internet connection available locally.

Other sub-contractor M/s SMEC has shown availability of technical staff and design softwares.

Data Sheet-6B: Design plan for Planning Design and Engineering:

The Bidders are required to propose a detailed design plan i.e. process inputs/interface, process method and process output along with timelines for each step envisaged for executing the scope of work for scope of work w.r.t. "Planning, Design & Engineering".

The bidder through proposed sub-contractor has provided sequence of activities with timelines.

Data Sheet-6C: Format of Drawing Block

The bidder has proposed format of drawing block showing "Title of drawing", "purpose of drawing", "Notes", "Reference to other drawings", Names of preparing, reviewing and approving officials name.

Data Sheet-6D: An outline of quality assurance system for the execution of scope of work w.r.t. "Planning, Design & Engineering"

The bidder has attached Certificate of Quality Management System and flow charts for checking / controlling quality of output and cited various tools available with them for Quality Control.

Data sheet-7: Details of Hydro-Mechanical Plant & Machinery

The bidders are required to submit the detailed description of the Hydro-mechanical Plant & Machinery proposed and should also include in his submission, for these Plant & Machinery, the description of their manufacturing activities-transportation to site and erection at site in detail including interface activities with the Civil Works.

The bidder through its sub-contractor has provided list of HM equipment, description of their manufacturing activities their handling and their installation at site. The bidder has proposed five set of stoplogs as per the provision.

Data sheet 8: Deployment of Construction Equipment

The Bidders are required to list out all critical construction equipment, which would be proposed for Construction works. This should include their numbers, capacities and whether equipments proposed are to be purchased new or old. In respect of old equipment, year of manufacture and current ownership is to be stated. Construction equipment should be preferably new.

The bidder has enclosed schedule of deployment of all critical construction equipment figuring in his construction methodology.

Data sheet-9: Construction Schedule of the Project

The Bidders are required to submit a Master Control Network within the Time for Completion dates, which shall form part of Overall Agreement so as to complete the work within 72 months. The bidder has proposed the achievement of Contract Milestones as below:

Sl. No.	Description	Proposed target month by the bidder
Milestone-1	Completion of Coffer Dam	15
Milestone-2A	Completion of Cut-off trench of Daudhan Earthen Dam	38
Milestone-2B	Completion of Excavation (Dam Foundation) of Daudhan Concrete Dam	52
Milestone-3	Completion of Concreting of KBLC - Upper Tunnel	42
Milestone-4	Completion of Excavation of Lower Tunnel	25
Milestone-5	Completion of Concreting of Surge Shaft	45
Milestone-6	Completion of Concreting of Daudhan Concrete Dam	67
Milestone-7	Completion of Fill Placement of Daudhan Earthen Dam	72
Milestone-8	Completion of Gate Installation of Daudhan Concrete Dam	72

Data sheet-10: An Outline of Quality Assurance System for the Project

The bidders are required to submit, an outline, description of proposed Quality Assurance System for the implementation of the project in line with the QAP for Civil and HM works provided in the Volume-III of tender document.

The bidder has proposed Quality Assurance System for Civil and HM works, which include audit provisions and customer feedback.

PART C - ANOMOLIES REQUIRING CLARIFICATIONS

1. The bidder has mentioned that Rock and Sand quarries have been identified by KBLPA and mentioned in Volume 1; Annex 2 of Project Profile; page 85 of 121. However, as per tender provisions, Employer takes no responsibility, if no quarry sites is available out of that mentioned in Project Profile. Necessary amendment to that effect had already been issued. This may be clarified to the bidder
2. The bidder has proposed Roller compacted concrete will be placed in the core of both NOF and OF dams. **This provision of RCC dam is not provided in the bid document**.
3. Article 4(C)(ix) of the ITB mentions that "The joint venture agreement should indicate precisely the role of all members of JV in respect of planning, design, construction equipment, key personnel, work execution, and financing of the project.". The Joint Venture agreement provided by the bidder does not fulfil this requirement.

OBSERVATIONS AND RECOMMENDATIONS

1. The BG and Tender fee submitted by the bidder is in order as per the requirements
2. The bidder has met the qualification requirement and also the financial criteria
3. The bidder has all the experience as mentioned in the Qualification requirements.
4. The construction methodology and the diversion program are exhaustive and appears acceptable. However, at a number of places the bidder has indicated the time cycle of concreting as 14 hours or even 16 hours. This is in contradiction of PTR regulations and clarifications need to be sought.
5. The bidder has proposed that he may go for RCC dam. This aspect needs to be deliberated
6. It is recommended that a generic declaration may be get signed by all the bidders conveying their unequivocal acceptance of the conditions stipulated in the tender Documents and the confirmation that their quoted prices are after taking into cognizance of Scope of Work, the Owner's Requirements and probable Risks as identified in Risk Allocation Schedule. A sample of the same is appended as Annexure 7.

ANNEXURE 6 – LARSEN &TOUBRO LIMITED (BID 6 OF 6)

PART A- QUALIFICATION REQUIREMENTS

1. ELIGIBILITY AND SUFFICIENCY OF THE SUBMITTED DOCUMENTS

a) **The L&T Limited** (hereinafter called as "the bidder" in Annexure 6) is classified as "Sole Bidder with the subcontractors" in accordance with Para 4 of the ITB. Certificate of Incorporation is enclosed at page no. 35 of bid, Article of Association at page no. 45 and MoA at *page37.*

b) During the last three years, the bidder has not been declared ineligible/ suspended/ blacklisted/ banned/debarred by appropriate agencies of the Government of India or Governments of MP and UP from participation in the Tender Processes of all of its entities *(Page 423-424).*

c) The bidder has>50% Make in India status and has submitted the declaration to this effect in Form 6 *(page 425).*

d) No corporate insolvency resolution process has been admitted against the bidder *(Page959).*

e) The bidder has submitted the BG No **230380IBGB** for Rs 10.0 Crore issued on 18.12.2023 and valid till 31.01.2025 (332 days), available at Page 6-10. The bidder has also submitted the Scanned copy of DD/Banker's cheque towards the cost of the Tender fee of Rs 40,000 through DD No **505225** on 01.03.2024 available at *Page 4* .

f) The bidder has submitted the Power of Attorney issued on issued on 27.07.23 in favour of Mr. Sureshkumar S, General Manager & Head - Hydel & Tunnels , with the copy of the resolution dated 28.10.2020, valid and effective so long as he is in the employment of the Company. The PoA is placed at *Page 14* and the copy of the resolution on page 14.

g) The bidder has submitted an undertaking dated 05.03.2024 towards Anti-profiteering Clause of GST Act / Rules *(Page 427)*

2. QUALIFICATION REQUIREMENTS

3.1.1 GENERAL EXPERIENCE

(a) Technical

Criteria

*The lead bidder (Sole Contractor or **Lead Partner of the Joint Venture**) should have General Construction Experience as Prime Contractor or Partner of JV or Sub-contractor approved by the employer, of executing a major Civil Structure (Dam/Tunnel) in a Water Resources/ Hydro Power Development Project for a period of at least two (2) years in*

preceding ten (10) years. In case of tunnelling works, the experience of tunnelling of highway tunnel / railway tunnel/Metro tunnel shall also be considered.

Observation

The bidder has executed/executing the following projects *(Summary at Page 254):* -

Sl. No.	Project	Status	Period	Ref Page
1.	99MWSingoliBhatwariHEP	Sole Bidder	01.01.2009 to Oct.2020	256
2.	Kaleshwaram Project Formation of Sri Komaravelli Mallanna Sagar Reservoir	JV/bidder lead partner 60%	11.10.2017 to 31.03.2023	260
3.	1000MW Pakal Dul HEP	Sole Bidder	03.07.2020- in progress	262
4.	120MWLower Kopili HEP	Sole Bidder	01.09.2020 - in Progress	266
5.	Sitamma Sagar Multi-purpose	Sole Bidder	26.09.2020 - in Progress	267

Thus this criterion has been met by the bidder.

(b) Financial

Criteria

*The main bidder (Sole Contractor or the **Lead partner of the Joint Venture**) should have successful experience as Sole Contractor or Partner of the JV or sub-contractor approved by the employer of having successfully or substantially completed, during last 20 years, either of the following works:*

i. *Major components of three Water Resources / Hydropower/infrastructure projects with cost of executed works not less than INR 700 crore each OR*
ii. *Major components of two Water Resources/Hydropower/ infrastructure projects with cost of executed works not less than INR 1000 crore each OR*
iii. *Major components of one Water Resources/Hydropower/ infrastructure projects with cost of executed works not less than INR 1500 crore.*

Provided that

a) *The start and completion date for the above experience should fall within the preceding twenty (20) years reckoned from the last day of the month previous to the one in which Tender is invited*
b) *The substantially completed works for the above purpose means the works for which at least 80 percent payments of the contract value have been received. For contracts under which the applicant participated as a joint venture member or sub-contractor, only the applicant's share, by value, shall be considered to meet this requirement.*
c) *For arriving at cost of similar work, the value of work executed shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated from the date of completion of the work to the date of Bid opening.*

Observation

The bidder has completed the following works (Page 255)

Name of the works	Status	Value of Work of share Completed After enhancing the Value (@7% p.a (Crore)
Hindu Hruday Samrat Balasaheb Thackeray Maharashtra Samruddhi Mahamarg (Package -10) (2021-2022) 01.01.2019 to 22.02.2022 (Certificate issued by MSRDC, page 269-272)	Sole	2256.00
Beawar-Pali-Pindwara Section NH-14 (From km 0.00 to km 244.12) 19.12.2012 to 10.6.2015	Sole	1965.60
Mumbai International Airport Project 01.12.2007 to 12.02.2014	Sole	6350.00
99 MW Singoli Bhatwari HEP (2009-20)	Sole	775.29

The Financial Experience Criteria have been fully met by the bidder having completed projects of >1500 crore.

3.1.2 SPECIFIC EXPERIENCE

A. CIVIL WORKS

*In addition to meeting the criteria of General Experience (Para 3.1.1), the bidder (Sole Contractor or the **Joint Venture collectively**) should have successful specific experience of having successfully or substantially completed, during last 20 years, all of the following works:*

(i) a) Concrete Dam with gated Spillway

At least one concrete dam of height not less than 15 m from the deepest foundation level to the crest level, with a gated Spillway and necessarily having a foundation gallery and instrumentation/inspection gallery AND

(i)(b) Earthen dam/ Rockfill/Composite Dam

At least one earth/rockfill/composite dam of height at the dam axis not less than 15 m from deepest foundation level to the top

(ii) Earthwork and concreting

Completion of following quantities in water resources/infrastructure projects, necessarily inclusive of that in (i) above, in the last 20 years

(a) gross combined excavation of 4,00,000 cum AND

(b) gross combined earth filling of 20,00,000 cum AND

(c) gross combined concreting of 9,00,000 cum with at least 3,00,000 cum of concreting achieved in a year at least once

*For the purpose of this qualification, **not more than five projects, necessarily including those in (i) above, shall be considered***

For contracts under which the applicant participated as a joint venture member or subcontractor, only the applicant's share, by value, shall be considered to meet this requirement.

(iii) Tunnelling

Completion of tunnel excavation and lining of at least one tunnel of minimum finished diameter of 5.5 m and length not less than 1000 m. For this purpose, experience of tunnelling of Highway tunnel/ Railway tunnel/Metro tunnel shall also be considered.

Para 4(D)(i) The Lead Partner to fully and necessarily meet the following:

- *Average annual turnover not less than 51 %of the criteria specified under financial capacity ,*
- *Working Capital criteria*
- *General construction experience criteria specified for the tender.*
- *Specific Experience Criteria for the Dam (3.1.2 (i)A) or (3.1.2 (i)B)*

Provided that the start and completion date for the above specific construction experience should fall within the preceding twenty (20) years reckoned from the last day of the month previous to the one in which Tender is invited.

Observation

a) For meeting the requirement of experience in **concrete dam**, the bidder has submitted his experience of construction of 92 m high concrete gravity dam with Gated spillway, Desilting basin, 2 Nos HRT (1178m&1310m Long and 9.8m dia),Power Channel, Surface power House, Forebay Intake, Bypass Channel intake of 330 MW **Shrinagar Hydro Electric Project** (Page 289-294).

b) For meeting the requirement of experience in **earthfill/rockfill/composite dam** the bidder has submitted the experience in the construction of the **Formation of Sri Komaravelli Mallanna Sagar Reservoir (Earthen Dam 53.9 m high) (In JV with 60% share, *pg 303-304*).**

c) For meeting the requirement of experience in **gross combined excavation** the bidder has submitted the following:

Project	**share**	**Qty (cum)**	**Quantity (cum)**
Veligonda Project - Gottipadia Dam 2005-2010 (Page 298-302)	100%	100% of 4,86,954	4,86,954
Kaleshwaram Project- Formation of Sri Komaravelli Mallanna Sagar Reservoir 2017-2023 (Page 303-304)	60%	60% of 14,04,789	8,42,873
Total			**13,29,827**

The bidder meets the criteria of 4 lakh cum of excavation

d) For meeting **gross combined earth filling** the bidder has submitted

Project	**Share**	**Qty (cum)**	**Quantity (cum)**
Kaleshwaram Project- Formation of Sri Komaravelli Mallanna Sagar Reservoir *(Page 303-304)* 2017-2023	60%	60% of 2,05,77,850	1,23,46,710
Total			**1,23,46,710**

The bidder meets the criteria of 20,00,000 cum of filling

e) For meeting **gross combined concreting,** the bidder has submitted the following

Project	**Share**	**Qty (cum)**	**Quantity (cum)**
Shrinagar HE Project 300 MW (Page 289-294).	100%	12,08,317	12,08,317
Kaleshwaram Project- Formation of Sri Komaravelli Mallanna Sagar Reservoir *(Page 303-304)* 2017-2023	60%	60% of 10,664	6,398
Veligonda Project - Gottipadia Dam *(Page 298)* 2005-2010	100%	9,76,820	9,76,820
Total			**21,91,535**
a) In Shrinagar HE Project, the bidder has completed 5,02,103 cum of concreting in FY 2010-11. b) In Veligonda Project , the bidder has completed 4,24,231 cum of concreting in FY 2006-07.			

f) For meeting the experience in **tunnelling** the bidder has submitted the following (Page 289-307)

Project	**Share**	**Dia of the Tunnel**	**Length**
300MW Shrinagar HEP	100%	9.8m dia	2488m
520MW Parbati HEP Stage III	40%	7.25m dia	2249 m

The criterion has been met.

3.2 HYDRO-MECHANICAL WORKS:

The bidder has proposed following sub-contractors for HM works*(Page 283-284)*

a) Texmaco Rail & Engineering Limited
b) Precision Infratech Pvt Ltd
c) PES Engineers Private Limited

As per Corrigendum 01 page 3 of 22 dated 18.09.2023 the same can be provided within 90 days of the issue of LoA. Hence this aspect has not been seen in further details.

3.4 DESIGN AND ENGINEERING WORKS:

The bidder has proposed following sub-contractors for PDE works*(Page 283-84)*

a) SMEC International Pvt. Ltd
b) AFRY India Private Ltd.
c) Lombardi Engineering India Pvt. Ltd.

However, the bidder in Undertaking from the sub-contractor (Appendix- ITB 7) and Joint Deed of Undertaking (Appendix-ITB 7i), has not mentioned distinct roles and responsibility of the above sub-contractors.

As per Corrigendum 01 page 3 of 22 dated 18.09.2023, the details of the sub-contractors can be provided within 30 days of the issue of LoA. Hence, this aspect has not been seen in further details.

3.5 FINANCIAL CAPACITY

(i) Turnover

*Minimum average annual construction turnover of the **sole bidder or the Joint Venture** as specified in Article 3.1 (C) in the preceding 3 years shall be **INR 1,500 crore**. For arriving at the turnover of the years prior to 2021 -22 , the same shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum*

*While calculating the average turnover for the last three years , the bidder can exercise an option of **excluding the year 2020-21 as pandemic year** and include **either** (a) the year 2018-19 with the weightage of (1.28) or (b)the year 2022-2023 (with the weightage of 1.0, provided Audited Balance sheet or CA Certificate based on Audited Balance Sheet is available). **This option permits only the year 2020-2021 to be excluded** and the continuous three years period with the exclusion of 2020-21 will be considered.*

The JV Partner to have average annual turnover not less than 20% of the criteria specified under financial capacity.

Observation (Pg 334)

				INR, Crore
	2020-21	**2021-22**	**2022-23**	**Average**
Factor @7% p.a.	*1.14*	*1.07*	*1.0*	
Turnover	83,579.77	1,08,070.44	1,10,500.98	**1,00,717.06**

(ii) Net Worth

*Net worth (paid up share capital + reserves & surplus) of the bidder (**and each partner of JV in case of JV**) of last 3 financial years should be **positive** and Net Worth of the **bidder or JV of last Financial Year should not be less than 450 crore**. While calculating the Net Worth for the last three years, the bidder can exercise an option of **excluding the year***

2020-21 as pandemic year *and include either the year 2018-19 with the weightage of (1.28) or the year 2022-2023 (with the weightage of 1.0, if Audited Balance sheet or CA Certificate based on Audited Balance Sheet is available). This option permits only the year2020-2021 to be excluded and the continuous three years period with the exclusion of 2020-21 will be considered.*

Observation

			INR, Crore
	2020-21	**2021-22**	**2022-23**
Factor @7% p.a.	*1.14*	*1.07*	*1.0*
Total	68,871.44	71,812.03	71,527.95

The net worth of the bidder is positive in last three years and is more than 450 crore in last financial year. Hence the bidder meets the criteria

(iii) Working Capital

The working capital of the bidder/JV (current assets minus current liabilities) shall be at ***least INR 200 crore.***

For this purpose, a certificate from a Chartered Accountant should be submitted. Only Audited Balance Sheet or CA certificate based on Audited Balance Sheet shall be considered. Provisional balance sheet will not be considered.

Observation

The Bidder's working capital is **Rs. 33837.45 crore in FY 2022-23** and **the bidder meets this criterion**

3.6 BID CAPACITY

The available Bid Capacity of the bidder (Sole bidder or JV as specified in Article 4.1 C (vi) below) at the time of submission of Price Bid, calculated as under should ***not be less than the 5000 crores***

For the purpose of this qualification, the work done outside of India by companies of Indian origin, either as Sole Contractor or Lead Partner of the Joint Venture can be considered, provided that, the bidder furnishes a certificate issued by the client, giving the physical and financial details of the work done. Such a certificate needs to be necessarily authenticated by Indian Embassy/Mission in the country where such work has been claimed to be done. Acceptance of this certificate, however, will be a sole discretion of KBLPA.

The cost of executed works carried out outside India in (B) above shall be converted into INR equivalent. For this purpose, the cost of executed works carried out outside India shall be converted into INR equivalent at the rate of exchange of the foreign currency to Indian Rupees. (SBITT Selling Rate applicable on the date of opening of Price Bid) will be applied.

Observation

The bid capacity of the bidder is Rs. **6,77,643 Crore**

The bidder meets this criterion

PART B- DATA SHEETS

Data Sheet-1: Bidder's Appreciation of the Project

As per tender provisions, bidders are required to submit a report consisting Bidder's appreciation of the project, which should include a section on the site inspection carried out prior to Bidding to demonstrate awareness and understanding of all the principal technical and logistic aspects etc. required for completion of Works.

M/s L&T has visited the site 4 times. The bidder has submitted the Project Appreciation narrating the following:

1. Introduction
2. Site Location And Topography
3. Scope Of Document
4. Salient Features Of The Project
5. Reference Document
6. Site Visit

6.1 Project Features

7. Approach Road To Various Project Components
8. Project Geology

8.1 Regional Geology

9. Hydrology
10. Climatology
11. Administrative Setup
12. Local Facilities And Services In The Project Area

12.1 Project Facilities

12.2 Muck Dumping Areas

13. Availability Of Construction Material
14. Availability Of Construction Labour
15. Construction Power
16. Local Law And Statutes
17. Project Planning And Execution

The bidder has described scope of work in brief and referred Owner's requirement. The bidder has addressed access to site. Status of existing project roads and new permanent and temporary roads proposed to be constructed , transport logistics, availability of resources, local facilities and services in the project area, construction material, muck disposal sites, power, water supply, communication facilities, local taxes & laws and availability of explosive its storage and handling.

The bidder has mentioned that as per tender documents, overall, seven rock quarries, eight sand quarries and three borrow areas for soil deposits were investigated and tested to ascertain its suitability as concrete aggregate and earth fill material for the construction of dam and other allied civil structures. Quarries investigated by client shall be exploited and utilised. Further,

suitable riverbed material obtained during excavation for Dam shall be utilised for production of aggregates. Tunnel muck, if found suitable, shall also be used for aggregate production.

However, as per tender provisions, Employer takes no responsibility, if no quarry sites is available out of that mentioned in Project Profile. Necessary amendment to that effect had already been issued. This needs to be communicated to the bidder.

Data Sheet –2: Bidder's Proposed Organizational Setup for the Project

The Bidder has submitted the Preliminary Overall Project Management Organisation Chart and Organisation Chart for Planning, Design & Engineering services, Civil Works, HM works and Narrative description of Organisation Chart. The relation between Head office and site Management has also been shown.

Data Sheet –3: An Outline of the Project Components along with Drawings.

The bidders are required to submit, in outline, descriptions of proposed project components along with relevant drawings. The information should be submitted in sufficient detail to allow assessment of the general adequacy of the Bidder's proposal. Sketches, drawings and diagrams should be included where necessary for clarification of the description. These drawings of the successful bidder shall form part of the Contract as 'Tender Drawings'.

Concrete Dam:

Roller compacted concrete will be placed in the core of both NOF and OF dams.

Spillway section of dam consists of 27 bays. Pier width is considered as 3.50m. Hence, width of spillway block is 3.5m+8.35m+3.5m= 15.35m. Width of end pier is taken as 4.50m. Therefore, total length of spillway corresponds to (25 x 15.35m) + (2 x 16.35m) = 416.45m. Accordingly, the length of the NOF block has been increased to 1061.81m. Hence, total length of NOF & OF dam = 416.45m + 1061.81m = 1478.26m

Overflow Section (Spillway)

The FRL / MWL of the dam is at EL.288.00 m. Top of the dam is at 293.00 m. The length of the overflow section is 416.45 m long. The height of the dam is 92 m. Thickness of breast wall is considered as 6.0m. Typical cross section of OF dam is given.

Non-Overflow Section

The FRL / MWL of the dam is at EL.288.00 m. Top of the dam is at 293.00 m. The length of the non-overflow section of the dam is 1061.80 m. Typical cross section of NOF dam is given.

Earthen Dam:

The earth dam is right flank and the length of the dam is 524.20 m. Typical cross section of earth dam is given.

Intakes, Tunnels, Surge shaft and Pressure shaft

The project includes three Intakes, two tunnels, lower tunnel of diameter 5.5 m and length 1.008 Km and upper tunnel of 8.5 m diameter and 1.928 Km. The surge shaft is 18 m diameter, 60 m deep. Three numbers of 120 m long, 2400mm finished diameter pressure shaft is considered.

The penstocks for Power house-I originates after the transition in Intake of PH-I. The center line of penstock is at EL 243.0 m, aligned horizontal to the intake. The steel liner starts from the end of transition. The horizontal penstock is sloping at an angle of 55° as it leaves the d/s sloping face of the dam body to align almost parallel to the d/s sloping face. After the bottom vertical bend, the penstock runs horizontal. The center line of the lower horizontal penstock is EL 222.0 m which is also the center line of spiral casing. Since the powerhouse - I is not in the scope of the present proposal, the scope of the work is limited to point of emergence of the penstocks from the body of the dam. The contractor is required to provide the bulkheads designed to withstand the water pressure corresponding to the maximum water level with the mandatory factor of safety. The internal diameter of penstocks is proposed as 4.5 m. The c/c distance between the two penstocks is 20 m. The steel liner is to be designed for full internal pressure including water hammer. The steel liner thickness can vary from 16 mm to 20 mm along the length of the penstock.

For Power house-II, three 2.4 m finished diameter, steel-lined pressure shafts are emanating from the bottom of the surge shaft. The pressure shaft is laid horizontal from the surge shaft up to the Power House with center line EL 240.0 m. The length of the steel-lined pressure shaft from surge shaft (after transition) to exit portal is 113.55 m. The length of other two pressure shafts from surge shaft (after transition) up to the exit portal including the horizontal bend is 119.6 m. Thereafter it is exposed for a length of 15 m and embedded in concrete for a length of 25 m. In the exposed reach of 15 m, it is proposed to provide a T- junction in the penstock fitted with a Howell Bunger Valve for bypassing the water to the tailrace d/s whenever the powerhouse is closed. The steel liner is to be designed for internal pressure including water hammer and checked for external pressure. The steel liner thickness proposed for the pressure shaft up to exit portal is 12 mm and thereafter up to D-line of the Power House is 14 mm.

Data Sheet –4: Management of Planning, Design and Engineering Works

The bidders are required to submit description of proposed management of Planning, Design and Engineering services including sequence to be used for the same, Key Design and Engineering activities, identification of Key experts along with their deployment schedule.

The bidder has proposed to engage M/s AFRY, M/s Lombardi and M/s SMEC as sub-contractors for PDE work. The bidder submitted description of proposed management of Planning, Design and Engineering services including sequence to be used for the same, Key Design and Engineering activities. However, their specific roles have not been defined in Joint Deed of Undertaking. But as per the tender provisions, the bidder has option to propose PDE Agency within 30 days of issue of LoA as per tender provisions. As such the sub-contractors are proposed not to be evaluated at this stage. However, this needs to be confirmed by the bidder.

Data Sheet –5A: Construction Methodology of Civil Component Works

The bidder has submitted description of proposed methods, sequences, facilities and layouts to be used for execution of civil works covering the following:

Mobilization and Establishment of Construction Facilities

Initial mobilization will be completed within 6 months of the effective date of the start of the Contract and will include:

i. Construction of camps, offices, living quarters, workmen colonies, stores, workshops, and other related facilities. The development of these facilities will be done in planned manner based on the requirement of activities to be undertaken.
ii. Setting up of various facilities and infrastructure pertaining to water and compressed air supply, telecommunications and wireless, etc.
iii. Power supply arrangement to various components as required.
iv. Setting up of fully equipped steel fabrication shop for rib bending and fabrication of steel supports, and steel structure for the camp and infrastructure requirements of the project.
v. Setting up of infrastructure for fuel oil facilities.
vi. Magazine for Blasting material
vii. Mobilization of equipment for excavation works as per the requirements

The bidder has mentioned that all required plants and machinery required for the work will be erected and commissioned and made operational as per the programme, which will match the requirements of the construction schedule. This will be closely monitored and coordinated with the requirements of the work.

The manpower induction will match the mobilization of machinery, plant, and equipment. Quarry/ Borrow Area/ Source of Material.

Aggregate Production

The Comprehensive investigations in respect of construction materials for Ken-Betwa Link Project phase-I have been carried out by CSMRS, New Delhi. As per tender documents, Overall, seven rock quarries, eight sand quarries and three borrow areas for soil deposits were investigated and tested to ascertain its suitability as concrete aggregate and earth fill material for the construction of dam and other allied civil structures.

However, as per tender conditions KBLPA is not responsible if listed quarries or construction material therein is not available.

Concrete Production

The concrete and shotcrete required in the project will be produced in batching plant of adequate capacity installed at location as suitable to the work requirement. The major requirement of Concrete in the project will be for the Dam Works and for other works like Intake and Upper & Lower Tunnels. The preliminary calculation for capacity of Concrete Batching Plant for the dam concreting is included in the respective chapter of Dam concreting. However, for taking up concreting in other components like, Intake and Upper &Lower Tunnel etc., Batching Plant of 60m^3/hr (2 x 30m^3/Hr) will be installed in the initial stage of the project.

However, the final configuration and locations of concrete batching plants will be decided after award of the contract and after detailed study of land availability, matching with the total capacity requirement proposed. The batching plant will deliver the concrete directly to the transit mixers/ concrete conveying system, which will finally feed the concrete to the concreting arrangement of respective location.

River Diversion Scheme

The river diversion system comprises of the construction of an upstream and a downstream cofferdam to prevent the inflow and backflow of water. This is required to provide an

undisturbed site for the construction of Dam and to prevent sudden surge of water in the working area. River diversion scheme is planned for non-monsoon flood of 1200 cumecs and monsoon flood of 20,150 cumecs.

Construction of coffer dam will be carried out in 3 subsequent stages to facilitate the construction of Concrete Dam and Earthen embankment dam as per construction schedule. Construction of Stage-1 coffer dam will be carried in working season 1 (Covering left flank NOF blocks No. 1-41, overflow blocks No. 42-56). Followed by construction of Stage-2 coffer dam in season 2 for integrating connection to the right bank to procced with the construction of additional 8 Nos. of Non-overflow blocks (NOF block No. 69-76). Thereafter, Stage-3 coffer dam will be constructed in season-3 (Covering overflow blocks No.57-68, right flank NOF block No. 69-76) whereas the earthen embankment dam will be constructed in parallel with right flank NOF Blocks.

A pipe culvert system will be provided in the stage-1 and stage-2 coffer dam during its construction with required nos. of pipe openings to negotiate the river flow during the construction of the dam in antecedent and precedent event. To construct the coffer dam, initially a pre-coffer dam of small height may be required, this precoffer will protect water entry into the area of excavation of cofferdam. The coffer dam construction will start by laying the initial foundation layer, which will be laid with river line material for entire width of the coffer dam. It is constructed by formation of the impervious material at the central portion with compacted earth-fill material on the sides and interfaced with transition filter material in between. The formation will be done by filling and spreading the material in layers and compacting it to form an embankment. For the central impervious core, small capacity 10T tamping foot rollers will be used while for other specified filling materials 20 T Vibratory rollers will be used. Lifts of the layers will be 300mm and will be compacted by means of roller with minimum 6 passes to ensure that the material achieves the desired compaction. Layers of different materials are to be laid and compacted simultaneously. Lifts will be properly moisture and compacted to achieve the required density and strength.

Placement and compaction of earth-fill material in controlled lifts significantly helps in reducing post-construction settlement, reduces material risk of slope failure, helps in achieving the required degree of compaction by expulsion of the air voids. Material for filling will be transported from the stockpiled area as per the gradation specified and proper slope will be maintained at all levels as per the approved drawings for the complete height of the coffer dam.

Excavation and concreting of components

The Dam is proposed to be excavated and concreted in two stages. The bidder has proposed Roller Compacted Concrete Dam in place of conventional dam, which is not in line with the tender provisions.

The bidder has provided excavation and concreting methodology for all components of work including arrangement for cooling of aggregates.

The bidder has mentioned that in Dam blocks, concrete volume of order of 22-24 L cum is required to be placed. The concrete needs to be placed in such a manner that placement of concrete is carried out to the deepest block and there exist always a uniform loading on the foundation.

Further, the concrete is considered to be placed in lifts of height 1.5m - 2.4 m, in layers of 500 mm continuously so that concrete is placed without any delay, segregation or loss of workability and achieving the sufficient time interval between placing successive layers within a lift.

For bypassing PH-II, 3 Nos of penstocks emanating from the surge shaft will be connected with a bypass arrangement for ensuring downstream flow. The By-pass arrangement will comprise of around 209 m long bypass tunnel along with an open channel of approximately 40m length at the outlet portal of the tunnel to by-pass flow to the link canal.

Data Sheet 5B: Construction Methodology of HM Component Works

The bidder has submitted Construction Methodology of HM Component Works through proposed sub-contractors M/s Texmaco Rail & Engineering Limited, M/s Precision Infratech Pvt. Ltd. and M/s PES Engineers Private Limited. However, as per tender provisions, the bidder has option to propose sub-contractor(s) for HM works within 90 days of issue of LoA. Fresh submission at that stage may be more appropriate. Bidder may be asked to confirm the above.

Data Sheet-6A: Infrastructure for execution of scope of work w.r.t. "Planning, Design & Engineering"

The Bidders are required to give detailed description of infrastructure with respect to proposed deployment of computer hardware and software, in-house technical knowhow and documentation to execute the works under head "Planning, Design & Engineering"

The proposed sub-contractors M/s SMEC International Pvt. Ltd., M/s AFRY India Private Ltd. and M/s Lombardi Engineering India Pvt. Ltd. of the bidder have mentioned about office space, Laptops installed with required Softwares and INTERNET connection for working of personnel. For printing the reports/memo/drawings, they have adequate nos. of advance printers available in their office. For time to time site visits, Laptops shall be carried by the experts during such visits. Internet connectivity shall be made available thru Wi-Fi Flash drives. Alternatively, experts may also use the internet connection available locally.

The sub-contractors have shown availability of technical staff and design softwares. However, as per tender provisions, the bidder has option to propose sub-contractor(s) for Planning, Design & Engineering works within 30 days of issue of LoA. Fresh submission at that stage may be more appropriate. Bidder may be asked to confirm the above.

Data Sheet-6B: Design plan for Planning Design and Engineering:

The Bidders are required to propose a detailed design plan i.e. process inputs/interface, process method and process output along with timelines for each step envisaged for executing the scope of work for scope of work w.r.t. "Planning, Design & Engineering".

The bidder through proposed sub-contractors has provided sequence of activities with timelines.

Data Sheet-6C: Format of Drawing Block

The bidder has proposed format of drawing block showing "Title of drawing", "purpose of drawing", "Notes", "Reference to other drawings", Names of preparing, reviewing and approving officials name.

Data Sheet-6D: An outline of quality assurance system for the execution of scope of work w.r.t. "Planning, Design & Engineering"

The bidder has attached Certificate of Quality Management System and flow charts for checking / controlling quality of output and cited various tools available with them for Quality Control.

Data sheet-7: Details of Hydro-Mechanical Plant & Machinery

The bidders are required to submit the detailed description of the Hydro-mechanical Plant & Machinery proposed and should also include in his submission, for these Plant & Machinery, the description of their manufacturing activities-transportation to site and erection at site in detail including interface activities with the Civil Works.

The bidder through its sub-contractors has provided list of HM equipment, description of their manufacturing activities their handling and their installation at site. The bidder has proposed five set of stoplogs as per the provision.

Data sheet 8: Deployment of Construction Equipment

The Bidders are required to list out all critical construction equipment, which would be proposed for Construction works. This should include their numbers, capacities and whether equipments proposed are to be purchased new or old. In respect of old equipment, year of manufacture and current ownership is to be stated. Construction equipment should be preferably new.

The bidder has enclosed schedule of deployment of all critical construction equipment figuring in his construction methodology.

Data sheet-9: Construction Schedule of the Project

The Bidders are required to submit a Master Control Network within the Time for Completion dates, which shall form part of Overall Agreement so as to complete the work within 72 months. The bidder has proposed the achievement of Contract Milestones as below:

Sl. No.	Description	Proposed target month by the bidder
Milestone-1	Completion of Coffer Dam	56
Milestone-2A	Completion of Cut-off trench of Daudhan Earthen Dam	42
Milestone-2B	Completion of Excavation (Dam Foundation) of Daudhan Concrete Dam	38
Milestone-3	Completion of Concreting of Ken- Betwa Link Canal - Upper Tunnel	40
Milestone-4	Completion of Excavation of Lower Tunnel	32
Milestone-5	Completion of Concreting of Surge Shaft	39
Milestone-6	Completion of Concreting of Daudhan Concrete Dam	66
Milestone-7	Completion of Fill Placement of Daudhan Earthen Dam	66
Milestone-8	Completion of Gate Installation of Daudhan Concrete Dam	Not shown

Data sheet-10: An Outline of Quality Assurance System for the Project

The bidders are required to submit, an outline, description of proposed Quality Assurance System for the implementation of the project in line with the QAP for Civil and HM works provided in the Volume-III of tender document.

The bidder has proposed Quality Assurance System for Civil and HM works, which include audit provisions and customer feedback.

PART C - ANOMOLIES REQUIRING CLARIFICATIONS

a) As per tender provisions, Employer takes no responsibility, if no quarry sites is available out of that mentioned in Project Profile. Necessary amendment to that effect had already been issued. This needs to be communicated to the bidder.

b) However, as per tender provisions, the bidder has option to propose sub-contractor(s) for HM works within 90 days of issue of LoA. Fresh submission at that stage may be more appropriate. Bidder may be asked to confirm the above.

c) Milestones in Data Sheet 9 for each milestone, in the requisite format as given in the ITB, needs to be provided by the bidder.

OBSERVATIONS AND RECOMMENDATIONS

a) The bidder is a sole bidder with the sub contractors

b) The BG and Tender fee submitted by the bidder is in order as per the requirements

c) The bidder has met the qualification requirement and also the financial criteria

d) The bidder has all the experience as mentioned in the Qualification requirements.

e) The construction methodology and the diversion program are exhaustive and appears acceptable.

f) It is recommended that a generic declaration may be get signed by all the bidders conveying their unequivocal acceptance of the conditions stipulated in the tender Documents and the confirmation that their quoted prices are after taking into cognizance of Scope of Work, the Owner's Requirements and probable Risks as identified in Risk Allocation Schedule. A sample of the same is appended as Annexure 7.

ANNEXURE 7 – DECLARATION IN RESPECT OF THE SUBMITTED BID

It is declared without any condition whatsoever

1. That we _____ (name of the bidder) have submitted our bid for EPC Execution of Daudhan Dam under Ken Betwa Link Project.

2. That we have carefully perused the limiting provisions in the Tender document including amendments, particularly but not limited to, the availability of quarries for construction materials, the working hours and the dumping sites and we have verified our facts on the ground.

3. That we have understood that the obligations of the KBLPA are limited to those mentioned in Article 46 of the GCC of the tender document (including amendments).

4. That any deviations in our submitted bid, whether tacit, by implication or otherwise, with the tender document are hereby unconditionally withdrawn by us and will not form the basis for any claim in the time extension or the financial compensation from Ken-Betwa Link Project Authority (KBLPA).

5. That the construction method and the construction equipment proposed by us are tentative and may require changes during actual execution of work to ensure scheduled completion of the Work Package and accordingly we undertake that, for any change in the construction equipment requirement necessitated to ensure completion of Works within the specified Time for completion, we shall deploy additional construction equipment as required at our cost.

6. We hereby convey our unequivocal acceptance of the conditions stipulated in the tender Documents (including amendments) and confirm that we have quoted our prices accordingly after taking into cognizance of Scope of Work, the Owner's Requirements and probable Risks as identified in Risk Allocation Schedule (Appendix GCC-9).

7. That we have read the Risk Allocation Schedule appended with the tender document as in reference to Article 55 and undertake that in the event of any conflict, the provisions contained in the Risk Allocation Schedule shall prevail over any other provisions in the tender documents and those mentioned in our submitted bid.

8. We further undertake that in the event of resultant contract being awarded to us, we shall strictly abide by these requirements and fulfill all the contractual obligations in letter and spirit as envisaged in the tender document.

Note: **This Undertaking shall be given on Bidder's Letter Head and signed with seal by the authorized signatory of the bidder having the Power of Attorney to do so.**