



Memo No.35 -CI (SPMU)/10D-01/2023

Date: 09.01.2024

2nd CALL OF REQUEST FOR EXPRESSION OF INTEREST (REOI)

Reference No: CE/IW/SPMU-EOI/02/23-24 Dated: 09.01.2024

INDIA

World Bank & Asian Infrastructure Investment Bank Assisted 'West Bengal Major Irrigation and Flood Management Project (WBMIFMP)'

IBRD Loan No.: 9025-IN; AIIB Loan No. L0054A-IND

Procurement Notice for India — P162679

Title of the sub-project: Techno-commercial offer including budgetary quote for “Design, fabrication and erection of self-operating hydraulic gates across Mundeswari river at Chingra, Block Khanakul-II in the District-Hooghly, under West Bengal Major Irrigation and Flood Management Project (WBMIFMP) in the State of West Bengal in India.”

Background:

The Government of India has received for financing of USD 290 million from the International Bank for Reconstruction and Development (IBRD) towards the cost of the West Bengal Major Irrigation and Flood Management Project (WBMIFMP) and intends to apply a part of the proceeds toward eligible payments under the contracts for Consultancy Services. The sub-borrower is Irrigation & Waterways Department, Government of West Bengal.

2. WBMIFMP aims to improve the existing irrigation network in the Damodar Valley Command Area (DVCA) within the State of West Bengal, to optimize conjunctive and sustainable use of ground and surface water across the DVCA in different irrigation seasons, and to reduce flooding in the Lower Damodar Sub-Basin (LDSB) in West Bengal.

Objective of the Sub-Project, titled above:

3. Earthen Boro-Bundh is constructed across Mundeswari River in West Bengal every year to hold the non-monsoon water and utilize the same by the local cultivators during non-monsoon season of Boro paddy cultivation (15 January–15 May). This Boro-Bundh is dismantled partly before the monsoon season, and some portion /components remain till it is washed away by heavy flood discharge. It

has now been envisaged to construct a properly designed Weir Structure comprising floor, piers, abutments and upstream & downstream protection and to fit state-of-the art designed and indigenously manufactured self-operating hydraulic gates that would primarily operate (open and close up) under differential hydrostatic head between upstream and downstream i.e., automatically open and automatically close also, without the need of any electrical power or manpower, depending on upstream water level. The Gates should not obstruct the flow during its open position, i.e., should not remain submerged in open position. This weir with the gates will replace the construction of Boro-Bundhs every year across the Channel and maintain the river morphology, by avoiding unwarranted siltation.

Technical Parameters, other details & Client's requirements

4. Necessary details, to the extent available till now, has been provided in the **Annex-1**.

Request for Expression of Interest (REOI)

5. Expression of Interest (EOI) is invited from the interested firms to provide necessary inputs in their proposal /offer for finalizing the type, description and specification and drawing of the gates and accessories, along with budgetary quote. Followings may please be noted in this connection.:

- a) The civil structure of the weir stated in Paragraph 3 above, will be designed in-house by the Client, with the loads transferred from the gate components. The alignment, shape and dimension of the civil structure will be finalized as per requirement of the gates with the structure.
- b) Subsequent to submission of the proposal/offer, the Client will finalize the particular type and specification of gates offered by the Firms, that will be most suitable from techno-economical evaluation. The structural design on overall safety of the gates and the loads & moments transferred to the weir structure as calculated by the Designer of the gates, as well as the detailed drawing of the gates and accessories will be checked by the Design Wing of the Irrigation & waterways Department, after such finalization and before proceeding towards tendering.
- c) The EOI, at the minimum should contain the following.
 - I. A general narrative on the Profile & organizational structure of the Firm, highlighting, *inter alia*, annual construction turnover for last 7 years (2016-17 to 2022-23), and computation of average turnover considering best 5 of the last 7 years.
 - II. Past credentials of self-operating/ **automatic** gate structures, showing, name of work, name, address & contact details of client, contract ID No., month & year of commencement and completion of the respective contracts, final contract value and sample drawings /photographs of the gates commissioned at sites. ***Contracts with similar self-operating/ automatic gates (not electro-mechanically or manually operated) with gate length not less than 10.0 meters should be cited as credentials. Such contracts should be for a period of not more than 7 years, and include the current contracts also. Other type gates need not be mentioned.***
 - III. Salient features of the particular type of gates along with principle of operation, suggested for the instant sub-project and rationale behind such selection.

- IV. A Design /Technical Note sharing the design principles, along with a declaration as to whether there is any restriction /objection in sharing the detailed design with the Client at a later stage, particularly for patented items.
 - V. Budgetary offer for gates and accessories in a priced BOQ format, showing the nomenclature of various items, quantities, unit rates (with GST) and total amount.
 - VI. Detailed specification of gate components with reference Indian /International Standards or Codes.
 - VII. Plan, Elevation and Typical cross section (in the form of GAD) of the gates and accessories, showing indicative loads likely to be transferred to the supporting piers /abutments /floor.
 - VIII. Any other information.
- d) The components of the weir structure (Civil works) and the hydromechanical gate components will be clubbed under a single package and tendering will be done subsequently. Proposer of the finalized gates will have the leverage to take part in such tendering either as an authorized sub-contractor or in joint venture with other bidders.

Evaluation of REOI

6. REOI would be evaluated by a Special Evaluation Committee comprising the followings: -

- a. Chief Engineer & Project Director, WBMIFMP – Chairman
- b. Chief Engineer (Mechanical & Electrical), I & W Directorate -Member
- c. Additional Project Director-II, SPMU, WBMIFMP - Member
- d. Director, Central Design Office, I & W Directorate -Member
- e. Procurement Specialist, PMC -Member
- f. Additional Project Director-IV, DPMU-II, WBMIFMP -Member-Secretary

7. Evaluation matrix is presented below:

Criteria No.	Description	Percentage	Remarks
I.	Principles of operation	25%	
II.	Past credentials	25%	No. of contracts with length of gates more than 10.00 meters taken up for a period not exceeding 7 years may be cited. The credentials may include current contracts also. The Firm citing maximum number of contracts will get full percentage. Other Firms will be marked on pro-rata basis.
III.	Design principles	20%	

IV.	Ease of maintenance	10%	
V.	Overall cost	20%	The Firm offering lowest price will get full percentage. Others on pro-rata basis.
Total		100%	
The Firm securing highest marks will be considered as the most advantageous proposer.			

Due date of submission of (REOI)

8. The EOI as explained in Paragraph 5 above, needs to be submitted in **3 sets** of hard copies either by post or in person at the address mentioned above in the Letter head, within **30 days** from publication of this Notice in Newspaper as well as the **WBMIFMP Link** of Departmental website (www.wbiwd.gov.in), i.e. within **4-00 pm on 08/02/2024**.

Client's further input.

9. One Index Map showing location of the worksite is attached herewith. In case the Firm desires to plan for a site visit, the following officer may be contacted.

Sri J. Datta
Executive Engineer,
Hooghly Irrigation Division
Irrigation & waterways Directorate
E mail : hooghlyid@gmail.com
Mobile: 9830706653

Encl. Annex-1 & Index Map

Signature
Chief Engineer & Project Director
State Project Management Unit,
West Bengal Major Irrigation and
Flood Management Project
Irrigation & waterways Directorate
Government of west Bengal

Technical Data and other inputs

1. River Data:

- ❖ Name of the River - Mundeswari River
- ❖ Design Flood Discharge - 3200 Cumec (25-Year Return Period)
- ❖ High Flood Level, HFL - 9.60 m GTS (25-Year Return Period)
- ❖ Required Storage Level during non-monsoon period - 6.357 m GTS
- ❖ Ruling Level at d/s during Non-Monsoon Season - 3.75 m GTS
- ❖ Maximum High Tide Level during Non-Monsoon Season- 4.0 m GTS

2. Weir Data

- ❖ U/s Bed Level of Weir - 2.195 m GTS
- ❖ D/s Bed Level of Weir - 1.945 m GTS
- ❖ D/s Bed Level of Flexible Apron- 2.195 m GTS
- ❖ Crest Level of the weir - 2.855 m GTS

3. Full Reservoir Level, FRL - 6.355 m GTS

4. Total Width of Weir - 220 m (Approx.)

5. Gates Data

- ❖ Type of Gates – Self-operating (to be operated under differential hydrostatic head without the need of electrical power or manpower)
- ❖ Size of Gates - 12.00 m x 3.50 m (Approx)
- ❖ No. of Gates - 17 nos. (Tentative)

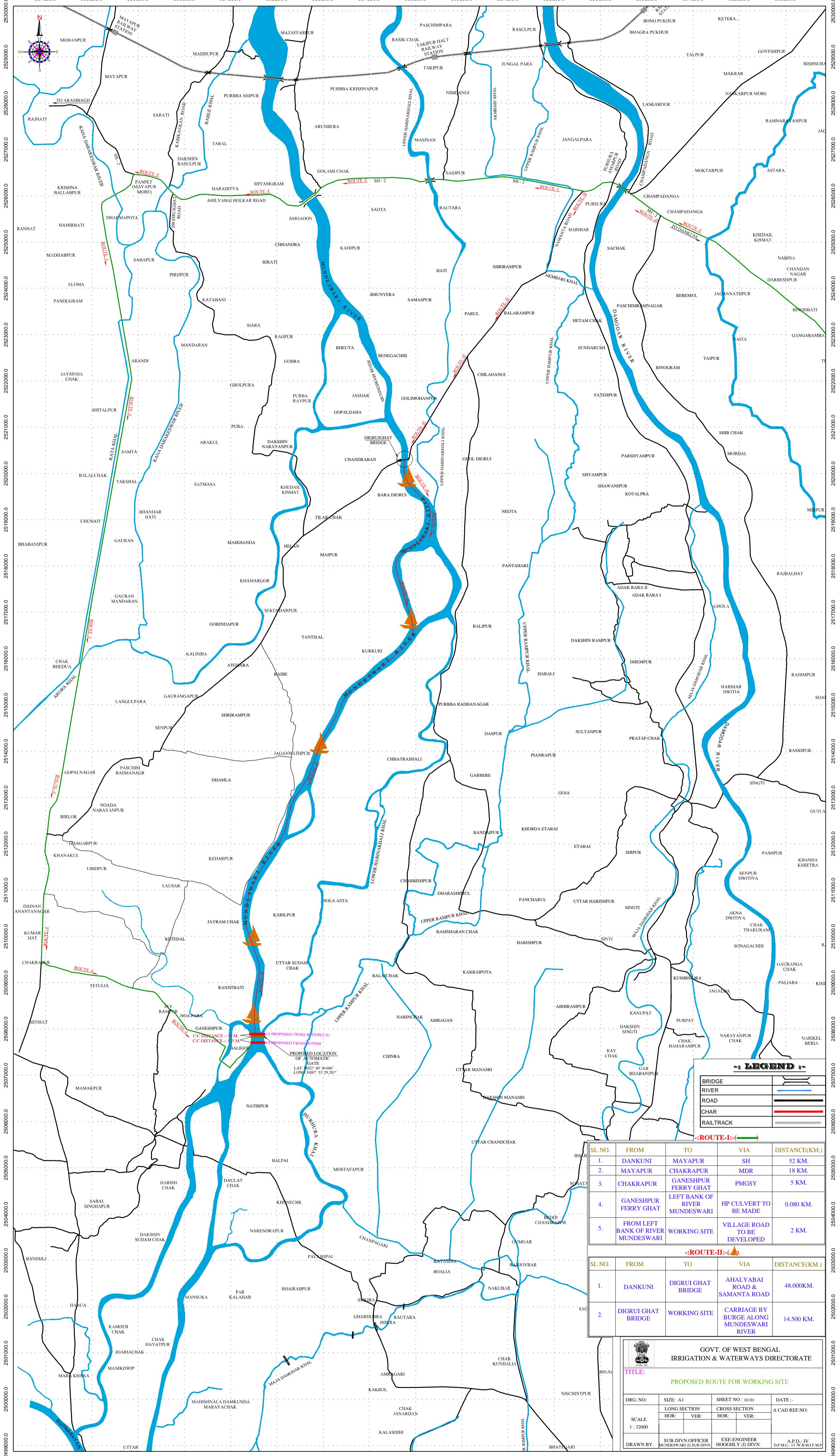
6. Operational Mode

The Self-operating Gates are supposed to be hydro mechanical gates that function (open and close) automatically. These should not require any electrical power or manpower for their operation and automatically regulate the outflow by deciding on upstream water level: when to open, how much to open and how long to remain open. Arrangement shall also be made for manual operation of all gates in controlled mode by using a suitable valve mechanism, or otherwise, for emergency operation, at around 35% to 45% of the FRL during monsoon (June to October) as well as non-monsoon season (November to May). Save and except the above, the gates should generally be kept open during monsoon season for unhindered passage of flood discharge and closed during non-monsoon season. The gates should not obstruct the flow during open position i.e., should not remain submerged in open position.

7. Other requirements

- a) The gate materials, supposed to be structural steel are required to be painted with anti-corrosive epoxy-based paints to have a maintenance free life of at least 7 years.

- b) Similarly, the sealing arrangement required to avoid leakage of water to downstream and depletion of upstream storage, should also to have a maintenance free life of at least 7 years.
- c) The embedded parts, mainly the fixtures that will remain under water, should preferably be of stainless steel.
- d) Nevertheless, periodical maintenance of the gates would be required. In order to do that provision of 1 set of stoplogs of suitable number of units for both upstream and downstream side may be made for complete isolation of the gates for repair /maintenance. Construction of a central pier may be considered at middle of each gate bay, at the upstream as well as downstream to facilitate operation of the stoplogs. The stoplogs can be operated and put in position by cranes /hydras fitted on a floating barge. This is, however, beyond the scope of this assignment.
- e) There should be a gangway (width 1.2 m) for inspection, made up of structural steel, to be supported on piers with a minimum vertical clearance of 1.5 m above the HFL
- f) **The Defect Liability Period (DLP) for the gates shall be considered as 3 years and Comprehensive Annual Maintenance within this DLP has to be provided by the Firm, at no extra cost.**



LEGEND :-

BRIDGE	
RIVER	
ROAD	
CHAR	
RAILTRACK	

:-ROUTE-I:-

SL.NO.	FROM	TO	VIA	DISTANCE(KM.)
1.	DANKUNI	MAYAPUR	SH	52 KM.
2.	MAYAPUR	CHAKRAPUR	MDR	18 KM.
3.	CHAKRAPUR	GANESHPUR FERRY GHAT	PMGSY	5 KM.
4.	GANESHPUR FERRY GHAT	LEFT BANK OF RIVER MUNDESWARI	HP CULVERT TO BE MADE	0.080 KM.
5.	FROM LEFT BANK OF RIVER MUNDESWARI	WORKING SITE	VILLAGE ROAD TO BE DEVELOPED	2 KM.

:-ROUTE-II:-

SL.NO.	FROM	TO	VIA	DISTANCE(KM.)
1.	DANKUNI	DIGRUI GHAT BRIDGE	AHALYABAI ROAD & SAMANTA ROAD	48.000KM.
2.	DIGRUI GHAT BRIDGE	WORKING SITE	CARRIAGE BY BURGE ALONG MUNDESWARI RIVER	14.500 KM.

GOVT. OF WEST BENGAL
IRRIGATION & WATERWAYS DIRECTORATE

TITLE:
PROPOSED ROUTE FOR WORKING SITE

DRG. NO.:	SIZE: A1	SHEET NO.: 0101	DATE :-
SCALE	HOR: VER:	CROSS SECTION	A CAD REF. NO.:
1 : 32000			
DRAWN BY:	SUB-DIVN.OFFICER	EXT-ENGINEER	A.P.D.-IV
	MUNDESWARI (SUB-DIVN.)	HOOGHLY (D) DIVN.	D.P.M./J.W.B.M.F.M.P.