

न्यूक्लियर पावर कॉर्पोरेशन ऑफ इंडिया लिमिटेड

(भारत सरकार का उद्यम)

NUCLEAR POWER CORPORATION OF INDIA LIMITED

(A Government of India Enterprise)

संविदा एवं सामग्री प्रबंधन निदेशालय, मुंबई

**DIRECTORATE OF CONTRACTS & MATERIALS MANAGEMENT
MUMBAI**



न्यूक्लियर पावर कॉर्पोरेशन ऑफ इंडिया लिमिटेड
Nuclear Power Corporation of India Limited



परियोजना : कैगा 5 एवं 6, कारवार, कर्नाटक

PROJECT: KAIGA-5&6, KARWAR, KARNATAKA

क्रय आदेश क्र **PURCHASE ORDER NO:**

CMM/FTP/09-30-1-1255/PO/0047

FOR

न्यूक्लियर आइलैंड मेगा ई. पी. सी. पैकेज (एन.आई. एम. ई. पी.)

Nuclear Island Mega EPC Package (NIMEP)



न्यूक्लियर पावर कॉर्पोरेशन ऑफ इंडिया लिमिटेड

(भारत सरकार का उद्यम)

NUCLEAR POWER CORPORATION OF INDIA LIMITED

(A Govt. of India Enterprise)

(CIN : U40104MH1987GOI149458)



संविदा एवं सामग्री प्रबंधन निदेशालय
नाभिकीय ऊर्जा भवन,
ए-'O' ब्लॉक, तलमाला,
अणुशक्तिनगर, मुंबई - 400 094.
दुरभाष: 2599 3000 / 2599 1000
फैक्स: 91-22-2558 0741



DIRECTORATE OF CONTRACTS & MATERIALS MANAGEMENT

Nabhikiya Urja Bhavan,
A-'O' Block, Ground Floor,
Anushaktinagar, Mumbai - 400 094.
Tel.: 2599 3000 / 2599 1000
Fax : 91-22-25580741

PURCHASE ORDER No.: CMM/FTP/09-30-1-1255/PO/0047

Date: 23th April, 2025

To,

M/s. Megha Engineering and Infrastructures Ltd.,
S-2, Technocrat Industrial Estate,
Balanagar, Hyderabad-500 037,
Telangana, INDIA.

E-mail: mgp@meil.in/info@meghaeng.com/
mgp@meghaeng.com/dchaitanya@meghaeng.com

Project: Kaiga-5&6

USI No: 20000, 30000, 50000
60000, 70000, 80000

Dear Sirs,

Your offer contained in the **Tender No. CMM/FTP/09-30-1-1255** to Supply, Erection & Commissioning and Civil Works for the under-mentioned Stores is accepted for and on behalf of Nuclear Power Corporation of India Ltd., subject to the General Conditions of Contract for Engineering, Procurement and Construction Contracts, detailed in the Form No. GCC/EPC-3/Rev.4 entitled "General Conditions of Contract for Engineering, Procurement and Construction Contracts" applicable to the contracts for indigenous stores placed by the Nuclear Power Corporation of India Ltd., (A Government of India Enterprise) and subject to the terms and conditions contained in the Purchase Order, to the extent of the quantity and at the price specified below:

Sl. No	Description	Quantity	Unit	Rate	Value
1.0	Design, Engineering, Supply, Inspection, Testing, Packing, Forwarding, Transportation to Site, Guarantee, Storage, Fabrication, Civil works, Erection, Examination, Testing, Commissioning, Operation and Maintenance of Nuclear Island Mega EPC Package (NIMEP) for Kaiga-5&6 Project as per the Technical Specification and Drawings under Tender No. CMM/FTP/09-30-1-1255.		As in Section- A		
2.0	SECTION-A: Items and Price Schedule. SECTION-B: Commercial Terms and Conditions: Basis of price, Statutory levies, Delivery schedule, Terms of Payment, etc. Appendix-1: Reference Particulars. Annexure-A: Format for 'Advance Bank Guarantee'. Annexure-B: Format for 'Performance Security Bond'. Annexure-C: Format for 'Retention Bank Guarantee'. Annexure-DP: Contractual Milestones. Annexure-E: Format for 'Indemnity Bond'. Annexure-F: Format for 'Certificate towards Goods and Services Tax & TDS' Annexure-I: Format for 'Erection Completion Certificate' Annexure-J: Operational Acceptance Certificate Annexure-K: Operational Acceptance Certificate (For Sub-module) Annexure- L: Free issue Material accounting Annexure-2: List of Activities required to be completed for release of 10% advance payment for supply portion to contractor Annexure-3: Details of Free issue Material Annexure-4: Activities for releasing Advance for Civil Work Annexure-6: Penalty for Contractors				

NPCIL GST No.: (For HQ, Mumbai - 27AAACN3154F1ZQ)
NPCIL GST No.: (For Kaiga-5&6, Karnataka- 29AAACN3154F1ZM)

cont.....



पंजीकृत कार्यालय: 16 वी मंजिल, सेंटर-1, वर्ल्ड ट्रेड सेंटर, कफ परेड, कुलाबा, मुंबई - 400 005
Regd. Office : 16th Floor, Center-1, World Trade Centre, Cuffe Parade, Colaba, Mumbai - 400 005
Visit us at : www.npcil.nic.in

PURCHASE ORDER NO. CMM/FTP/09-30-1-1255/PO/0047

Prices Basis: As per Section-B.
Delivery Period: As per Section-B.
Place of Delivery: As per Section-B.

General Conditions of Contract for Engineering, Procurement and Construction Contracts, applicable to Contracts for Indigenous Stores, placed by Nuclear Power Corporation of India Ltd., (A Government of India Enterprise) detailed in Form No. GCC/EPC-3/R-4, and this Purchase Order shall be the sole repository of the Contract.

Please acknowledge receipt immediately.

Yours faithfully,



23/04/2025

विपिन कुमार त्रिवेदी, (Vipin Kumar Trivedi)
सह निदेशक (सीएमएम) Associate Director (C&MM)
For & on behalf of Nuclear Power Corporation of India Ltd.
(The Purchaser)

Important:

1. Bills should be submitted in triplicate to the Paying Authority at the address as indicated in the Purchase Order along with all relevant Documents and as specified in this Purchase Order.

Delivery Instructions:

1. Stores are to be delivered at the place of delivery stipulated in this Purchase Order on any working day between 10.30 a.m. and 3.00 p.m.
2. No Stores shall be accepted by the Stores unless Delivery Challan giving full details of the Purchase Order No. and Date, Description of Stores, Quantity, Make, Unit and Gross Weight or Net Weight is submitted with the Stores. In absence of any of the above, the Store-keeper shall refuse to take delivery of the Stores.



PURCHASE ORDER NO. CMM/FTP/09-30-1-1255/PO/0047

SECTION A : ITEMS AND PRICE SCHEDULE

Sl. No.	Description	Total Prices of complete scope of respective Modules of NIME Package including GST and all other Indian indirect taxes & levies (INR)
1.0	Design, Engineering, Supply, Inspection, Testing, Packing, Forwarding, Transportation to Site, Guarantee, Storage, Fabrication, Civil works, Erection, Examination, Testing, Commissioning, Operation and Maintenance of Nuclear Island Mega EPC Package (NIMEP) for Kaiga-5&6 Project as per the Technical Specification and Drawings under Tender No. CMM/FTP/09-30-1-1255.	
	Module No.	Module Name
1.1	M1	Civil Module
1.2	M2	Reactor Module
1.3	M3	Nuclear and Mechanical System Module
1.4	M4	Electrical Module
1.5	M5	Control & Instrumentation Module
1.6	M6	Lab, Workshop & Other O&M Facilities Module
Total Prices for complete scope of NIME Package including GST and all other Indian indirect taxes & levies :		1,27,86,93,58,588
(Rupees Twelve Thousand Seven Hundred Eighty Six Crore Ninety Three Lakh Fifty Eight Thousand Five Hundred Eighty Eight Only)		

Note: Detailed Price Break-ups will be issued later.


 23/04/2025
विपिन कुमार त्रिवेदी, (Vipin Kumar Trivedi)
सह निदेशक (सीएमएम) Associate Director (C&MM)

For and on behalf of Nuclear Power Corporation of India Limited
 (The Purchaser)



SECTION-B

Section-B1	COMMERCIAL TERMS AND CONDITIONS (COMMON)		
Section-B2	COMMERCIAL TERMS AND CONDITIONS (Module Wise)		
SECTION-B2-I	(a)	MODULE: M1 Sub Module S1	Construction of Main Plant Buildings
	(b)	MODULE: M1 Sub Module S2	Design, Engineering, Construction, Supply, Erection, Commissioning & Testing of four number of Natural Draught Cooling Towers, Cooling Water Pump House and associated works
	(c)	MODULE: M1 Sub Module S3	Design, Engineering, Construction, Supply, Erection, Commissioning & Testing of four number of Induced Draught Cooling Towers (IDCT) and associated works
	(d)	MODULE: M1 Sub Module S4	Construction of various Miscellaneous Buildings / structures
SECTION-B2-II	MODULE: M2 M2 Sub Module S1 M2 Sub Module S2 M2 Sub Module S3 M2 Sub Module S4		Reactor Module
SECTION-B2-III	MODULE: M3 M3 Sub Module S1 M3 Sub Module S2 M3 Sub Module S3 M3 Sub Module S4 M3 Sub Module S5		Nuclear & Mechanical System (N&MS)
SECTION-B2-IV	(a)	MODULE: M4 Sub-Module S1	Main Plant Electrical System
	(b)	MODULE: M4 Electrical Module Sub-Module S2	Switchyard
	(c)	(MODULE: M4 Electrical Module Sub-Module S3	Power Transformers and Shunt Reactors
	(d)	MODULE: M4 Electrical Module Sub-Module S4	Diesel Generators
SECTION-B2-V	(a)	MODULE: M 5 Sub-Module S1	Control Centre Instrumentation
	(b)	MODULE: M5 Sub-Module S2	Field Instrumentation
SECTION-B2-VI	MODULE: M6		Laboratory, Workshop and other O&M Facilities



SECTION-B

SECTION – B1

COMMERCIAL TERMS AND CONDITIONS (COMMON)

**BASIS OF PRICE, STATUTORY LEVIES, DELIVERY SCHEDULE,
TERMS OF PAYMENT ETC.**

1.0 PRICE BASIS:

Prices stipulated in Section- A of the Purchase Order are for:

- (a) Supply (inclusive of Packing and Forwarding charges, Inland transportation (freight), Insurance Charges and Goods & Service Tax (GST) and all other indirect Taxes).
- (b) Erection & commissioning (inclusive of Insurance Charges & Goods & Service Tax (GST) & all other indirect Taxes).
- (c) Civil work (inclusive of Insurance Charges & Goods & Service Tax (GST) & all other indirect Taxes).

Prices Basis for all Supply items and spares (1 (a) above) covered under this Purchase Order shall be on **Delivered at Place Unloaded (DPU)**, Kaiga Atomic Power Project – 5&6, PO: Kaiga: via Karwar, Distt, Uttar Kannada, Karnataka, Site, **INCOTERM-2020 basis**.

The contract price and currency of Payment for all the modules shall be in Indian Rupees (INR).

1.1 BILL OF QUANTITIES (BOQ):

- 1.1.1 The Bill of Quantity as per Purchaser's detailed engineering, issued along with the Tender is only tentative and the Contractor may proceed with procurement of 75% of such tendered BOQ. Any subsequent procurement shall be done by the Contractor only after getting approval of the BOQ prepared by the Contractor based on the drawings issued for construction by the Purchaser. However, the Contractor shall bear the responsibility of correctness of the BOQ arrived at by him based on detailed engineering drawings for construction issued by the Purchaser.

- 1.1.2 All Civil construction drawings like Concrete Forming Drawing (CFDs), Reinforcement drawings, Liner and EP fabrication drawings etc and other than



Civil construction drawings shall be released to contractor as per schedule given in Annexure-4 of Section C Notes of the Tender.

1.2 FREIGHT & TRANSIT INSURANCE CHARGES FOR SUPPLY ITEMS AND SPARES:

- 1.2.1 Freight and Insurance shall be arranged by the Contractor.
- 1.2.2 The contractor shall indicate the Transportation & Transit Insurance charges and applicable taxes and duties separately while billing.
- 1.2.3 Items shall be dispatched to Kaiga Atomic Power Project – 5&6, (Kaiga-5&6), Karwar through reputed transporter without any transshipment enroute.
- 1.2.4 The Contractor shall be solely responsible for safe delivery of the items at Kaiga Atomic Power Project – 5&6, (Kaiga-5&6), Karwar.

1.3 PRICE ADJUSTMENT:

- 1.3.1 Price Adjustment on the Contract Price shall be applicable as per General Conditions of the Contract (GCC/EPC-3/R-4), SCC-Part 1-Common and SCC-Part 2- Module wise.
- 1.3.2 Only the following components of the Price shall be subject to Price adjustment:

(a) For Supply of Items and Mandatory Spares:

The price adjustment on supply of Items and mandatory spares shall be allowed with ceiling on DPU Price (excluding GST and all other indirect taxes) as per clause (d) hereunder.

(b) For Erection and Commissioning:

The price adjustment on erection and commissioning prices (excluding GST and all other indirect taxes) shall be allowed with ceiling as per clause (d) hereunder.

(c) For civil works portion:

The price adjustment on civil works prices (excluding GST and all other indirect taxes) shall be allowed with ceiling as per clause (d) hereunder.

- (d) The price adjustment will be allowed up-to a ceiling of $\pm 40\%$ (forty percent) of the total price component in INR. The price adjustment for individual Items shall be initially allowed up to ceiling of $\pm 40\%$ (forty percent) value of the respective item for supply, erection & commissioning



and civil works. Subsequently at the time of contract closure, Price adjustment of individual items will be allowed to such an extent that net price adjustment of all the items in INR does not exceed $\pm 40\%$ (forty percent) ceiling of total Contract value (after considering clause (e) below) and shall be payable/ recoverable accordingly.

- e) For Imported items covered under this purchase order, the Foreign Exchange Variation (without any ceiling) shall be allowed (to the extent of foreign currency component) for these imported items mentioned above wherein foreign currency component is selected by the Contractor. However, Price Adjustment Provisions shall not be applicable on the foreign currency portion of these imported items. Price Adjustment Provisions shall be applicable on the INR portion of these imported items.
- f) No Price adjustment shall be provided on the portion of price for which advance is given.
- g) No adjustment of prices is allowed on tools, tackles and accessories, Engineering charges, Testing, charges, analysis charges etc. shown/payable separately.

1.3.3 PRICE ADJUSTMENT FORMULA FOR SUPPLY PORTION:

The price adjustment formula to be applied to DPU Price (excluding GST and all other indirect taxes) of Supply Items including Spares in Section-A of Purchase Order shall be as follows:

1.3.3.1 Price Adjustment Formula for Supply Portion: (for Indigenous Items):

$$EC_1 = EC \left\{ F + \frac{a M_1}{M_0} + \frac{b N_1}{N_0} + \frac{c O_1}{O_0} + \frac{d P_1}{P_0} + \dots + \frac{l_b L_1}{L_0} \right\}$$

Where,

EC₁ = Adjusted Basic Price components of items / equipments.

EC = Basic Price components of items / equipments.

M, N, O, P, Q.... = Corresponding published price indices of various materials as defined in SECTION-B2: COMMERCIAL TERMS AND CONDITIONS (Module Wise).

l_b = Co-efficient of labour content in the DPU cost of item /equipment.

L = Labour index.



F = 0.15 Fixed portion of the DPU component of the items/equipments which will not be subject to any adjustment.

a, b, c, d, e.... = Coefficients of major materials involved in the DPU price cost of the items/equipment as defined in SECTION-B2: COMMERCIAL TERMS AND CONDITIONS (Module Wise).

Subscript '0' refers to indices as prevailing on the seventh day prior to the due date of submission of bid [Submission of both Part - I (Technical & Commercial except Price) and Part – II (Price Bid)] i.e., **September, 2023**.

Subscript '1' refers to the indices as on:

- a) 90 days prior to the date of dispatch for labour component, and
- b) The expiry of 2/3rd period from the date of purchase order to the date of dispatch, for material component.

For the purpose of this clause, the date of dispatch shall mean Contractual Milestone Date of dispatch as per Contract or actual date of dispatch, whichever is earlier.

In case no Contractual Milestone Date of dispatch is mentioned for an item, Contractual Delivery Date (CDD) of the contract shall be taken as Contractual Milestone Date of dispatch for such items, for the purpose of this clause.

1.3.3.2 Price Adjustment Formula for Supply Portion of Foreign Currency Component part of Import (Imported Items):

The price adjustment formula to be applied to the portion of DPU price-component for which foreign exchange variation is allowed, shall be as follows:

$$ECF1 = ECF * \left\{ F + 0.85 * \frac{FE1_1 \text{ OR } FE2_1 \dots}{FE1_0 \text{ OR } FE2_0 \dots} \right\}$$

Where,

ECF1 = Adjusted Basic Price components of items / equipments (Foreign Currency Component part of Import).

ECF = Basic Price components of items / equipments (Foreign Currency Component part of Import).

F = 0.15 Fixed portion of the DP component of the items/equipments which will not be subject to any adjustment.



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FE1, FE2, refers to number of INR equivalent to one unit of foreign currency.

The exchange rates to be used for calculation shall be as per bills selling exchange rates established by The State Bank of India.

Subscript '0' refers to number of INR equivalent to one unit of foreign currency as prevailing on the seventh day prior to the due date of submission of bid [Submission of both Part - I (Technical & Commercial except Price) and Part – II (Price Bid)] **i.e., September,2023.**

Subscript '1' refers to number of INR equivalent to one unit of foreign currency as on:

The expiry of 2/3rd period from the date of purchase order to the date of dispatch, for material component

For the purpose of this clause, the date of dispatch shall mean Contractual Milestone Date of dispatch as per Contract or actual date of dispatch, whichever is earlier.

In case no Contractual Milestone Date of dispatch is mentioned for an item, Contractual Delivery Date (CDD) of the contract shall be taken as Contractual Milestone Date of dispatch for such items, for the purpose of this clause.

- 1.3.3.3 In case of dispatches which are delayed beyond Contractual Milestone Date of dispatch (as given in the Contract) for reasons attributable to the Purchaser, the price adjustment provisions shall continue to be applicable for an additional period equal to delay caused by the Purchaser, subject to GCC sub-clause 5.4.1, 5.4.2 & 5.4.3. This shall, however not deemed to be automatic extension of Contractual Delivery Date.
- 1.3.3.4 In case of dispatches which are delayed beyond the Contractual Milestone Date of dispatch (as given in Contract) for reasons attributable to the Contractor or Force Majeure events, the provision of Price Adjustment shall be as per terms of PO, regulated on the basis of the indices as applicable as per PO terms on the original Contractual Milestone Date of dispatch or the indices as applicable as per PO terms on the actual delivery date, whichever is lower.
- 1.3.3.5 In case dispatches are delayed beyond the Contractual Milestone Date of dispatch (as given in the Contract) and the total delayed period can be apportioned between delays due to the Purchaser, the Contractor and / or Force Majeure events, Price adjustments for the period of delay caused by the Purchaser will be allowed considering as if this delay due to the Purchaser happened first, immediately after Contractual Milestone Date, irrespective of actual point in time in which such delay by Purchaser occurs.



1.3.4 PRICE ADJUSTMENT FORMULA FOR ERECTION AND COMMISSIONING:

The price adjustment formula to be applied on erection and commissioning prices (excluding GST and all other indirect taxes) of the Purchase Order shall be as follows:

1.3.4.1 Price Adjustment Formula for Erection and Commissioning:

The formula for calculation of the monthly price variation of the cost of erection portion of the works is indicated and explained below:

$$E_1 = E_0 (0.25 + 0.75 * F_1 / F_0)$$

Where,

E_1 = Adjusted erection and commissioning price of each invoice.

E_0 = Basic value of work done in the contractual completion period or the actual completion date whichever is earlier.

F = The value of 'F', i.e., minimum wages in Rupees of a skilled labour fixed under any law, statutory rule or order as applicable on the last date of the month previous to the one under consideration shall be as per the value issued by Kaiga-5,6 project site.

Subscript '0' will be as prevailing on the date of submission of bid both Part - I (Technical & Commercial except Price) and Part - II (Price Bid)]. i.e., **October, 2023.**

F_0 = Will be issued later.

Subscript '1' will be as prevailing on the last date of the month previous to the actual date of execution of activities or the minimum wages prevailing on the Contractual Milestone Date for intermediate completion, whichever is earlier. In case no contractual milestone date for intermediate completion is mentioned for an activity, Contractual Delivery Date (CDD) of the contract shall be taken as contractual milestone date for intermediate completion.

1.3.4.2 In case of delay in erection and commissioning beyond the Contractual Milestone Date (as given in the contract) for reasons attributable to the Purchaser, the price adjustment provision shall continue to be applicable for an additional period equal to the delay caused by the Purchaser. This shall,



however, not deemed to be automatic extension of the contractual delivery date.

- 1.3.4.3 In case of activities that are delayed beyond the Contractual Milestone Date (as given in the contract) for reasons attributable to the Contractor or Force Majeure events, the provision of Price Adjustment shall be as per terms of PO, regulated on the basis of the indices as applicable as per PO terms on the original Contractual Milestone Date or the indices as applicable as per PO terms on the actual delivery date, whichever is lower.
- 1.3.4.4 In case completion of an activity is delayed beyond the Contractual Milestone Date (as given in the contract) and the total delayed period can be apportioned between delays due to the Purchaser, the Contractor and / or Force Majeure events, Price adjustments for the period of delay caused by the Purchaser will be allowed considering as if this delay due to the Purchaser happened first, immediately after Contractual Milestone Date, irrespective of actual point in time in which such delay by Purchaser occurs.

1.3.5 PRICE ADJUSTMENT FORMULA FOR CIVIL WORK PORTION:

The price adjustment formula to be applied to Civil Works prices (excluding GST and all other indirect taxes) for Civil Work Portion shall be as under.

1.3.5.1 Price Adjustment formula for Civil Work:

The actual amount of price adjustment shall be determined by satisfying the conditions specified herein. The formula designed for governing and calculating the price adjustment to be applied to the contract price shall be as follows:

$$ACV1 = CV (F + l_u \times L_{u1}/L_{u0} + l_{ss} \times L_{ss1}/L_{ss0} + l_s \times L_{s1}/L_{s0} + +m \times M_1/M_0 + n \times N_1/N_0 + o \times O_1/O_0 + q \times Q_1/Q_0 + d \times D_1/D_0)$$

Where:

ACV1 - Adjusted contract price i.e., value of work done after application of above price adjustment formula.

CV - Base contract price, subject to price adjustment, i.e., the value of the work done in the given period for which the Price Adjustment is to be calculated excluding cost of material supplied or services rendered at fixed prices by the Purchaser and the cost of extra items, rates for which have been worked out based on market rates.



F - Fixed component (15%) expressed as percentage of contract value will not be subjected to any adjustment under this formula or otherwise.

l_u - Unskilled Labour component as defined in **SECTION-B2: COMMERCIAL TERMS AND CONDITIONS (Module Wise)** expressed as percentage of the contract value which will be subjected to adjustment.

l_{ss} - Semi skilled Labour component as defined in **SECTION - B2: COMMERCIAL TERMS AND CONDITIONS (Module Wise)** expressed as percentage of the contract value which will be subjected to adjustment.

l_s - Skilled labour component as defined in **SECTION - B2: COMMERCIAL TERMS AND CONDITIONS (Module Wise)** expressed as percentage of the contract value which will be subject to adjustment.

m,n,o - Various materials component as defined in **SECTION - B2: COMMERCIAL TERMS AND CONDITIONS (Module Wise)** expressed as percentage of the contract value, which will be subject to adjustment.

q : All commodities component expressed as percentage of contract value, which shall not be defined in m, n and o expressed as percentage of contract value as defined in **SECTION - B2: COMMERCIAL TERMS AND CONDITIONS (Module Wise)**

d : P. O. L. component expressed as percentage of the contract value as defined in **SECTION - B2: COMMERCIAL TERMS AND CONDITIONS (Module Wise)** which will be subject to adjustment.

The sum of all the above components should sum up to one (1).

M, N, O - Corresponding published price indices of various materials based on All India Wholesale Price Index published by Economic adviser to GoI/ other references as defined in **SECTION - B2: COMMERCIAL TERMS AND CONDITIONS (Module Wise)** for civil component / electrical component of construction material as worked out for Individual Commodities / Group Items for the period under consideration

Q - Wholesale price indices applicable to All commodities as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.

L - Minimum wages in Rupees issued by office of Chief Labour Commissioner, Ministry of Labours & Employment as applicable on the last date of the month previous to the one under consideration (where in subscript 'u' 'ss' and 's' denotes the unskilled, semi-skilled and skilled labour



respectively). Kaiga-5&6, Site is coming under Area-C, as per Government Notification dated 19/01/2017.

D - P.O.L index for the period under consideration which will be considered as Diesel prices at the nearest Diesel Pump of Kaiga-5&6 Site.

SUBSCRIPT:

‘0’ - refers to the values of the above-mentioned Minimum Wages, Material / P.O.L. indices applicable to previous month prior to the date of opening of tenders i.e., **September, 2023.**

‘1’ - refers to the values of corresponding Minimum Wages, Material / P.O.L. indices as applicable for the month prior to the month in which the work is executed for which adjustment is applicable, respectively.

1.3.5.2 Price Adjustment for Secured Advance in Civil Works:

Price Adjustment on Secured advance paid on materials shall be regulated as below:

In the case of materials brought to site for which any secured advance is included in the bill, the value of such advance shall be added to the cost of work shown in the bill for operation of this Clause.

Similarly, when such materials are incorporated in the work and secured advance is deducted from the bill, the value of secured advance actually paid should be deducted from the cost of the work shown in the bill, running or final.

1.3.6 PRICE ADJUSTMENT FOR O&M PORTION UNDER MODULE-3:

The price adjustment formula for the various components of the Contract Price shall be as follows: -

$$ACV_1 = CV (F + I \times L_1 / L_0 + m \times M_1 / M_0 + n \times N_1 / N_0 + o \times O_1 / O_0 + p \times P_1 / P_0 + q \times Q_1 / Q_0)$$

Where:

ACV1 Adjusted contract price i.e. value of O&M cost after application of above price adjustment formula.

CV: Base contract price, subject to price adjustment, i.e. the cost of the operating and maintaining of the plant in the given period for which the Price



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Adjustment is to be calculated; excluding cost of material supplied or services rendered at fixed prices by the Purchaser and the cost of extra items for which rates have been worked out based on market rates and as agreed mutually.

F Fixed component will not be subject to any adjustment under this formula or otherwise.

The component and corresponding value of coefficients applicable for price adjustment is given in the table below.

Component	Symbol	Value of Coefficient	Source of Indices
Fixed Portion	F	0.15	----
Manufacture of other chemical products (M)	m	0.30	Wholesale price index with Base 2011-12=100 as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
Labour	l _{ss}	0.55	Minimum wages in Rupees issued by office of Chief Labour Commissioner, Ministry of Labours & Employment as applicable on the last date of the month previous to the one under consideration. semiskilled labour) (Where in subscript "ss" denotes the semiskilled labour). Kaiga-5&6, Site is coming under Area-C, as per Government Notification dated 19/01/2017

Description	Value
M₀ Material Indices Value of Manufacture of other chemical products for the month of September, 2023	M₀ = 134.1
L_{ss0} Labour Indices Value of Labour for the month of September, 2023	L_{ss0} = (will be issued later)



Price Adjustment shall be calculated for every billing month. Along with the monthly bill, the Contractor shall submit to Engineer-in-charge a written notice indicating new values of the indices of material and labour components, if any, and their effective dates along with authenticated documentary evidence. The PURCHASER shall make payments after verification of the values of such indices notified by the CONTRACTOR.

Subscript:

‘0’ - refers to the indices as prevailing on the seventh day prior to due date of submission of Bid (both Part-I and Part – II) i.e. **September, 2023**. The Contractor shall submit authentic copies within 30 days of issue of Purchase Order.

‘1’-refers to the values of corresponding Labour/Material indices as applicable for the month just preceding the month of Operation & Maintenance contract for which invoice is submitted.

1.3.7 The Contractor shall furnish the authentic copies of the base indices value (For Subscript “0”) duly stamped and signed in ink pertaining for Supply, E&C, Civil and O&M work within 30 days from the date of Purchase Order.

1.3.8 The Contractor shall furnish authentic copies of indices duly stamped and signed in ink pertaining to applicable end dates along with invoices for arriving at adjusted Price for Supply, E&C, Civil and O&M work.

2.0 STATUTORY LEVIES:

2.1 GOODS AND SERVICES TAX (GST):

2.1.1 The prices stipulated in the Section-A of Purchase order for Supply, Erection & Commissioning and Civil Work Portion are inclusive of Goods and Services Tax (GST) and any other Indian Indirect Taxes payable in India. The current applicable rate of GST, as quoted, is 18%.

2.1.2 The contractor shall submit a certificate as per format **Annexure-F** (Format for ‘Certificate towards Goods and Services Tax & TDS’) along with their Invoice.

2.1.3 The Contractor shall bear all non-Indian and Indian taxes, duties, levies etc. payable up to Purchaser’s Project Site in respect of sourcing items from abroad.

2.1.4 Contractor's GSTIN are **36AAECM7627A1ZO and 29AAECM7627A1ZJ**.



- 2.1.5 Contractor shall be responsible for payment of all Indian Taxes, Duties including IGST on imports and all other statutory levies as applicable in connection with supply of the Stores. The **DPU - Delivered at Place unloaded as per Incoterms 2020** price shall be inclusive of all Taxes, Duties and other Statutory levies payable under the law of the Land.
- 2.1.6 GST as applicable on price adjustment as per terms and conditions of contract will be reimbursed by the Purchaser.
- 2.1.7 In case, there is no increase in GST rate within Contractual Delivery Date, GST as applicable or quoted, whichever is lower will be reimbursed by Purchaser limiting to the rate prevailing within the Contractual Delivery Schedule.
- 2.1.8 In case of increase in existing taxes/ duties and /or introduction of any other new indirect taxes / cess, if levied by Government during the contractual delivery period, the incremental rate of existing taxes/levies and/or any other new indirect tax/cess, shall be reimbursed / paid by the Purchaser upon verification of the documentary evidence submitted and its acceptance by the purchaser. The payment/reimbursement of statutory variations in the rates of tax and/or of new tax, duty or levy imposed under statute or law in India as above would be restricted only to direct transactions between the Owner and the Contractor. This provision shall not apply to changes in Personal Income tax or Corporate Income tax or to changes in non-Indian Taxes.
- 2.1.9 For extension in the contractual delivery period for the reasons attributable to the Purchaser and/or Force Majeure, increase in existing taxes & duties, if any, and new tax component introduced in the extended period shall be reimbursed to the Contractor subject to submission of necessary documentary evidence. No increase / new tax shall be payable during the delay period due to reasons attributable to the Contractor.
- 2.1.10 If there is an upward revision in the rate of GST within CDD due to change in classification by the Contractor, such upward revision shall not be entertained as per clause no 2.1.8 & 2.1.9 and the payment towards GST will be restricted to the quoted rate of GST.
- 2.1.11 GST on Liquidated Damages (LD), if applicable, shall be to the account of the Contractor and shall be recovered from payments due to the Contractor.
- 2.1.12 The provisions of The Central Goods and Services Tax Act 2017(CGST), The Integrated Goods and Services Tax Act 2017(IGST), The relevant SGST act of the State Government, The Union Territories Goods and Services Tax Act 2017(UTGST) and The Goods and Services Compensation to States Tax Act 2017 and their Rules as being enacted and amended from time to time are



applicable to this Contract. Accordingly, the Contractor shall pass on all input tax credits and the exemptions available therein to the Purchaser.

- 2.1.13 In case of all materials identified by the Contractor and Purchaser to be dispatched directly from the sub-vendor's work to Purchaser's site, the Contractor shall ensure that his sub-vendors raise Tax invoices as per the provisions of GST Law, "Billed to the Contractor and Shipped" to the Purchaser's site. The Contractor shall further ensure that he raises his corresponding Tax Invoices in the name of Purchaser during transit of the materials before the delivery of materials is taken by Purchaser.
- 2.1.14 The implications of GST on return of goods will be as per the provisions of the relevant GST Laws.
- 2.1.15 While claiming the GST, the Contractor is required to adhere to the provisions available therein. The Contractors are required to ensure that, the details of GST charged in the Invoice and other details are filled in the GST Returns within the due date as notified by the GST Council, and also certify the same in **Annexure-F** (Format for 'Certificate towards Goods and Services Tax & TDS') only upon which reimbursement of GST would be considered.
- 2.1.16 Please note that in case of any refund/credit to GST if granted to Contractor by GST Authorities in respect of stores supplied under the contract, Contractor will pass on the credit to the Purchaser immediately along with a certificate from Contractor's Director/Manager/ Proprietor/Accountant that the credit so passed on relates to the GST originally paid for the stores supplied under the contract.
- 2.1.17 When GST is claimed by the Contractor / supplier in general the certificate as per **Annexure-F** (Format for 'Certificate towards Goods and Services Tax & TDS') should be submitted to the paying authority with their invoices.
- 2.1.18 GST on Price Adjustment amounts if any, is reimbursable by the Purchaser. Reimbursement of GST shall be regulated in accordance with the above clauses and Price Adjustment amount shall be regulated in accordance with the above Clause No. 1.3 (Price Adjustment)
- 2.1.19 In case any additional ITC benefit is granted to the Contractor by GST authorities after bid submission, the same shall be immediately passed on to the Purchaser and such value shall be indicated in the respective **Annexure-F** (Format for 'Certificate towards Goods and Services Tax & TDS') submitted along with the invoice for supply of Stores.



- 2.1.20 The Purchaser shall, at the time of its payments due to the Contractor, withhold the necessary tax at source at such rate if required under the legislation unless and to the extent that the Contractor shall produce to the Purchaser any certificate issued by a Government Authority (having authority to issue such certificate) entitling the Contractor to receive the payments under the Contract for a prescribed period without deduction of any tax or deduction at a lower rate.
- 2.1.21 In case of such deductions as mentioned above, the Purchaser shall provide the necessary withholding tax certificates to the Contractor within the time stipulated by the relevant law to enable the Contractor to file the same with the Government Authority as a proof of payment of such taxes.
- 2.1.22 The Purchaser shall not be liable to pay any increase in GST that has come into force after expiry of the contractual delivery period if the delivery is delayed beyond the contractual delivery period for reasons attributable to the Contractor.

2.2 DIRECT TAXES – TAX DEDUCTION AT SOURCE:

- 2.2.1. The Purchaser shall have the right to withhold taxes on income, excess profits, royalty and other taxes from payments due to Contractor under this Contract to the extent that such withholding may be required by the government of India or any relevant authority thereof or by the government of any other country, and payment by the Purchaser to the respective governmental office of the amount of money so withheld will relieve the Purchaser from any further obligation to Contractor with respect to the amount so withheld.
- 2.2.2. The Purchaser shall, at the time of their payments due to the Contractor, withhold the necessary taxes at such rate as is required by any Government Authority, unless and to the extent that the Contractor shall produce to the Purchaser any certificate issued by a Government Authority (having authority to issue such certificate) entitling the Contractor to receive the payments under the Contract for a prescribed period without deduction of any tax or deduction at a lower rate.
- 2.2.3 The Purchaser shall provide the necessary withholding tax certificates to the Contractor within the time stipulated by the relevant law to enable the Contractor to file the same with the Government Authority as a proof of payment of such taxes.
- 2.2.4 All taxes levied on Contractor's corporate income or profits shall be for the account of Contractor and shall not be reimbursed by the Purchaser. Contractor



shall also be responsible for payment of income taxes of its personnel levied in India or elsewhere.

2.2.5 The Contractor's Permanent Account No. (PAN) is AAECM7627A.

2.3 Building and Other Construction Workers Act, 1996:

The Contractor shall get themselves registered from the Registering Office under Section-7 of the "Building and Other Construction Workers Act, 1996" and rules made thereto by the concerned State Govt. and submit certificate of Registration issued from the Registering Officer of the concerned State Govt. (Labour Dept.). As per this Act, the contractor shall be levied a cess @1% of cost of construction work and same is included in Contract price.

The Methodology of implementation of Building and Other Construction Workers Act, 1996 will be as per practices being followed by Kaiga Site.

3.0 SITE WORK:

3.1 Civil work, Erection, Testing and Commissioning, Performance testing, Handover of the facility shall be carried out at Kaiga Atomic Power Project-5&6 (Kaiga-5&6) Kaiga Site, Via-Karwar, Dist.- Uttar Kannada, Karnataka-581400.

3.2 The Contractor shall prepare and submit all erection schedules, procedures, drawings, quality assurance plan, quality plans as specified in the tender specification for approval to:

Chief Construction Engineer

Kaiga Atomic Power Project-5&6 (Kaiga-5&6) Kaiga Site, Via-Karwar, Dist.- Uttar Kannada, Karnataka-581400.

With a copy to: **Associate Director/General Manager (C&MM)**, Directorate of Contracts & Materials Management, Nuclear Power Corporation of India Limited, Nabhikiya Urja Bhavan, Block No. E-0, Anushaktinagar, Mumbai – 400094, Maharashtra.

Documents and/or procedures approved by the Purchaser's Engineer shall form part of this contract.

3.3 All works covered under this purchase order shall be subject to overall supervision of Chief Construction Engineer, Kaiga-5&6 or his authorized representative, as contained in GCC/EPC-3/Rev.4 and Special Conditions of Contract stipulated in the tender document.



3.4 All correspondences of Technical nature related to Site shall also be addressed to the designated official in clause no. 3.2 above.

3.5 The contractor shall complete the entire package as per the schedule given in the Purchase Order.

3.6 Program of Performance:

3.6.1 Purchaser have provided contractual milestone dates, drawing released schedule, date for issue of FIM.

3.6.2 Contractor shall prepare detailed Master Control Network (MCN) based on inputs provided in tender document to include progress of various procurement activities and site work. MCN shall have provision to monitor progress of the entire package, module, sub module and individual PO.

3.6.3 MCN can be prepared using Primavera, MS Project or any other project monitoring software having web-based monitoring capability. Updated MCN shall be submitted to Purchaser for approval within 28 days from the placement of PO. MCN shall be updated on monthly basis and submitted to Purchaser.

3.6.4 Any change in critical path shall be immediately communicated to Purchaser and request for updating MCN shall be submitted to Purchaser. The request for updating of MCN because of change in critical path shall be first approved by functional Director of contractor and then submitted to Purchaser for approval.

3.7 Departmental Water Supply Charges:

3.7.1 Purchaser shall identify and show the location of drawing water from the reservoir for construction and commissioning purposes. The Contractor shall make his own arrangement to establish water supply by deploying necessary pumps, pumping station, distribution network, storage, etc., for lifting water from the reservoir and further pumping to their place of work, necessary treatment if any for specific consumption, distribution and storage of water and shall be done by the Contractor. The system shall be maintained by the Contractor throughout the currency of construction period.

3.7.2 No charges shall be levied for the water drawn and consumed. Royalty or other statutory taxes if any imposed at a later stage shall be reimbursed by purchaser on documentary proof of same.



3.7.3 In case the contractor is found wasting the water, penalty of Rs.500/- on each occasion for first two occasions and subsequently Rs.1000/- on every occasion shall be recovered from contractor's bill as and when noticed by water supply group. GST shall be extra as applicable.

3.7.4 Only one tapping for drawing construction water shall be provided by Purchaser at pre-defined location at site. However, the contractor has to make his own arrangement to receive & distribute the water and shall lay water supply lines to the construction site. Change in location shall be done by Purchaser on chargeable basis. In case, adequate quantity of construction water is not supplied by Purchaser or in emergency situations, the contractor shall make his own arrangement to draw water from the primary source at his own cost.

3.8 Construction Power supply:

3.8.1 The construction power supply shall be provided generally at following five locations:

1. Contractor's facility area
2. Main plant area nearest to work premises of the Contractor
3. Labour colony,
4. At batching plant/Quarry area,
5. At the plant area on opposite 2 ends.

as per the requirement furnished by the Contractor from the LT or HT feeders according to the load at chargeable basis at the rate of Rs.5.00 per Kwh.

3.8.2 Following are additional conditions for Construction Power supply: -

a) Minimum Billing: Minimum charges @ 45 Kwh per month shall be recovered in case monthly consumption is less than minimum chargeable units.

b) Power factor clause: -

i. The power factor clause is applicable to Contractors having connected load more than 25 HP or 18.65 KW. The power factor shall be maintained by the consumer @ 0.9. In case of failure in maintaining the same, surcharge @ 1% of energy charges for every 0.01 fall in average power factor.

ii. The contractors/ consumers having electricity connection more than 25 HP or 18.65 KW shall install suitable power factor improving device and a trivecto - meter for calculation of P.P. with M.D. in case contractor fails



to provide trivecto - meter. Purchaser will consider P.P. at their connection as 0.6.

- c) The Contractor irrespective of connected load must have following minimum Electrical protection for Over current, Earth fault and short circuit on their panel
- d) Contractor have to provide soft starters for motor loads 100 KW and above.
- e) The Contractor shall follow AERB safety guide /site procedures
- f) No power supply shall be extended to the labour camp by Purchaser. Contractor shall make his own arrangement for providing power supply to their labour camp.

3.8.3 Other Special Conditions Governing Power Supply:

1. The Purchaser shall meter the supply of power to the contractor at his panel. For this purpose, the contractor shall be liable to install and maintain a tested and certified and duly approved by the site Engineer, a tri-vector type energy meter, with MDI facility, integrator type power factor meter and integrator type maximum demand meter at his own cost. Current transformer of 15VA burden and 0.5 class accuracy and suitable ratio shall also be installed and maintained by the contractor.
2. The meter shall be calibrated by contractor in every 1 (one) year at standard laboratory of State Government or Purchaser approved laboratories or NABL accredited Lab. All the expenses for meter calibration shall be borne by the contractor.
3. The Engineer-in-Charge, or his representative at his own discretion can ask for calibration of the installed meters or replacement of electricity meter, if required. All the expenditures incurred due to calibration/replacement of meter shall be borne by the contractor.
4. It would be responsibility of contractor to ensure safety of the meter and to ensure that meter is not tampered with. In case it is found that meter has been tampered with or not working, a penalty of Rs. 1000/- (GST shall be extra as applicable) shall be imposed on every occasion and the charges will be recovered on the basis of average consumption for the preceding 6 (six) months. In the cases, where the period of six months is not available, the maximum consumption of preceding months shall be considered for consumption/recovery charges. The contractor will be required to take immediate action for replacement/repair of the defective energy meter



within eight (08) days from date of noticing the defect.

5. Contractor shall be required to lay his own power distribution network, using underground cables in a neat and tidy manner for distribution of construction power supply up to the area of use from Purchaser substations. The routes of cables arrangements shall be approved by Engineer-in-Charge, or his representative.
6. The estimated requirement already submitted in their bid for electrical power for execution of the works in terms of maximum kVA demand. Contractor shall make his own arrangement for any additional requirement. However, the same may be provided by Purchaser at same terms and conditions subject to availability at the time of execution.
7. For uninterrupted execution of site works during power shutdown/system breakdown periods, the contractor at his own cost shall arrange power through alternate sources. No claim of any kind in the form of hindrance in work and any other sort of financial loss etc shall be entertained on account of interruption of construction power supply. Contractor shall make his own sufficient backup power supply arrangements to ensure that work should not suffer due to non-availability of required power supply.
8. The construction load shall not be less than 75% of the estimated load and the contractor shall have the option to make changes in the connected load only after approval of EIC.

For the purpose of calculating minimum BHP condition, loads connected at various points will be taken into consideration.

9. It shall be the responsibility of the contractor to provide and maintain a complete installation on the load side of the supply with due regard to safety requirements at site. All cabling and lighting installations shall be subject to the approval of the Engineer-in-Charge and Safety Engineer shall comply in all respects to the appropriate statutory requirements given in the following:
 - i. Indian Electricity Act, 1910 (as amended)
 - ii. Electricity supply Act, 1948 (as amended)
 - iii. Indian Electricity Rules, 1956 (as amended)
 - iv. Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulation-2010.
 - v. For the purpose of scrutiny, the contractor shall provide full specifications of the equipment and the layout drawing. Approval of the 'Engineer-in-Charge' does not automatically absolve the contractor from complying with any or all other conditions laid down



in the relevant guidelines.

- vi. The power supply will also be regulated as per the terms and conditions of the State Electricity Board.
10. The contractor shall maintain a power factor at not less than 0.9 by installation, if necessary, at his own cost, suitable corrective devices. The contractor's failure in this regard within a period as stipulated by the Engineer-in-Charge may entail installation of the necessary power factor corrective devices by the Engineer-in-Charge at the contractor's risk and cost.
11. Purchaser will not be liable for any loss or damage to the contractor's equipment as a result of variations in voltage or frequency or interruptions in power supply. Purchaser will also not be liable for any loss to the contractor arising from stoppage of work or any delay consequent upon failure, interruption or failure of power supply or variation of voltage and frequency.
12. Recoveries for the power supplied for construction purposes at Plant Site shall be made from the running account bills of the contractor.
13. The contractor is not entitled for resale of the power supply provided to him by Purchaser for construction purpose.
14. After completion of the works, the contractor shall at his own cost promptly dismantle the distribution and other facilities erected by him.
15. Contractor shall arrange to install diesel generator at his own cost if uninterrupted power supply is required for his works.

3.8.4 Domestic power supply & Lighting:

Contractor shall be required to make his own arrangement for power supply for his residential area.

3.8.5 Lighting facility for construction site:

Adequate lighting facility in line of Rule – 11 of Atomic Energy (Factories) Rules 1996 for buildings and outside area such as flood light, hand lights and area lighting shall be provided by the contractor at his own cost at the site of construction, at the storage area of his materials and equipment and at temporary access roads within the working area. The contractor shall obtain the approval of the Engineer-in-Charge for the lighting arrangement prior to installation.



3.8.6 Engagement of Staff and Labour:

Contractor must have a programme for training of his manpower to perform the activities affecting quality, which shall form part of Contractor's QA manual. All the personnel undergoing training shall have the basic education, qualification and relevant experience and proficiency required for carrying out specific jobs.

All personnel involved in inspection and for NDT shall have knowledge of the requirements of the items, equipment, systems and of the applicable specifications, procedures and industrial safety requirements. Where required by codes, standards, specifications or other specific requirements, Personnel performing activities affecting quality shall obtain necessary qualification/certification and/ or re-certification/re-qualification.

3.9 Housekeeping:

Housekeeping is very essential to provide safe working area for construction personnel and for movement of the machineries. In order to achieve this objective; a two-part housekeeping policy is adopted at Kaiga 5&6. As first part Contractor has to maintain certain housekeeping practices for his own works. In addition to this, for up keeping of overall plant area and areas where multiple agencies work simultaneously, different package Contractors shall be responsible maintaining general housekeeping in the allocated specific area to them.

3.10 Penalty against Industrial accident within Purchaser's Premises:

Any accident within Purchaser premises involving workforce shall attract deduction of a predetermined amount as a penalty from the contractor's running bills as given in **Annexure-6: Penalty for Contractors** (GST shall be extra as applicable):

Penalty shall be recovered based on certification by Purchaser surgeon

3.11 Other Penalty:

Following Penalty shall be deducted from the contractor's running bills as given below (GST shall be extra as applicable):

- i. Penalty against loss of RFID cards: In case of loss/ non-returning of RFID Cards a penalty of Rs.500/- (Rupees Five Hundred Only) per card shall be levied and recovered.



- ii. The contractor has to provide free transport facility to his workmen from his labour camp to work place. In case if contract worker is found traveling in departmental transport without proper pass / authorization, then penalty of Rs. 800/- will be imposed for every instance

3.12 Training:

Training needs for Purchaser personnel described in the various technical specifications shall be binding on the contractor. All the expenses towards training programmes held shall be borne by the contractor. However, travelling expenses, boarding and lodging for Purchaser personnel imparted training shall be borne by Purchaser.

3.13 Medical facilities:

Medical facilities for the contractor's manpower at Purchaser hospital shall be provided only for emergency cases on chargeable basis as per prevailing rate at NPCIL KGS hospital depending on availability of such facilities with Purchaser.

3.14 Labour colony:

Limited area for establishing labour colony beyond EZ (Exclusion Zone) will be provided to Contractor on chargeable basis and the charges shall be at the rate of Rs1/- per hectare per year on each stretch of area provided. The Contractor shall visit the site and assess the extent and suitability of the area. At the same time the Contractor are requested to identify the labour camp by themselves for any additional land requirement.

3.15 Dress Code and Use of Clean Overalls:

Contractor shall have dress code and should provide proper uniform to his staff and workers including sub contractor's staff and workers. The colour of the uniform shall be cleared from Purchaser site. The Contractor shall ensure that his workmen are always in the uniform during their presence in plant premises. workers shall wear reflective jacket as uniform. The workers engaged in clean room conditions; hot work shall wear protective clothing. The personnel working in clean shops/ area should wear clean dress.

- 3.16 Project site is a restricted and secured area. The contractor shall abide by all security rules and regulations made applicable from time to time with respect to movement of manpower, vehicles and materials in the project site. Entry pass for manpower and vehicles and entry/exit records for materials duly endorsed



by the Engineer-in-charge or his authorized person shall be obtained by the contractor from time to time.

4.0 SUBMISSION OF DRAWINGS / PROCEDURES / DOCUMENTS:

- 4.1 The contractor shall prepare and submit all drawings, documents, Quality Assurance Plans etc. as specified in the tender specification for approval to:

Addl. Chief Engineer (Procurement)

Nuclear Power Corporation of India Limited,
Nabhikiya Urja Bhavan,
Anushaktinagar, Mumbai – 400094,
Maharashtra.

Documents and/or procedures approved by the Purchaser's Engineer shall form part of this contract.

- 4.2 All correspondence of technical nature shall also be addressed to the designated official in Clause No. 4.1 above.

5.0 QUALITY SURVEILLANCE:

- 5.1 It is the responsibility of the Contractor to ensure compliance with the quality assurance requirement stipulated in the Tender document during Supply, erection, testing, commissioning and Civil works. For this purpose, Contractor shall have appropriate quality assurance organisation and have personnel with requisite qualification to carry out inspection /quality surveillance for the entire work carried out at site.

- 5.2 All Supply covered under this purchase order shall be subject to Quality Surveillance by **Executive Director (QA) or his authorised representative.**

Erection, Commissioning and Civil work at site will be subject to Quality Surveillance by the Purchaser's authorised representatives, for which the Contractor shall contact: -

Chief Engineer (Quality Assurance)

Kaiga Atomic Power Project-5&6 (Kaiga-5&6),
Kaiga Site, PO: Kaiga: Via-Karwar,
Dist.- Uttar Kannada, Karnataka-581400.

The Contractor shall provide all required assistance for this purpose. Purchaser reserves the right to carryout auditing of the activities of the contractor/subcontractors at their works/premises.



- 5.3 Where the consignments are despatched / delivered after clearance by the Purchaser Quality Surveillance Engineer/ his authorised representative / inspection agency, a copy of the Shipping Release issued by him shall, invariably, be enclosed along with the delivery challan and other shipping documents (LR, RR etc.), accompanying the consignment.
- 5.4 The equipment / stores shall be despatched only after the same are cleared by the Purchaser/his representative nominated for this purpose & shipping release as per the prescribed format is obtained in writing.
- 5.5 Contact details of Executive Director (QA): **Phone №: 022-63995030 & Email ID: edqa@npcil.co.in**
- 5.6 Purchaser reserves the right to carry out audit of the activities of the Contractor/Subcontractor at their works/premises.
- 5.7 Any changes to the approved QA plans by the Purchaser shall be mutually discussed and agreed upon.

6.0 CONTRACTUAL DELIVERY SCHEDULE:

- 6.1 The contractor shall complete the entire scope of Supply, Erection & Commissioning, Civil and O&M work and handing over of the complete facilities covered under this Purchase Order within the period mentioned below.

Project/ Unit	Contractual Delivery Period (in months) from the date of placement of PO	Contractual Delivery Date (CDD):
Kaiga-5	Within 66 months from the date of PO	on or before <u>22nd October, 2030</u>
Kaiga-6	Within 72 months from the date of PO	on or before <u>22nd April, 2031</u>

- 6.2 Contractual Milestone dates for each Sub-Module are indicated in **Annexure- DP: Contractual Milestones** and shall be strictly met by the contractor.
- 6.3 Date of completion of the facilities stipulated in the contract shall be the essence of the Contract and facilities must be completed by the dates specified therein.
- 6.4 In case the Contractor fails to apply and secure extension of contractual delivery schedule, before operational acceptance/handing over the facilities, acceptance of facility by the Purchaser in no way prejudice the right of the



Purchaser to levy liquidated damages for delays nor will it entitle contractor for payment of additional statutory levies that comes into force after expiry of contractual delivery schedule.

- 6.5 In case of delay in the completion of the events compared to the specified time schedule, for any reason whatsoever the Contractor shall inform the Purchaser in order to secure extension of the said contractual delivery date.

Further to the above, in case of delay in achieving the Operational Acceptance/handling over of the facilities as per specified time schedule (as may have been extended during project execution) hereinafter defined as the Contractual Delivery Date or "CDD", for reason attributable to the Contractor, the acceptance of the Facilities shall in no way prejudice the right of the Purchaser to levy liquidated damages along with taxes and duties for delays in accordance with **Clause 20** under this Section nor will it entitle Contractor for payment of additional statutory levies that comes into force after the expiry of the specified time schedule.

7.0 DEFECT LIABILITY PERIOD:

7.1 For Items / Equipment / System:

Defect liability period shall be 18 months from the date of completion of facilities (satisfactory erection and pre-commissioning) or 12 months from the date of Operational Acceptance of Facilities (Commissioning), whichever occurs first, for each reactor unit.

7.2 For Spares / Tools / Tackles / Accessories:

The defect liability period shall be 18 months from the date of receipt of items (last consignment) at site or 12 months from the date of acceptance, whichever occurs first.

8.0 LATENT DEFECTS LIABILITY:

At the end of Defects Liability Period, the Contractor's liability ceases except for latent defects. The Contractor's liability for latent defects warranty for the plant and equipment including spares shall be limited to a period of five (5) years from the end of Defects Liability Period.

The Contractor shall submit a Bank Guarantee/Insurance Surety Bond for 1.0 % of the purchase order value covering the total scope of work under **Purchase Order NO. CMM/FTP/09-30-1-1255/PO/0047** in the form of a bank guarantee/ Insurance Surety Bond towards Latent Defects at the end of



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Defect liability period and it shall be valid for a period of 5 years from the date of successful completion of the defect liability period.

9.0 PERFORMANCE SECURITY BOND:

- 9.1 The Contractor shall furnish single Performance Security Bond (PSB), as detailed below, for **3 (Three) %** of total value of contract covering the total scope of work i.e., Supply, Erection, Commissioning and Civil work portion under **Purchase Order NO. CMM/FTP/09-30-1-1255/PO/0047** for due performance of the Purchase Order and performance of the Facility(s), in the form of Bank Guarantee/Insurance Surety Bond. Bank Guarantee shall be from scheduled commercial bank (except co-operative bank) as per prescribed format, within 30 days from the date of issue of this purchase order and it shall be valid till satisfactory completion of defect liability period covering warranty/guarantee of the equipment/Facilities supplied by the contractor and its sub-contractor plus claim period of three months, for lodging of claims, if any.

Item Description	Value of Performance Security Bond (in INR)	Valid up to
Nuclear Island Mega EPC Package (NIMEP) for Kaiga-5&6 Project.	₹ 383,60,80,758/- (Rupees Three Hundred Eighty Three Crore Sixty Lakh Eighty Thousand Seven Hundred Fifty Eight only)	<u>22nd October, 2032</u> Plus Three Months Grace Period

- 9.2 In the event, the Contractor fails to fulfil the obligations under the Contract, the Purchaser shall have the right to encash and appropriate the Performance Security Bond bank guarantees /Insurance Surety bond. This right shall be in addition to and without prejudice to the rights of the Purchaser to recover from the Contractor any loss or damages that the Purchaser is herein entitled.
- 9.3 In addition to be encashable for failure of the Contractor to fulfil his Contractual obligations covered by the Performance Security Bond bank guarantees /Insurance Surety bond, this Bank Guarantee shall also be encashable for the purpose of recovery of LD, if any, pursuant to SCC clause no 87 Delay in Supply of the Tender.
- 9.4 PSB Bank Guarantee/Insurance Surety bond shall be released on successful completion of defect liability period including extension thereof, and submission of Module wise additional Bank Guarantees if any, and submission



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of Bank Guarantee/ Insurance Surety Bond for Latent Defect Security as per clause no. 8.0 of this Contract.

- 9.5 In the event of change in Purchase Order price due to quantity variation, the value of the Performance Security Bond bank guarantees /Insurance Surety bond shall remain unaltered for upto +/- 15% change in Purchase Order price. Beyond this change in Purchase Order price by +/- 15%, PSB value shall be revised taking into account the revised Purchase Order value.

9.6 BG FOR O&M WORK MODULE-3:

Bank Guarantee of 3% of O&M Contract value as towards security deposit shall be submitted separately within 30 days from the date of issue of specific instructions from the Engineer-In-Charge regarding commencement of O&M contract. The **Performance Security Bond (PSB) for Sub Module 4** shall be released to the contractor only after satisfying the related terms and conditions and submission of BG for O&M work.

This Security Deposit BG shall be extended from time to time, as required, till the completion of O&M Contract.

10.0 PACKING & TRANSPORTATION:

- 10.1 The Items covered under this Purchase Order shall be packed as per the procedure indicated in Tender Specification.
- 10.2 The items shall be packed securely to avoid any damage to the consignment in handling and transit. The packing and marking shall be done at the expenses of the contractor.
- 10.3 The Stores shall be despatched to the Consignee / Place of Delivery through a reputed transport contractor without any transshipment en-route.

11.0 CONSIGNEE / PLACE OF DELIVERY:

- 11.1 All items covered under this purchase order shall be despatched to consignee on Delivered at Place Unloaded (DPU), Kaiga Atomic Power Project – 5&6, PO: Kaiga: via Karwar, Distt, Uttar Kannada, Karnataka, Site, INCOTERM-2020 basis, **GSTIN- 29AAACN3154F1ZM** without any transshipment enroute to:

Manager (Materials),

Kaiga Atomic Power Project-5&6, (Kaiga-5&6),

PO: Kaiga: via-Karwar, Distt-Uttar Kannada, Karnataka-581400

Phone-08382-253556.



11.2 The Contractor shall be responsible for generation of e-way bill and maintaining its validity till the goods are delivered to the Consignee as per terms and conditions of Purchase Order.

12.0 UNLOADING AND STORAGE AT SITE:

12.1 Unloading at site shall be done by the contractor at his own cost. However, contractor shall intimate the consignee the following details by fax in advance:

- (i) Carrier's Name
- (ii) Truck No.
- (iii) Lorry Receipt No. and date.
- (iv) Approx. time of arrival of truck at site.
- (v) No. of packages and dimensions and weight of each package etc.

12.2 The Contractor shall arrange loading/unloading, handling, site transportation for materials covered under this Purchase Order and also shall arrange suitable storage of the items at Site at his cost. Further, the responsibility for care and custody thereof together with the risk of loss or damage thereto shall remain with the Contractor until completion of facilities and handing over. Till that time the responsibility for care and custody thereof together with the risk of loss or damage thereto is transferred to Purchaser, such liability shall remain with the Contractor, without prejudice to the obligations of the Contractor related to defect liability.

12.3 The Contractor shall take all necessary precautions against any loss, deterioration or destruction of the materials from whatever cause arising whilst the said materials remain in their possession and or their custody or control. They shall also not mix up the materials in question with any of their goods and shall render true and proper account of the material actually used and return the balance remaining on hand unused along with the usable off-cuts, if any, within a period of one month from the date of completion of facilities covered by this Purchase Order, unless stated otherwise specifically in the tender specifications or in this purchase order. The decision of the Executive Director, Contracts & Materials Management Group, NPCIL, Mumbai as to whether the Contractor have occasioned any loss, deterioration or destruction of the materials whilst in their possession, custody or control from whatever cause arising as also the decision regarding quantum of the damages suffered by the Purchaser shall be final and binding upon the Contractor.



13.0 TERMS OF PAYMENT:

13.1 Terms of payment for Supply of Items & Materials and spares excluding testing charges:

13.1.1 10% of DPU Prices of sub module excluding GST on pro-rata basis as interest bearing advance against submission of following documents to paying authority:

- a) Invoice of the Contractor.
- b) Advance Bank Guarantee/Insurance Surety Bond towards advance payment for equivalent amount valid till the Completion of contract plus a claim period of three months.
- c) Copy of the Bank Guarantee/ Insurance Surety Bond already submitted towards performance security Bond
- d) Copy of the already submitted unconditional order acceptance.
- e) Certificate from Engineer In-charge (EIC) or his authorized representative indicating completion of all the activities mentioned in related to supply mentioned in **Annexure-2** (List of Activities required to be completed for release of 10% advance payment for supply portion to contractor) against each sub module.

Note: 10% advance payment shall be made separately for individual sub-module

13.1.2 90% of DPU Prices after adjusting amounts already paid as Advance and accrued interest along with 100% of Price Adjustment, if any, along with 100% Taxes & Duties, as applicable, on receipt of items at site on pro-rata basis against submission of following documents to paying authority:

- a) GST Invoice with **Annexure-F** (Format for 'Certificate towards Goods and Services Tax & TDS').
- b) A Certificate from Engineer In-charge (EIC) or his authorized representative against physical verification of items as per packing list / delivery challan indicating that all documentation regarding receipt and acceptance formalities are completed and payment can be released to the contractor.
- c) Authentic copies of Indices pertaining to applicable end dates along with each dispatch wise Tax Invoice for arriving at adjusted DPU price.

Note: Contractor shall submit documentary proof for import of item in support of claim for FE variation.



13.1.3 5.0% of DPU price will be released on handing over of the sub module to the Purchaser and issue of Acceptance Certificate for each sub module as per the format in **Annexure-K** (Operational Acceptance Certificate for Sub-Module) by the Purchaser against submission of following documents to paying authority:

- a) Invoice of the Contractor.
- b) A Certificate from Engineer In-charge (EIC) or his authorized representative as per **Annexure-K** (Operational Acceptance Certificate for Sub-Module) format for successful handing over of sub-module to the Purchaser and also stating that payment can be released to the contractor.

13.1.4 3.0% of DPU price will be released on handing over of the facilities to the Purchaser and issue of Operational Acceptance certificate as per the format in **Annexure-J** (Operational Acceptance Certificate) by the Purchaser against submission of following documents to paying authority:

- a) Invoice of the Contractor.
- b) A Certificate from Engineer In-charge (EIC) or his authorized representative as per **Annexure-J** (Operational Acceptance Certificate) format for successful handing over of the facilities to the Purchaser and also stating that payment can be released to the contractor.

13.1.5 2.0 % of DPU price will be released on completion of Material Accounting of overall package for each reactor unit against submission of following documents to paying authority:

- a) Invoice of the Contractor.
- b) A Certificate from Engineer In-charge (EIC) or his authorized representative for completion of Material Accounting of overall package for each reactor unit and also stating that payment can be released to the contractor.

Note:

i) Above payment at clause No. 13.1.3, 13.1.4 and 13.1.5 will be released separately for each reactor unit wise.

ii) In the event of delay in attaining the events pertaining to above sub-clause 13.1.3 and 13.1.4 above for reasons attributable to the Purchaser, the corresponding payments can be released to the Contractor on expiry of contractual milestones /Original CDD against Retention Bank Guarantee/Insurance Surety Bond. The Retention bank Guarantee shall be as per format given in **Annexure-C** (Format for Retention bank Guarantee), initially valid for 6 months and subsequently extendable till completion of the corresponding events. In addition to be encashable for failure of the Contractor to fulfil his Contractual obligations covered by the Retention



Bank Guarantee/Insurance Surety Bond, this Bank Guarantee/ Insurance surety Bond shall also be encashable for the purpose of recovery of LD, if any, as per terms and conditions of the Contract.

13.2 Testing/ Analysis Charges:

13.2.1 100% of Testing/Analysis charges along with 100% taxes & Duties as applicable shall be paid on pro-rata basis on successful completion of corresponding Testing/Analysis, submission of report thereof and acceptance of the same by the Purchaser on submission of following documents to paying authority:

- a) GST Invoice with **Annexure-F** (Format for 'Certificate towards Goods and Services Tax & TDS')
- a) A Certificate from Engineer In-charge (EIC) or his authorized representative for successful completion of corresponding Testing/Analysis, and acceptance of the same and payment can be released to the contractor.

Note: Above clause is applicable only for items where testing and analysis charges are separately indicated in Purchase Order.

13.3 Terms of payment for Erection and Commissioning:

13.3.1 5 % of Erection and Commissioning (E&C) Portion price of overall contract including applicable GST, as interest bearing advance shall be released against submission of following documents to paying authority:

- a) GST Invoice with **Annexure-F** (Format for 'Certificate towards Goods and Services Tax & TDS')
- b) Equivalent Bank Guarantee/Insurance Surety Bond.
- c) Copy of Performance Security Bond.
- d) Copy of Unconditional order acceptance.
- e) Certificate from Engineer In-charge (EIC) Or his authorized representative indicating completion of the activities against advance payment mentioned as below:

Activities to be completed for releasing 5 % advance for payment against erection works:

1.	Office building of adequate capacity for staff with required facilities of sitting
2.	Document storage, drawing/drafting, computers etc
3.	Closed, Semi-closed and open storage facilities.
4.	General fabrication shops for GI ducts, Carbon steel piping and structural works with required facilities.
5.	Compressed air cleaning and chemical cleaning facilities.
6.	Water storage of adequate capacity.



7.	Access roads to various facilities.
8.	Radiography dark room and source pit.
9.	Deployment of plant machinery including crane/hydra, trailer, welding machine,
10.	Hole punching machine, drilling machine etc. to start of works as per schedule.
11.	Deployment of Construction manager, safety head and head QA.
12.	Any other facilities as per approved mobilization plan.

Note: Above advances against erection works shall be release for whole package.

13.3.2 5 % of Erection and Commissioning (E&C) Portion price of overall contract price including applicable GST, as an interest-bearing advance shall be released against site mobilization on submission of following documents to paying authority:

- GST Invoice with **Annexure-F** (Format for 'Certificate towards Goods and Services Tax & TDS')
- Equivalent Bank Guarantee/Insurance Surety Bond in prescribed format.
- Copy of Performance Security Bond
- Copy of Unconditional order acceptance.
- Certificate from Engineer In-charge (EIC) or his authorized representative indicating completion of the activities mentioned against advance payment mentioned as below:

1.	Clean workshops for PHT feeder fabrication & mock-up.
2.	Clean workshops for Stainless steel fabrication work.
3.	Pickling shop with required acid, base and neutral baths of adequate size, heating and handling facilities.
4.	Detergent wash cleaning facility.
5.	Demineralized water plant of adequate capacity for cleaning, washing and testing requirements.
6.	Valve and damper testing facility.
7.	Enclosed Grit blasting and painting shops.
8.	Deployment of other manpower like qualified QA and Safety personnel, experience engineers and supervisors and workmen as per agreed schedule.
9.	Other balance facilities as per approved mobilization plan.
10.	Establishment of RCA shop including supply of Coolant Channel installation tools, measuring instruments, installation of RCA shop EOT crane, Lath machines, air compressors, induction heaters & air motor with expanders etc and commissioning & Testing of Lathe machines & load testing of EOT crane.
11.	Procurement, supply, fabrication and erection of End shield ball filling shed, Calandria storage shed and storage shed for reactor components.
12.	Submission of all installation procedures and NDT procedures required for installation of reactor components.



- | | |
|-----|--|
| 13. | Supply and load testing of all lifting tools/tackles, slings, bow shackles, D-shackles, chain pulley blocks etc. required for handling of End shields, Calandria, FM bridge & column and CV Top hatch beams. |
|-----|--|

Note: Above advances against erection works shall be released for whole package.

13.3.3 90% of Erection and Commissioning (E&C) Portion price including applicable GST after adjusting amounts already paid as advance and accrued interest along with 100% of Price Adjustment, if any, on pro-rata basis shall be released against satisfactory completion of Identified milestone and/or approved Billing Schedule/PO for completion of erection and commissioning services and on submission of following documents to paying authority:

- GST Invoice with **Annexure-F** (Format for 'Certificate towards Goods and Services Tax & TDS')
- Certificate from Engineer In-charge, or his authorized representative stating that contractor has satisfactory completed activities as per Identified milestone and/or approved Billing Schedule/PO approved billing schedule and payment as above can be released to the contractor.
- Authentic copies of indices pertaining to applicable end dates

13.3.4 5 % of Erection and Commissioning (E&C) Portion price of the sub module including applicable GST shall be released on handing over of the respective sub module to the Purchaser and issue of Acceptance Certificate for each sub module as per the format in **Annexure-K** (Operational Acceptance Certificate for Sub-Module) by the Purchaser on submission of following documents to paying authority:

- GST Invoice with **Annexure-F** (Format for 'Certificate towards Goods and Services Tax & TDS')
- Certificate from Engineer In-charge or his authorized representative as per **Annexure-K** (Operational Acceptance Certificate for Sub-Module) successful handing over of sub module to the purchaser and also stating payment can be released to the contractor.

13.3.5 3 % of Erection and Commissioning (E&C) Portion price for each reactor unit including applicable GST shall be released on handing over of the facilities to the Purchaser and issue of Operational Acceptance certificate as per the format in **Annexure-J** (Operational Acceptance Certificate) by the Purchaser on submission of following documents to Paying authority:

- GST Invoice with **Annexure-F** (Format for 'Certificate towards Goods and Services Tax & TDS')



- b) Certificate from Engineer In-charge, or his authorized representative for handing over of the facilities to the Purchaser and also stating payment can be released to the contractor.

13.3.6 2 % of Erection and Commissioning (E&C) Portion price for each reactor unit including applicable GST shall be released on completion of Material Accounting of overall package for each reactor unit on submission of following documents to Paying authority:

- a) GST Invoice with **Annexure-F** (Format for 'Certificate towards Goods and Services Tax & TDS')
b) Certificate from Engineer In-charge, or his authorized representative for successful Material Accounting completion of overall package for each reactor unit and also stating payment can be released to the contractor.

Note: Above payment 13.3.4, 13.3.5 and 13.3.6 will be released separately for each reactor unit wise.

13.4 Terms of payment and mobilization advances for all works of Module M1 and Civil Works of other Modules:

Note: Mobilization Advance is as indicated in 13.4.1, 13.4.2 & 13.4.3 below:

13.4.1 5 % of civil works price of Sub-Module as interest bearing advance including applicable Taxes and Duties as Mobilization Advance shall be released against submission of following documents to Paying authority:

- a) GST Invoice with **Annexure-F** (Format for 'Certificate towards Goods and Services Tax & TDS')
b) Equivalent Bank Guarantee/Insurance Surety Bond.
c) Copy of Performance Security Bond.
d) Copy of Unconditional order acceptance.
e) Certificate from Engineer In-charge, or his authorized representative indicating completion of all the activities related to civil works mentioned in **Annexure-4** (Activities for releasing Advance for Civil Work) against each sub module and also stating that payment as above can be released.

13.4.2 5% of civil works price of Sub-Module as interest bearing advance including applicable Taxes and Duties as Mobilization Advance shall be released against submission of following documents to Paying authority:

- a) GST Invoice with **Annexure-F** (Format for 'Certificate towards Goods and Services Tax & TDS')
b) Equivalent Bank Guarantee/Insurance Surety Bond.



- c) Certificate from Engineer In-charge, or his authorized representative indicating completion of all the activities related to civil works mentioned in **Annexure-4** (Activities for releasing Advance for Civil Work) against each sub module and also stating that payment as above can be released.

13.4.3 Maximum 5 % of civil works of Sub-Module as interest bearing advance including applicable Taxes and Duties against purchase of New Plant and Equipment.

An Advance of 90% of the purchase price of New Plant and Equipment acquired for the work and brought to site, against production of following documents to Paying authority:

- a) GST Invoice with **Annexure-F** (Format for 'Certificate towards Goods and Services Tax & TDS')
- b) Hypothecation deed for new plant and equipment in favour of Purchaser.
- c) A certificate from Engineer In-charge, or his authorized representative stating that mobilization advance applied for this new plant and equipment are not in excess of requirement and price thereof considered are reasonable, and also stating that the payment as above can be released.

Note: *Advance indicated in 13.4.1, 13.4.2 & 13.4.3 shall be based on actual work done and on Pro-rata basis;*

13.4.4 93% of civil works including applicable Taxes and Duties, shall be released after deducting amounts already paid as advance and accrued interest thereon, along with 100% of price adjustment, if any, on pro-rata basis against satisfactory completion of identified milestone and/or actual measurement based on approved Billing Schedule/SOQR and monthly running account bills certified by Engineer In-charge, or his authorized representative against submission of following documents to Paying authority:

- a) GST Invoice with **Annexure-F** (Format for 'Certificate towards Goods and Services Tax & TDS')
- b) Authentic copies of indices pertaining to applicable end dates.
- c) A certificate from Engineer In-charge, or his authorized representative stating for satisfactory completion of identified milestone and/or actual measurement based on approved Billing Schedule/SOQR and monthly running account bills, and also stating that the payment as above can be released.

13.4.5 2 % of civil works price including applicable Taxes and Duties shall be released on handing over of the sub module to the Purchaser and issue of Acceptance Certificate for each sub module as per the format in **Annexure-K** (Operational Acceptance Certificate for Sub-Module) by the Purchaser against submission of following documents to Paying authority:



- a) GST Invoice with **Annexure-F** (Format for 'Certificate towards Goods and Services Tax & TDS')
- b) A certificate from Engineer In-charge, or his authorized representative as per **Annexure-K** (Operational Acceptance Certificate for Sub-Module) for successful handing over of the sub module to the Purchaser and also stating that the payment as above can be released.

13.4.6 5 % of civil works including applicable Taxes and Duties, shall be released on handing over of the facilities to the Purchaser and issue of Operational Acceptance certificate as per the format in **Annexure-J** (Operational Acceptance Certificate) by the Purchaser against submission of following documents to Paying authority:

- a) GST Invoice with **Annexure-F** (Format for 'Certificate towards Goods and Services Tax & TDS')
- b) A certificate from Engineer In-charge, or his authorized representative as per **Annexure-J** (Operational Acceptance Certificate) for successful handing over of the facilities to the Purchaser and also stating that the payment as above can be released.

13.4.7 For **MODULE M1 Sub Module S4**, NPCIL has the right to execute the additional activity/work to the extent of 5% of the total cost quoted by the bidder under each building at No extra cost.

Note:

- i. Above payment 13.4.5 and 13.4.6 will be released separately for each reactor unit wise.
- ii. In the event of delay in attaining the events pertaining to 13.4.5 and 13.4.6 above for reasons attributable to the Purchaser, the corresponding payments can be released to the Contractor on expiry of contractual milestones /Original CDD against Retention Bank Guarantee/Insurance Surety Bond as per format given in **Annexure-C** (Format for Retention bank Guarantee), initially valid for 6 months and subsequently extendable till completion of the corresponding events. In addition to be encashable for failure of the Contractor to fulfil his Contractual obligations covered by the Retention Bank Guarantee, this Bank Guarantee/ Insurance surety Bond shall also be encashable for the purpose of recovery of LD, if any, as per terms and conditions of the Contract.
- iii. Purchaser shall release 75% of eligible Running Account (RA) bills / due stage payment within 10 working days of submission of bills subject to receipt of invoice and supporting documents in acceptable form.
- iv. Balance payment will be released within 30 working days subject to receipt of invoice and supporting documents in acceptable form.



13.5 PAYMENT TERMS FOR O&M PORTION OF THE CONTRACT UNDER MODULE-3

Payment towards O&M charges will be released along with applicable GST and Price Adjustment as applicable on monthly Basis after completion of Operation and Maintenance for a particular month and on submission of following documents:

- 1) Unconditional order acceptance (For the first month only)
- 2) Invoice in triplicate along with advanced stamped receipt.
- 3) A valid Security Deposit Bank Guarantee.
- 4) Copy of insurance policy/ Certificate of Insurance.
- 5) Authentic copies of indices pertaining to applicable end dates for arriving at price component due to price adjustment.
- 6) A Certificate issued by the Chief Construction Engineer / Chief Superintendent Kaiga-5&6 or his authorized representative stating that the contractor has satisfactorily completed Operation and Maintenance of System and monthly payment can be released.

For Price Adjustment, if indices for a particular month are not yet published, the payment for price adjustment can be claimed separately later.

13.6 TERMS OF PAYMENT for Commissioning spares under Module M5 S1:

Commissioning spares to be supplied as listed in Section E3 and as described in Section C-2-1 of the tender.

After system transfer / handing over to O&M group of KAIGA-5&6, these commissioning spares in functional condition for customized items and leftover of bought out items shall be handed over to the purchaser at Site. Payment of commissioning spares shall be made after receipt, acceptance and against certification by Engineer in Charge (EIC).

14.0 ESCROW ACCOUNT:

Payment of advance against clause No. 13.1.1, 13.3.1, 13.3.2, 13.4.1 and 13.4.2 shall be paid through **ESCROW ACCOUNT**. **ESCROW ACCOUNT AGREEMENT** shall be executed between contractor, Purchaser & authorities of ESCROW Bank after award of contract.

15.0 RATE OF INTEREST FOR INTEREST BEARING ADVANCES:

- 15.1 Advances given by Purchaser shall be interest bearing. The rate of interest applicable on the advance payment shall be weighted average cost of capital



per annum for NPCIL plus 1.0 %. The rate shall be revised from time to time by NPCIL.

The weighted average cost of capital for the financial year shall be declared/informed by Purchaser and the same shall be applicable for that particular Financial Year.

16.0 MODE OF PAYMENT:

16.1 All payments shall be made by Direct bank to bank wire transfer as per the terms of payment against submission of necessary documents.

16.2 To facilitate payment Contractor shall submit their bank details duly authenticated by the concerned bank on or before submission of first Tax Invoice/bill. Subsequently, in case of any changes/revision these details shall again need to be duly authenticated by respective bank.

17.0 PAYING AUTHORITY:

17.1 All Tax Invoices/bills shall be raised on "bill to ship to" basis. The billing address and shipping address shall be "Consignee" with Consignee's GST No. However, all Tax Invoices/bills and other documents for payment shall be submitted to paying authority as indicated below: -

Manager (F&A)

Kaiga Atomic Power Project-5&6, (Kaiga-5&6)

PO: Kaiga: via-Karwar, Distt-Uttar Kannada, **Karnataka-581400.**

18.0 SUBMISSION OF BANK GUARANTEES:

18.1 All bank guarantees strictly in conformity with the formats enclosed herewith shall be got executed from Schedule Commercial Bank in India (except Co-operative Bank) and shall be governed by Indian Laws and subject to jurisdiction of Courts in Mumbai, India.

18.2 All Bank Guarantees shall be submitted directly by the concerned bank under their seal and cover for acceptance to:

Sr. Manager (C&MM),

FTP Section, Directorate of Contracts & Materials Management,

Nuclear Power Corporation of India Limited,

Nabhikiya Urja Bhavan, Block D-0,

Anushaktinagar, **Mumbai-400094.**



18.3 The value of the bank guarantees submitted towards security of advance payments as per Contract may be reduced once in six months to the extent of receipt of items/materials or completion of identified milestones as per billing schedule for erection & commissioning and Civil portion, as the case may be, by the Purchaser and the advance amount adjusted against such receipts / milestone completion.

19.0 SUBMISSION OF INSURANCE POLICIES FOR CIVIL, ERECTION AND COMMISSIONING PORTION:

19.1 The initial Insurance Policies (except Automobile Liability Insurance Policies which shall be accepted and maintained at Site) as per **clause no 22.0** (Insurance Cover for Civil and Erection & Commissioning Portion) and sub-clauses shall be obtained before starting of the dispatch of Stores / Equipment and / or deployment of any of Contractor's employee at Site and same shall be furnished for acceptance to: -

Sr. Manager (C&MM),

FTP Section, Directorate of Contracts & Materials Management,
Nuclear Power Corporation of India Limited,
Nabhikiya Urja Bhavan, Block D-0,
Anushaktinagar, Mumbai-400094.

With a copy to **Chief Construction Engineer**, Kaiga Atomic Power Project-5&6 (Kaiga-5&6) Kaiga Site, Via-Karwar, Dist.- Uttar Kannada, Karnataka-581400.

19.2 The initial accepted Insurance Policies will be forwarded by C&MM, Mumbai to site for further maintaining, validating and extending time to time as per the contract terms & condition. For all the payment terms as per Clause no. 13.0 of this Purchase Order, Chief Construction Engineer, Kaiga-5&6 or his authorized representative shall ensure validity, extension and appropriate risk covered etc. of Insurance Policy / Certificate of Insurance as per Clause No. 22.0 (Insurance Cover for Civil and Erection & Commissioning Portion) before releasing each payment.

19.3 The Insurance Policies shall be maintained, validated and extended from time to time as per contract terms & conditions and shall be submitted to **Chief Construction Engineer**, Kaiga Atomic Power Project-5&6 (Kaiga-5&6) Kaiga Site, Via-Karwar, Dist.- Uttar Kannada, Karnataka-581400.



20.0 LIQUIDATED DAMAGES (LD):

20.1 Should the Contractor fail to handover the facilities or any part thereof Pursuant to GCC sub-clause 6.1.1 within the CDD prescribed for the same, it shall be construed as a breach of the Contract and the Purchaser shall be entitled at his option to the following:

a) To receive the facilities after prescribed CDD with the right to recover from the Contractor agreed Liquidated Damages (LD) @ 0.25% of the total value of Purchase Order per week or part thereof subject to maximum of 5% of total value of Purchase Order.

Note:

- i. The value of Purchase Order for the purpose of Levy of LD shall be the revised value of Purchase Order after adjustment of Price variation implication
- ii. The liquidated damages shall also be applicable on price adjustment value along with contract value.
- iii. The liquidated damages shall be applicable on reactor unit wise.

b) To terminate the contract in full or in parts as per GCC sub-clause no. 21.5 (Cancellation / Termination of Contract in Full or Part).

20.2 For the contracts where within CDD, Contractual Milestone date(s) of despatch are also specified for some/all stores, such stores shall be despatched to Purchaser's site on or before such Contractual Milestone Date(s), failing which Liquidated Damages shall be levied at the rate applicable as per Clause 20.1(a) above considering corresponding Contractual Milestone Date as Delivery Period for such purpose, on the value of such stores and upto a maximum 5% of value of stores that are delayed with reference to corresponding Contractual Milestone Date.

20.3 For the contracts where within CDD, Contractual Milestone date(s) of intermediate completion are also specified for some/all parts of the facilities, such intermediate completion of facilities shall be achieved on or before such Contractual Milestone Date(s), failing which Liquidated Damages shall be levied at the rate applicable as per Clause No. 20.1 (a) above considering corresponding Contractual Milestone Date as Delivery Period for such purpose, on the value of such facilities and upto a maximum 5% of value of facilities that are delayed with reference to corresponding Contractual Milestone Date.

20.4 In the event of completion and handing over the facilities (or a part for which a separate time for handing over is specified in the Contract) by the contractor within the Contractual Delivery Date specified in the Contract, the amount



levied as LD pursuant to Clause No. 20.2 and 20.3 above shall be refunded to the Contractor.

- 20.5 In the event of delay in completion and handing over of the Facilities and levy of LD pursuant to Clause No.20.1(a), the Total amount levied as LD pursuant to Clause No. 20.1(a), 20.2 and 20.3 shall not exceed the maximum of 5% of total Contract value.
- 20.6 GST on Liquidated Damages (LD), if applicable, shall be to the account of the Contractor and shall be recovered from payments due to the Contractor.
- 20.7 However, the payment of liquidated damages shall not in any way relieve the Contractor from any of its obligations to complete the Facilities or from any other obligations and liabilities of the Contractor under the Contract.

21.0 INSURANCE COVER FOR ITEMS UNDER SUPPLY PORTION:

- 21.1 The Contractor shall take out and maintain in effect the following Insurance based on reinstatement value during the performance of the contract and the Purchaser shall be named as co-insured under all insurance policies. All Insurer's rights of subrogation against co-insured shall be waived. Deductibles / excesses if any, under the insurance policies shall be borne by the Contractor.

21.1.1 Cargo Insurance during Transport:

During Marine transit (Sea/Air) and Inland transportation, covering loss or damage as per ICC – clause – 'A' with War / Strike-Riot-Civil Commotions (SRCC) provisions, for full replacement value of the consignment/cargo from the Contractor's or Sub-contractor's works or Stores until arrival at project site. Purchaser shall be named as "Loss Payee" in this Policy.

- 21.2 Unless otherwise stated, insurances under this sub-clause shall cover all physical loss / damage and third-party liability subject only to minimum compulsory / general exclusions.
- 21.3 Alterations to the terms of insurance shall not be made without the approval of the Purchaser.
- 21.4 The required insurance coverage referred to and set forth in this clause shall in no way affect or limit Contractor's liability with respect to performance of the work or any obligation under the contract / law.



22.0 INSURANCE COVER FOR CIVIL AND ERECTION & COMMISSIONING PORTION:

22.1 The Contractor shall take out and maintain in effect the following Insurance for Kaiga-5&6 based on reinstatement value during the performance of the contract and the Purchaser shall be named as co-insured under all insurance policies. All Insurer's rights of subrogation against co-insured shall be waived. Deductibles / excesses if any, under the insurance policies shall be borne by the Contractor.

In the Insurance Policies mentioned below except for Third Party Liability Insurance and Automobile insurance, the purchaser shall be named as LOSS PAYEE in this Insurance Policy.

Unless otherwise stated, insurances under this sub-clause shall cover all physical loss / damage and third-party liability subject only to minimum compulsory / general exclusions.

Alterations to the terms of insurance shall not be made without the approval of the Purchaser.

The required insurance coverage referred to and set forth in this clause shall in no way affect or limit Contractor's liability with respect to performance of the work or any obligation under the contract / law.

22.1.1 STORAGE-CUM- ERECTION INSURANCE / CONTRACTOR'S ALL RISK INSURANCE POLICY:

22.1.1.1 Insurance should cover physical loss or damage to the facilities at site against All Risks including Terrorism occurring prior to the completion and handing over of facilities.

22.1.2 THIRD PARTY LIABILITY INSURANCE:

Covering bodily injury or death suffered by Third parties and loss or damage to the property occurring in connection with the supply and installation of the facilities.

22.1.3 INSURANCE FOR CONTRACTOR'S PERSONNEL:

The Contractor shall effect and maintain insurance against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed at site by the Contractor or any other of the Contractor's Personnel.



In accordance with the applicable statutory requirement, the Contractor should take Employee's Compensation Insurance for his Employee. The phrase **"Purchaser's interest is protected"** shall be endorsed in the Policy.

22.1.4 AUTOMOBILE LIABILITY INSURANCE:

Contractor shall maintain automobile liability insurance covering all owned, non-owned and hired automobiles, trucks and other vehicles used by Contractor or its sub-Contractors in connection with the execution of contract.

22.1.5 ADDITIONAL INSURANCE:

Any other insurance that may become applicable during execution of the contract shall be arranged by the Contractor at his own cost.

23.0 FREE ISSUE MATERIALS (FIMs):

23.1 Free Issue Materials (FIM) as indicated in **Annexure-3 (a) (Details of Free issue Material to be issued from Kaiga-5&6 Site) and Annexure-3 (b) (Details of Free issue Material to be issued from TVS, Mumbai)** will be issued by the Purchaser. The FIM shall be issued progressively by Purchaser as per the stages of Construction Schedule.

23.2 Free Issue Materials will be issued by the Purchaser only upon submission of Insurance Policies as per **clause no. 25.0** (Insurance Policy for Free Issue Materials) and Indemnity Bond as per **clause no.24.0** (Indemnity for Free Issue Materials) by Contractor and acceptance of the same by Purchaser.

23.3 For collection of FIMs, Contractor has to send an intimation to **Manager (Materials)**, Kaiga Atomic Power Project-5&6, (Kaiga-5&6) PO: Kaiga: via- Karwar, Distt-Uttar Kannada, Karnataka-581400 Phone-08382-253556 / **Manager (Material)**, Directorate of Contracts & Materials Management, Nuclear Power Corporation of India Limited, Trombay Village Stores, Mumbai-400088_Phone-022- 63994732 as mentioned in **Annexure-3 (Details of Free issue Material)** well in advance before scheduled collection of FIM. Upon receipt of confirmation from **Manager (Material)** of Kaiga-5&6, Project/ **Manager (Material)** of Trombay Village Stores, Mumbai, the Contractor shall collect, FIMs as indicated in **Annexure-3 (Details of Free issue Material)** "as is where is" conditions at their own cost from Kaiga-5&6, Project/Trombay Village Stores, Mumbai.

23.4 The value of Free Issue Materials issued by the Purchaser is indicated in **Annexure-3 (Details of Free issue Material)**.



- 23.5 The Contractor should carry out inspection/test of all the Free Issue Materials at the time of collection from Purchaser's stores and shortage/discrepancies, if any, shall be intimated to the Purchaser.
- 23.6 The Contractor shall ensure that all FIMs are received at their place in good condition. On receiving of FIMs at Contractor's works, a report shall be sent to Purchaser. The Contractor shall note that due to misplacement / loss of any FIM, if other FIM becomes non-usable for the job same shall also be replaced by the Contractor at their own cost.
- 23.7 All the FIMs shall be properly stored so as to avoid any deterioration / damage at Contractor's place. The Contractor shall be responsible for any deterioration / damage / loss of FIMs due to any reason at their works and will have to bear all the costs of material replacement if required. The Contractor shall not attempt any rework / rectification on damaged material without written approval from Purchaser.
- 23.8 The utilization of the FIMs shall be reported to Purchaser for accounting as soon as the item(s) is/are used in fabrication with correlating reports / records of fabrication certified by NPCIL QS. Accounting of the FIMs shall be done as per the contract. The records / documents like material issue vouchers, dispatch notes shall be retained and traceable.

24.0 INDEMNITY FOR FREE ISSUE MATERIALS:

- 24.1 The Contractor shall indemnify the Purchaser and keep the Purchaser indemnified to the extent of full value of Free Issue Materials till such time the entire contract is executed and proper account for the Free Issue Materials is rendered. **The Contractor shall furnish Indemnity Bond as per format enclosed along with Insurance Policy as mentioned at Clause No. 23.2**
- 24.2 The contractor shall be responsible for the safety of the Free Issue Materials after their receipt by Contractor and all through the period during which the materials will remain in Contractor's possession. They shall take all necessary precautions against any loss, deterioration or destruction of the Free Issue Materials from whatever cause arising whilst the said materials remain in their possession and or their custody or control. They shall also not mix up the materials in question with any of their goods and shall render true and proper account of the material and return the same within a period of one month from the date of delivery of the items covered by this purchase order. The decision of the Executive Director, Directorate of Contracts & Materials Management, Nuclear Power Corporation of India Limited, Mumbai as to whether the contractors have occasioned any loss, deterioration or destruction of the Free Issue Materials whilst in their possession, custody or control from whatever



cause arising as also the decision regarding quantum of the damages suffered by the Purchaser shall be final and binding upon the Contractor.

25.0 INSURANCE POLICY FOR FREE ISSUE MATERIALS:

25.1 The Free Issue Materials issued to the Contractor by the Purchaser shall be covered by the Insurance Policy to be taken by the Contractor at his own cost for the full value as mentioned in **Annexure-3 (b)** (Details of Free issue Material to be issued from TVS, Mumbai).

The Insurance Policy shall cover the following specifically:

INSURED : **M/s. Megha Engineering and Infrastructures Ltd.,**
S-2, Technocrat Industrial Estate,
Balanagar, **Hyderabad-500 037,**
Telangana, INDIA.

BENEFICIARY : **Nuclear Power Corporation of India Limited,**
acting through Executive Director,
Directorate of Contracts & Materials Management,
Nuclear Power Corporation of India Ltd.,
A-'0' Block, Ground Floor,
Nabhikiya Urja Bhavan,
Anushaktinagar, **Mumbai – 400 094, INDIA.**

DESCRIPTION OF ITEMS:

VALUE :

VALIDITY :

PURCHASE ORDER NO. :

RISKS TO BE COVERED : Any loss or damage to the Purchaser's material due to fire, theft, riot, burglary, strike etc., and any damages arising out of external sources such as damages due to the materials falling on Purchaser's materials.

25.2 Contractor shall take FIM Insurance Policies as below:

a) For Items covered under **Annexure-3 (a)** (Details of Free issue Material to be issued from Kaiga-5&6 Site) to be issued from Kaiga-5&6 for Storage and Erection & Commissioning:



The Contractor shall arrange to cover these FIM items under the Insurance Policy “Storage –cum Erection Insurance Policy / Contractor’s All Risk Insurance Policy” (refer clause no. 22.1.1)

- b) For Items covered under **Annexure-3 (b)** (Details of Free issue Material to be issued from TVS, Mumbai) to be issued from TVS Mumbai for Fabrication work, Storage and Erection & Commissioning:

The Contractor will arrange Transit Insurance till the material is delivered at Kaiga Site.

The Contractor shall also ensure separate seamless Insurance Coverage of this FIM during further fabrication works at Contractor’s /Sub-Contractor’s Premises till delivery at Kaiga-5&6 Site.

Further, the Contractor shall also arrange to cover these FIM under the Insurance Policy “Storage –cum Erection Insurance Policy / Contractor’s All Risk Insurance Policy” (refer clause no. 22.1.1).

The Contractor shall submit Material Accounting as per **Annexure- L: (Free issue Material accounting)**

26.0 SETTLEMENT OF FREE ISSUE MATERIALS:

- 26.1 The Material Accounting shall be carried out as per Clause No. 15.5 of GCC/EPC-3/Rev.4 for Erection and Commissioning. The Contractor shall account for all the material either supplied/procured by the Contractor or issued as NPCIL supplied items for Erection purpose/on chargeable basis by the Purchaser.

27.0 CERTIFICATE REGARDING FREE ISSUE MATERIAL:

- 27.1 Till the Purchase Order is completed and Free Issue Materials accounting is finalised, at the end of every financial year (i.e., during March), Contractor shall furnish a certificate stating that the Free Issue Materials issued against this Purchase Order is held/available with them.

28.0 SUB-CONTRACT:

- 28.1 The Contractor shall not sub contract any or all of the work without written consent of the Purchaser. The Contractor shall be solely responsible to the Purchaser for all work including that of the sub-contractor, if allowed by the Purchaser.



- 28.2 For the critical equipment/items, approved sub-contractor/ vendor list is separately provided in Annexure-2 of Section-C Notes of the tender. Contractor shall source these equipment/items from the above list of sub-contractors/vendors only. No change of Sub-Contractor/vendor shall be allowed from the list provided by Purchaser for the critical equipment/items.
- 28.3 For the Items excluding as given in Annexure-2 of Section-C Notes of the tender the Suggested list of Sub-vendors/Sub-contractors is given in Annexure-1 of Section C Notes of the tender.
- 28.4 The contractor shall evaluate the sub-contractor/ sub-vendor from the list of approved sub-contractor/ sub-vendor as per the Contractor's in-house procedure and submit the evaluation report to Purchaser for acceptance before placement of Sub-Order.
- 28.5 List of Approved Sub-contractor/vendors shall be strictly adhered to for procurement of goods/services.
- 28.6 However, during execution of contract under very special and extra-ordinary circumstances, Contractor may request Purchaser for change of subcontractors indicated in Section C Notes Annexure-1 of the tender giving sufficient reasons and submit their credentials along with contractor's recommendation to the Purchaser for approval, in sufficient time so as not to impede the progress of work on the Facilities.
- 28.7 Approval by the Purchaser for any of the Sub-contractors/vendors shall not relieve the Contractor from any of their obligations, duties or responsibilities under the Contract.
- 28.8 The Contractor shall further note that post award of Contract they will not be entitled to any time extension or monetary claims on account of Purchaser's approval of additional sub-contractors/vendors proposed by the Contractor, development of new vendors or availability of single Sub-contractor/vendor or limited sub-contractor/vendor for any specific items.
- 28.9 The Contractor shall select and employ its Subcontractors for such major items from those listed in the lists referred to in GCC sub-clause 3.6.2.
- 28.10 All payment to the sub-contractors shall be made by the Contractor.
- 28.11 Employment of Piece Rate workers shall not be deemed as sub-contracting.
- 28.12 In the event the Contractor violates the condition for obtaining consent under **clause 28.1 above**, the Purchaser shall become entitled, in its discretion, to rescind that part of the Contract in respect of which such violation has taken



place, by giving 30 days notice to the Contractor. However, the Purchaser may in the alternative, scrutinise such Sub-Contract or the Agreement entered into between the Contractor and the Sub-Contractor, and either, ratify such sub-contract/ agreement subject to any conditions or stipulations imposed by the Purchaser in that regard, or afford time to the Contractor to rectify/ remedy his breach.

- 28.13 It will be the duty of the Contractor to make good any defects in the work of the Sub-Contractor or finish any incomplete work at his own cost, and/or to compensate the Purchaser for any damage done by the Sub-Contractor to the Property or Project of the Purchaser.
- 28.14 Contractor shall not sub contract more than 49 % of Total Contract value of jobs to another single sub-contractor. However total cost of multiple sub-contracting may be more than 49% of Total Contract value.
- 28.15 Joint venture is allowed as a sub-vendor after fulfilling conditions as above.

29.0 CONFIDENTIALITY CLAUSE:

- 29.1 The purchase order shall be governed by Confidentiality clause no. 1.10 of General Conditions of Contract, i.e. GCC/EPC-3/Rev.4.
- 29.2 The design, drawings, specifications and other details furnished to the Contractor by the Purchaser towards manufacture of equipment are to be treated as secret and shall not be divulged to any third party. The Contractor, therefore, bind himself, his successor, his executors, administrators, employees and the permitted assignees or such other persons, agents directly or indirectly concerned with the works / supply to the secret nature of design, drawings, specifications etc.

30.0 GOVERNING LAW AND SETTLEMENT OF DISPUTE

- 30.1 The Contract shall be governed by the law of India.
- 30.2 Settlement of dispute shall be governed as per Clause no.22 of GCC/EPC-3/Rev.4.
- 30.3 A Dispute Resolution Board (DRB) will be set up for timely settlement of any dispute arising in this contract. The Standard Operating Procedure (SOP) regarding formation of DRB is given in **Annexure-5** of SCC-Part 1: Special Conditions of Contract-Common.



31.0 PROGRESS REPORTING

- 31.1 Contractor shall submit the format of weekly and monthly progress report immediately after placement of PO and get it approved from Project Manager. Progress report shall be submitted through V-DOC in soft format only.
- 31.2 Monthly Progress report shall contain but not limited to (a) Executive summary and major highlight of activity (b) Progress of activity performed (c) Percentage completion achieved compared with the planned percentage completion for each activity (d) if any activity is behind the program, giving comments and likely consequences and stating the corrective action being taken (e) Activity planned for next progress report period. (f) Financial and physical progress of project and (g) Any hindrance for progress (h) Updated activity network in Primavera software, MS project or any other project monitoring software etc.
- 31.3 The Contractor shall also submit signed copy of the monthly Progress Report in an acceptable format to:

Addl. Chief Engineer (Procurement)

Nuclear Power Corporation of India Limited,
Nabhikiya Urja Bhavan,
Anushaktinagar, Mumbai – 400094, Maharashtra.

for monitoring the progress of the work with a copy to **Associate Director/ General Manager (C&MM), Directorate of C&MM, NPCIL**, Mumbai for information.

- 31.4 Contractor's site organization shall be headed by Project Director (PD) and the PD shall be vested with administrative & financial powers to take prompt decision in matters related to this package.
- It is also incumbent upon the Contractor that the progress of the contract is reviewed once a month with the project authorities.

Monthly Progress Review meeting shall be held between functional Director of Contractor and NPCIL. The venue of Monthly Progress review will be decided by NPCIL

Contractor shall also deploy project management team along with appropriate project management tool/ software at no extra cost to Purchaser.

31.5 HINDRANCES:

The Contractor is required to maintain Hindrance Registers module wise, as per prescribed format provided Section C Notes of the tender.



31.5.1 Two hindrance registers for each module shall be maintained as follows:

- a. Design & engineering, procurement and supply related issues in the office of the Project Manager at Purchaser's Head Office and
- b. Site work related issues including site front release & construction drawing release in the office of the EIC at site separately immediately after receipt of Purchase Order.

In the event of start of a hindrance attributed to Purchaser or Force majeure, the Contractor shall enter it in the hindrance register and get it endorsed by the representative of Purchaser.

In the event of start of a hindrance attributed to Contractor the Purchaser shall enter it in the hindrance register and get it endorsed by the representative of contractor.

Immediately after end of the hindrance, the contractor shall record the closure of the hindrance and get it endorsed by the respective Purchaser representative. Immediately upon resolution of the hindrance, the contractor shall work out the delay based on MCN and post it in the hindrance register and get it endorsed by the Project manager/ EIC/ Authorized representative of Purchaser.

Delays period shall be classified in following four categories:

- i. Delays due to reasons beyond the control of both parties
- ii. Delays attributable solely to the Purchaser
- iii. Concurrent delays
- iv. Delays solely attributable to contractor

Hindrances not having impact on the critical path as per MCN /not endorsed by the purchaser's authority shall not be considered for delay analysis and extension of time.

On occurrence of a hindrance, which the contractor feels will have an impact on the schedule of contract execution, the contractor shall immediately communicate to the Project manager/ EIC / Authorized representative of Purchaser, through a formal letter and post the hindrance with dates as per MCN and obtain the certification of happening from the Project manager/ EIC/ Authorized representative of Purchaser on the hindrance register itself.

32.0 POST ORDER CORRESPONDENCE:

32.1 All Correspondence regarding Technical matters in respect of this order shall henceforth be addressed to:



Addl. Chief Engineer (Procurement)

Nuclear Power Corporation of India Limited,
Nabhikiya Urja Bhavan,
Anushaktinagar, Mumbai – 400094,
Maharashtra.

with a copy to **Associate Director/ General Manager (C&MM)**, Directorate of Contracts & Materials Management, Nuclear Power Corporation of India Ltd., D- '0' Block, Nabhikiya Urja Bhavan, Anushakti Nagar, Mumbai-400 094.

- 32.2 All Correspondence regarding Commercial matters in respect of this order shall henceforth be addressed to:

Associate Director/ General Manager (C&MM)

Directorate of Contracts & Materials Management,
Nuclear Power Corporation of India Ltd.,
D-'0' Block, Ground Floor,
Nabhikiya Urja Bhavan, Anushakti Nagar,
Mumbai-400 094, Maharashtra.

33.0 RIGHT OF RECOURSE UNDER CIVIL LIABILITY FOR NUCLEAR DAMAGES ACT 2010 & CIVIL LIABILITY FOR NUCLEAR DAMAGES RULE 2011:

Since requirement is for PHWR, NPCIL is the system designer and technology owner, being responsible for safety design of such installations in this tender, NPCIL shall assume the role of supplier in accordance with the explanation of the term "Supplier" given in the rule 24 of the CLND Rules, 2011 and in the context of section 17(a) and (b) of the CLND Act, 2010.

34.0 MODIFICATION IN CONTRACT:

- 34.1 Modification to the contract shall be considered valid only when accepted in writing by the Purchaser by issuing an "amendment to the contract". The contract will be modified to the extent of the modification mentioned in the amendment to the contract. Any other communication between the parties, agreeing to modifications, will not be binding on them.
- 34.2 The Purchaser will not be bound by any printed conditions or provisions in the Contractor's bid forms or acknowledgement of contract, invoices, packing list and other documents which purport to impose any conditions at variance with or supplemental to contract.



35.0 TERMS AND CONDITIONS OF CONTRACT:

35.1 This Purchase Order shall be governed by the Terms & Conditions contained in the following documents, with the priority in the following sequence:

- 1) The Contract Agreement / Purchase Order
- 2) Pre-Bid Clarifications /Confirmation
- 3) Module/Sub Module Specific SCC
- 4) The Special Conditions of Contract (SCC) - Common.
- 5) The General Conditions of the contract, GCC/EPC-3/Rev.4
- 6) Data sheet.
- 7) Drawings,
- 8) Technical specifications
- 9) The Tender document, other than Sr. no. (2) to (8) above.

36.0 SECURED ADVANCE ON MATERIALS FOR CIVIL WORKS:

Secured advance on the security of materials (which are not combustible, fragile or perishable in nature) brought to the site but not yet incorporated in the works will be made up to 75 (seventy-five) per cent of invoice value, or the 75 (seventy-five) percent of the corresponding value of the materials determined on the basis of BOQ rates, whichever is less, subject to the condition that their quantities are not excessive and shall be used within a period of 90 (ninety) days and subject to other stipulations in the contract. The contractor will be required to sign an indenture bond, hypothecating the goods to the Purchaser and also be responsible for their safe custody.

Before the advance is released, the Purchaser may inspect the site to ensure that the Contractor has safeguarded the materials against pilferage and deterioration. No secured advance will be paid on materials on which the contractor has taken any loan/ limit from banks against hypothecation of the materials against which the secured advance is claimed. An undertaking in this regard may also be taken from the contractor. Generally, as per the provisions of the contracts, the contractors are required to submit proof of cost of materials and the delivery of material at site while claiming such advances. The stock register should be maintained from the commencement of the contract and, unless otherwise prescribed in the contracts, the stock, so considered for advance, should generally be only paid stock (and not brought on credit). Where the materials are supplied from a captive source of the contractor, the reasonableness of the valuation of such materials may be ensured. The advance will be repaid from each succeeding running bill (periodic/ interim payment) to the extent materials for which advance has been previously paid have been incorporated into the works. In all cases, the repayment of the advance will be affected after expiry



of a period of 120 days since payment of advance, whether the material is consumed in the work or not.

37.0 INCENTIVE CLAUSE:

The contractor shall be given an incentive at the rate of 0.1% of contract value per month for early completion, subject to and upper cap of Rs. 50 Crores. The contract value for calculating incentive shall be as per original purchase order.

The incentive shall only be applicable in case of early completion of total contract (and not any part of the contract) with respect to the original contractual delivery date (CDD).

The early completion shall be calculated with respect to original CDD and not with respect to revised CDD (irrespective of the reason of revision of CDD). Incentive shall be payable at the time of closure of contract and not intermittently.

38.0 Time Overrun:

In the event of delay in completion and handing over of the Facilities beyond CDD by the Contractor due to specific site related issues for which Purchaser is responsible like release of work front as per work programme schedule and readiness of other facilities to be provided to the Contractor by the Purchaser in accordance with the Contract, the Contractor shall be entitled to compensation for additional expenditure for extended stay at site to the extent required for such reasons in addition to extension of time as per GCC clause no. 20.1.

The amount of compensation will be arrived at through mutual consultation between the Purchaser and the Contractor following the other procedures as per GCC sub-clause no. 19.2.2 and 19.2.3. Overrun charges shall be paid for net delay attributable to NPCIL (i.e. from the total delay in Contract period, the delay attributable to NPCIL & Supplier / Contractor shall be identified individually and the delay attributable to NPCIL less delay attributable to Supplier / Contractor = net delay)


23/04/2025

विपिन कुमार त्रिवेदी, (Vipin Kumar Trivedi)
सह निदेशक (सीएमएम) Associate Director, C&MM

For and on behalf of Nuclear Power Corporation of India Limited
(The Purchaser)



SECTION-B

SECTION – B2

MODULE WISE COMMERCIAL TERMS AND CONDITIONS

SECTION – B2-I : (a) MODULE: M1 Sub Module S1

**BASIS OF PRICE, STATUTORY LEVIES, DELIVERY SCHEDULE,
TERMS OF PAYMENT ETC.**

(Construction of Main Plant Buildings)



1.0 SPECIFICATIONS TO BE FOLLOWED

This Clause supplements Clause 4.1.2 of General Conditions of Contracts (GCC/EPC-3/R-4).

The work shall be carried out strictly in accordance with the drawings and contract specifications. In the absence of any specification for any work or material, relevant Indian Standard Specifications will be applicable and where no Indian Standard Specification exists, relevant International Standard Specifications will apply. In absence of all these specifications work shall be carried out as per Manufacturer's specifications.

Further, in absence of any mention of specifications in the contract regarding work, material or workmanship, the decision of adaptability of relevant IS, BSS, American Standard Specifications or International standard, Manufacturer's specifications etc, will be entirely at the discretion of Engineer-in-charge and the same shall be binding on the Contractor.

2.0 GENERAL REQUIREMENT FOR COMMENCEMENT OF THE WORK AND SITE MOBILIZATION

This Clause supplements Clause 5.9.8 of General Conditions of Contracts. The Contractor shall mobilize site infrastructure viz. excavation equipment, plant machinery, batching plant, ice plant, plant & equipment for consolidation grouting dewatering, fabrication yards for formwork, re-steel, structural steel, embedded parts, concrete testing laboratory, geotechnical investigations, Site offices, Ware Houses, Stores, Work Shops and Personnel etc required for the satisfactory completion of the work as mentioned in tender document. Contractor shall during the contract period, augment and mobilize additional equipment, plant, machinery and labour, if found essential, at his own cost to meet the construction schedule.

The advance payment shall be against site mobilization, equivalent bank guarantee and performance security bond, shall be regulated as provided in the Contract.

For release of advance payment, the Contractor shall submit the following program for the approval of Engineer-In-Charge on award of work:

- (a) The order in which the Contractor intends to carry out the Works, including the anticipated timing of each stage or activity or milestone of design, submission of Contractor's Documents, procurement, manufacture of Plant, delivery to Site, construction, erection and testing including resource mobilization details,
- (b) Contractor's resource mobilization details stating reasonable estimate of the number of each class of Contractor's Personnel and of each type of Contractor's



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Equipment (separate categorization of available and newly to be procured for the project), required on the Site for each major stage/ activity.

Subsequent instalment to be released after ascertaining that the earlier advance has been utilized for intended purpose to the satisfaction of Engineer in Charge (EIC).

The additional mobilization advance of advance 5% against new plant and machinery shall be subject to the following conditions:

- (i) the contractor shall produce satisfactory proof of payment;
- (ii) such equipment is considered necessary by the engineer for the works;
- (iii) the equipment has been verified to have been brought to site and
- (iv) the contractor gives an undertaking on stamp paper that the equipment will work only on that job and will not be removed from the site without obtaining written approval from the engineer. No advance shall be admissible on equipment purchased under a hire purchase scheme/ financing arrangement or on hired equipment. In case of 'Machinery and Equipment advance', insurance and hypothecation to the employer should be ensured.

The repayment of advances shall be done through proportionate percentage deductions from running bill (periodic/ interim payment). Part 'Bank Guarantees' (BGs) against the mobilization advance should be taken in as many numbers as the proposed recovery instalments and should be equivalent to the amount of each instalment.

All advances shall be used by the contractor exclusively for mobilization expenditure, including the acquisition of construction related plant and equipment. Should the contractor misappropriate any portion of the advance, it shall become due and payable immediately, and no further advance will be made to the contractor thereafter. In such cases, the contractor shall also be liable for appropriate action under the contract.

3.0 MODE OF MEASUREMENT: This Clause supplements Clause 15.4 of GCC.

Mode of measurement when not specified in the tender/contract shall be in accordance with relevant Indian Standard (IS) Specifications and in case the same is not spelt out in IS, Engineer in Charge (EIC)'s decision shall be final and binding on the Contractor.

The quantities shall be paid as per approved construction drawings. However, for excavation works quantities involved in approach ramps shall not be paid & quoted rate of excavation shall be deemed to have included in the cost of approach ramps.



As per direction of Engineer in Charge (EIC), all the Approach Ramps either existing or created under the scope of this contract shall be backfilled & finished to the specified lines and grades.

4.0 RATES: This Clause supplements Clause 3.1.4 of GCC.

Unless otherwise stated in the schedule of quantities, rates for all items shall be for the complete work including supplying and fixing of all materials, labour, tools & plant, appliances, transport, water, electricity, insurance, labour cess, taxes (excluding GST) etc., contractor's supervision, overheads, profits, quality and safety requirements, firefighting arrangements, workmen amenities such as medical facility, drinking water facility and sewage systems with adequate number of bath/toilets, crèche etc complete to meet the technical and statutory requirements and any other item which is necessary for the satisfactory completion of the job.

5.0 PRICE ADJUSTMENT COMPONENTS

For Main Plant Civil works - material/ labour component to be considered for the purpose of Contract Price adjustment are mentioned as below.

ANNEXURE-M1-S1-I

SN	Description	Stipulation
1	Price Adjustment / Escalation	Yes
2	VARIOUS COMPONENTS EXPRESSED AS A PERCENTAGE OF CONTRACT VALUE of Sub Module M1-S1 .	
	Unskilled labour component (lu)	6%
	Semiskilled labour component (lss)	7%
	Skilled labour component (ls)	13%
	MATERIAL COMPONENT	
	Ordinary Portland Cement (m)	06%
	Alloy Steel wire rods (n)	26%
	Angles, Channels, Sections, Steel (Coated/not) (o)	6%
	All commodities (q)	18%
	P.O.L Component (HSD) (d)	03%
	INDEX/ PRICES FORMING BASIS FOR ESCALATION	



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SN	Description	Stipulation
	Ordinary Portland Cement (M)	Wholesale price index applicable to "Ordinary Portland Cement" as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
	M₀ Material Indices Value of Ordinary Portland Cement for the month of September, 2023	M₀ = 134.9
	Alloy Steel wire rods (N)	Wholesale price index applicable to <u>Alloy steel Wire rods</u> as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
	N₀ Material Indices Value of Alloy Steel Wire Rods for the month of September, 2023	N₀ = 140.1
	Angles, Channels, Sections, Steel (Coated/not) (O)	Wholesale price index applicable to <u>Angles, Channels, Sections, steel (coated/not)</u> as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
	O₀ Material Indices Value of Angles, Channels, Sections, Steel (Coated/not) for the month of September, 2023	O₀ = 148.2
	(P)	NA
	All commodities (Q)	Wholesale price indices applicable to " <u>All commodities</u> " as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
	Q₀ Material Indices Value of All commodities for the month of September, 2023	Q₀ = 151.8



SN	Description	Stipulation
	Labour (L)	Minimum wages in Rupees issued by office of Chief Labour Commissioner, Ministry of Labours & Employment as applicable on the last date of the month previous to the one under consideration. (Where in subscript “u”, “ss”, and “s” denotes the unskilled, semiskilled and skilled labour respectively). Kaiga-5&6, Site is coming under Area-C, as per Government Notification dated 19/01/2017
	(L_{u0} , L_{ss0} & L_{s0}) Labour Indices Value of Labour for the month of September, 2023	L_{u0} = (will be issued later) L_{ss0} = (will be issued later) L_{s0} = (will be issued later)
	P.O.L Component (HSD) (D)	Price of High-Speed Diesel (HSD) to be considered at Nearest Diesel Pump to Kaiga-5&6.
	D_0 Indices Value of P.O.L Component High-Speed Diesel (HSD) for the month of September, 2023	D_0 = (will be issued later)

6.0 PRICING THE CHANGE PROPOSAL:

The rates for altered, extra or substituted item of work shall be worked out in accordance with Clause 19.4.3 of the General condition contract (GCC/EPC-3/Rev.4). In case the rates for extra, altered or substituted item are not available in any part of Module of Schedule of quantities then the rate shall be determined based on Market rates, approved by the Engineer-in-charge.

A component of overheads and profit @ 15% will be considered for deriving market rates for extra, altered, and substituted items.

7.0 WORK PROGRAM: This Clause supplements Clause 7 of General Conditions of Contract

7.1 CONSTRUCTION PROGRAMME

The time allowed for carrying out the work shall be strictly observed by the Contractor and shall deemed to be the essence of the contract and shall be reckoned from the date indicated in the Purchase Order. All works shall be completed in accordance with the construction schedule given in **Annexure-M1-S1-II** below:



ANNEXURE –M1-S1-II

KAIGA-5&6 –Schedule of construction for various buildings/structures engineered by NPCIL (for first unit)

Sr. No.	Building/Activity Name	Activity Start month	Activity Finish month	Remarks
1	Mobilisation	0*	3	
1.1	Submission of documents by the Contractor for obtaining FPC consent and presenting/defending in AERB	0*	3	
2	Nuclear building			
2.1	Concreting of NB raft (Including Water proofing and Rock Anchors)	3	12	
2.2	Construction upto RB 100 M El soffit	12	16	
2.3	Construction of RB 100 M El slab & Release of RB 91.7 M El area	14	21	
2.4	Construction upto RB 104.5 M El soffit	18	20	
2.5	Construction of RB 104.5 M El (East) slab & Release of RB 100 M El (East) area	20	24	
2.6	Construction upto RB 109 M El soffit	21	24	
2.7	Construction of RB 109 M El (East) slab & Release of RB 100 M El (West) area and RB 104.5 M El (East) area	23	28	
2.8	Construction upto RB 115.5 M El soffit	25	27	
2.9	Construction of RB 115.5 M El slab & Release of RB 109 M El area	26	32	
2.10	Release of RB 115.5 M El slab		32	
2.11	Construction of Calandria vault base	12	14	
2.12	Construction of calandria vault walls up to 115.5 m El & Release of CV	15	27	
2.13	Construction of Steam Generator Vault	29	34	
2.14	Construction of RB 132 M El slab	32	37	
2.15	Inner Containment wall (ICW) from 91.7 M El upto 100 M El	12	20	
2.16	Inner Containment wall (ICW) from 100 M El upto 115.5 M El	20	28	
2.17	Inner Containment wall (ICW) from 115.5 M El upto bottom of ring beam	28	37	
2.18	ICW ring beam	37	40	
2.19	IC Dome	40	45	
2.20	Inner containment (prestressing, Caulking, Painting)	45	49	



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2.21	Outer Containment wall (OCW) from 91.7 m El upto 100 M El	14	25	
2.22	Outer Containment wall (OCW) from 100 M El upto 115.5 M El	25	36	
2.23	Outer Containment wall (OCW) from 115.5 M El upto bottom of ring beam	36	47	
2.24	OCW balance work upto dome	47	55	
2.25	RB proof test & ILRT		58	Contractual milestone for Unit-1
2.26	Construction of RAB upto 95 M El soffit	12	15	
2.27	Construction of RAB 95 M El slab & Release of RAB basement area	14	20	
2.28	Construction of RAB upto 100 M El soffit	17	21	
2.29	Construction of RAB 100 M El slab & Release of RAB 95M area	19	26	
2.30	Construction of RAB upto 105 M El soffit	23	26	
2.31	Construction of RAB 105 M El slab & Release of RAB 100 m El area	24	30	
2.32	Construction of RAB upto 109 M El soffit	27	30	
2.33	Construction of RAB 109 M El slab & Release of RAB 105 m El area	29	35	
2.34	Construction of RAB upto 116.5 M El soffit	32	35	
2.35	Construction of RAB 116.5 M El slab & Release of RAB 109 m El area	34	40	
2.36	Construction of SFSB	12	32	
2.37	SFSB Hydro test		33	
2.38	SFSB module fabrication, fixing and liner erection	24	43	
2.39	Completion of RAB		50	
3	Control Building			
3.1	Construction of CB raft	16	18	CB raft can be taken up only after NB-5 and NB-6 Raft
3.2	Construction of CB upto 100 M El soffit	18	22	
3.3	Construction of CB 100 M El slab and release of CB basement area	20	28	
3.4	Construction of CB upto 106 M El soffit	24	28	
3.5	Construction of CB 106 M El slab and release of CB 100 M El area	26	32	



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3.6	Construction of CB upto 111 M El soffit	28	31	
3.7	Construction of CB 111 M El slab and release of CB 106 M El area	30	36	
3.8	Construction of CB upto 116 M El soffit	31	35	
3.9	Construction of CB 116 M El slab and release of CB 111 M El area	33	39	
3.10	Construction of CB upto 122 M El soffit	36	38	
3.11	Construction of CB 122 M El slab and release of CB 116 M El area	37	42	
4	Station Auxiliary Building (SAB-B)			
4.1	Construction of raft	15	16	SAB-B raft can be taken up only after completion of RAB5-wall upto EL 94000
	Construction of below 100 M El & DG foundation	16	19	
4.2	Construction of slab at 100 M El and release of below 100 M El area	19	22	
4.3	Construction upto 106/108 M El soffit	22	25	
4.4	Construction of 106/108 M El slab & release of SAB 100 M El Area	24	29	
4.5	Construction upto 111 M El soffit	26	29	
4.6	Construction of 111 M El slab & release of SAB 106 M El Area	28	32	
4.7	Construction upto 116 M El soffit	30	32	
4.8	Construction of 116 M El slab & release of SAB 111 M El Area	31	36	
4.9	Construction up to 121 M El (including slab) and release of SAB 116 M El area	34	38	
4.10	Completion including water proofing and finishing of SABs		43	
	Station Auxiliary Building (SAB-A)			
4.11	Construction of raft	19	20	SAB-A raft can be taken up only after completion of RAB5-wall and CB wall



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				upto EL 94000
	Construction of below 100 M El & DG foundation	20	23	
4.12	Construction of slab at 100 M El and release of below 100 M El area	23	26	
4.13	Construction upto 106/108 M El soffit	26	29	
4.14	Construction of 106/108 M El slab & release of SAB 100 M El Area	28	33	
4.15	Construction upto 111 M El soffit	30	33	
4.16	Construction of 111 M El slab & release of SAB 106 M El Area	32	36	
4.17	Construction upto 116 M El soffit	34	36	
4.18	Construction of 116 M El slab & release of SAB 111 M El Area	35	40	
4.19	Construction up to 121 M El (including slab) and release of SAB 116 M El area	38	42	
4.20	Completion including water proofing and finishing of SABs		47	
5	Tunnels & Trenches			
5.1	Construction of Tunnels & trenches at station road crossings (East side and South side to be prioritised)	12	18	
5.2	Construction of Tunnels & Trenches inside OI (within 16 m wide road in Nuclear Island including tunnels between CB-TB)	18	26	
5.3	Construction of Tunnels & Trenches inside OI (beyond 16 m wide road in near FWPH, SRPH, SREH & IDCT area)	26	31	
5.4	Construction of Tunnels & Trenches outside OI (Switchyard side, near FISH and O&M building side)	31	36	
6	Station roads, hardstands and drains			
6.1	Construction of station roads, hardstands and drains along the road	12	44	
7	Fire Water Pump house			
7.1	Construction and release of FWPH	15	34	
8	Safety Related Pump House			
8.1	Construction and release of SRPH	15	35	



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9	Safety Related Electrical house			
9.1	Construction and release of SREH & SREH ANNEX	21	39	
10	Ventilation Stack, Stack Activity monitoring room & ventilation tunnel			
10.1	Construction and release of Vent. Stack and SMR	15	26	
11	Over Head Water Tank			
11.1	Completion and testing of OHWT	15	27	
12	Waste Management Plant & WMP Dyke Area			
12.1	Construction of WMP raft and upto soffit of 100 m El	18	24	WMP raft can be taken up only after completion of NB-5 & NB-6 raft
12.2	Construction of WMP 100 M El slab, WMP Dyke area and upto soffit of 106.5 M El	24	30	
12.2	Construction of WMP 106.5 M El slab and upto soffit of 114.5 M El	30	38	
12.3	Construction of 114.5 M El slab & concrete plenums at 114.5 M El	38	42	
13	D2O Upgrading Plant			
13.1	Construction upto grade slab at 100 M El	21	29	
13.2	Construction upto slab at 108 M EL (including 108 M El slab)	29	32	
13.3	Erection of tower and cladding	30	43	
14	New fuel Storage building			
14.1	Construction of Complete NFSB	45	57	Construction of NFSB shall be taken only after completion dome staging assembly and end shield ball filling activity



15	Fuel oil Storage Area			
15.1	Completion of FOSA structure & APW Dyke area	21	28	
16	Fuel Handling & Mechanical Workshop			
16.1	Construction of Complete FH & MW	23	41	
17	Central Alaram Station building			
17.1	Construction of Complete CAS	23	38	

Note:

1. Construction schedule for the second unit shall lag by a period of 6 months.
2. Construction of other balance buildings along with finishing works shall be executed in parallel and completed within 3 months of last structure.
3. All construction drawings like concrete forming drawing (CFDs), Reinforcement drawings, Liner and EP, Fabrication drawings will be provided to the contractor 3 months prior to activity start month defined above.
4. L-2 Network shall be submitted by the contractor by breaking down milestones as given above indicating input requirements from NPCIL for acceptance by NPCIL within two months of award of work.
5. Achievement of above schedule shall be required for enabling meeting of project schedule as appended with the tender.
6. The Completion dates of Fabrication of Embedded parts and Miscellaneous Structural steel, as well as the Completion dates of various activities related to the miscellaneous structures such as underground services and site grading should match the Schedule detailed above.
7. All concreting activities includes all finishes.
8. Mobilization time provided includes splicing, forming and welding of reinforcement steel and laying them in first pour of concrete.
9. The Painting activity of any area shall be completed to ensure the overall completion schedule of the building

7.1.2 The Contractor shall submit a detailed construction time schedule, keeping the phasing of the work generally in line with the construction schedule proposed by NPCIL, for the approval of the Engineer which shall form the part of the contract. The Contractor shall strictly adhere to such an approved L-1 network program submitted in Primavera, MS Office or any other software.

7.1.3 In order to achieve the above programme, Contractor should mobilize the resources to complete the floor to floor construction including intermediate wall & columns in maximum two to three pours. The height of the wall/ column pour shall be 5-6 M (floor to floor level). For containment walls, the lift height shall be 3-3.5 M. To



reduce the construction time and improve quality & safety, concept of prefabricated ring liner & dome liner shall be adopted for Inner containment.

7.2 CONSTRUCTION SCHEDULE PLANNING AND REPORTING:

The work shall commence and complete in accordance with the specified time schedule. Monsoon and other inclement weather will not be considered as a reason for extension of time or any overstay compensation. Contractor shall prepare an overall and building wise network to meet target dates.

The Contractor shall prepare an overall activity network and submit for the approval of NPCIL. Further to the above, Contractor shall prepare building / structure wise detailed activity network showing all the activities to be completed to meet the scheduled targets. The building / structure wise network shall contain the resources deployment plan of each activity and the invoicing pattern. The Contractor shall deploy experts in Project monitoring at no extra cost to NPCIL. They shall have project monitoring tool (software) like Primavera-P6 (latest version), M S Office latest version or any other efficient software for resource based project planning, scheduling and monitoring.

The Contractor shall furnish the information in the requisite format at the respective periodicity as detailed below in both hard and soft format:

Sl. No.	Report / Information	Reporting Periodicity	Remarks
1.	Overall Network	Yearly	
2.	Overall contract time and progress chart	Quarterly	
3.	Building wise detailed network including resource and invoice	Quarterly	
4.	Building / structure wise time and progress	Quarterly	
5.	Building / Structure resource deployment status	Daily	To be recorded and submitted on next day. However, it is used for justifying future reports.
6.	Daily plan and execution report	Daily	To be recorded and submitted on next day. However, it is used for justifying future reports.
7.	Building / structure wise constraints report	Fortnightly	To be recorded only. However, it is used for justifying future reports.



8.	Three monthly rolling plan	Monthly	
9.	Building / structure wise Hindrance register.	Monthly	To be recorded after mutual acceptance by Engineer-in-Charge.
10.	Monthly consolidated progress report	Monthly	This should include physical, financial progress and resources deployment status etc.

8.0 REVIEW/ APPROVAL OF CONTRACTOR'S DOCUMENTS:

The contractor shall prepare and submit following documents for approval within a one month of schedule start date of work:

Construction Pre-requisites:

The Contractor shall submit a time-based schedule of Site Mobilization, establishment of site facilities, deployment of Plant & Machineries, qualification of construction materials & validation of construction processes such as concrete mix design as necessary for starting and completion of construction works as per specified work schedule.

Contractors work specific QA Manual:

Among other things this document shall also include roles and responsibilities of Project Manager, Works Manager and other key officials / section In-charges and staff members of construction team having requisite qualification and experience connected with various identified construction activities in the form of an Organization Chart who shall be responsible to take instruction from NPCIL Engineer-in-Charge.

Construction Methodology for Contractor's Scope of Works:

A comprehensive construction methodology covering entire scope of contractor's works shall be prepared and submitted by the Contractor. The methodology shall also include work procedures and QA Plans for activities associated with the construction of all the buildings and structures covered in the scope of contract. Prior to starting of each activity, work procedure shall be prepared by the Contractor and submitted to Engineer-in-charge for acceptance.

As a number of site activities shall need prior acceptance of regulatory agencies like AERB, it shall be the responsibility of the contractor to ensure compliance to all the observations of regulatory agencies including attending the meetings called by these agencies (without any extra cost to NPCIL) for seeking



construction consents. Any delay in submission of required documents for AERB review and compliance of AERB's comments for obtaining regulatory consents will be to Contractor's account.

9.0 CONTRACTOR'S SITE ORGANIZATION:

- 9.1** The site organization of the contractor for Civil construction shall be necessarily headed by an officer occupying a senior position in the organization having graduation in Civil Engineering from reputed institute with a minimum experience of fifteen (15) years in such project execution and shall be vested with powers to take prompt decision. It is also incumbent upon the Contractor that the progress of the contract is reviewed once a month with the project authorities. In addition to the above, periodical reviews at management level shall also be conducted as and when required.
- 9.2** It is to be noted that the time is essence of contract and in order to meet the schedules and to meet targets the Contractor has to plan for work round the clock shift right from the initial stages. Necessary supervisory staff and the labour force shall be deployed in each shift to ensure that the schedules are met with.
- 9.3** The construction manpower shall be planned taking in to consideration the commencement and completion of various activities as specified in the contract.
- 9.4** The Contractor shall submit a detailed site organization chart along with qualification of all the key personnel of execution, QA, Safety and housekeeping groups, he proposes to deploy on the works. The organization shall include the number and category of personnel of different grades for supervisory works up to the grade of Foreman/Asst. Foreman. (The distribution of staff and personnel shall be building wise/schedule wise/activity wise).
- 9.5** Contractor shall set up an independent Quality Management and Project Safety Systems showing all interfaces and submit all the requisite details in line with the relevant Clauses of this section.

10.0 STORAGE OF MATERIAL:

Contractor shall have sufficient storage area/ godowns for storing reinforcement steel, structural steel, embedded parts, cement and all other items required for work.

Some items such as polysulphide compound, epoxy paints are required to be stored in air-conditioned / well ventilated rooms.



11.0 PERFORMANCE BOND TOWARDS WATERPROOFING OF UNDERGROUND STRUCTURES:

Contractor shall make periodical inspection and repair the waterproofing for any apparent defects to ensure complete waterproofing during the guarantee period of 10 years.

The Contractor shall submit a Bank Guarantee/Insurance Surety Bond from a scheduled commercial bank (other than co-operative bank) for an amount of **10%** of the cost of water proofing works carried out before expiry of defect liability period for a period so as to make guarantee period good for a total period of 10 years (plus 3 month's grace period) from the date of acceptance of water proofing works of underground structures by the Engineer.

12.0 PERFORMANCE BOND TOWARDS ROOF INSULATION AND WATERPROOFING:

The Contractor shall be responsible for maintaining the roof top insulation for a period of 10 years from the date of acceptance of the water proofing work by the Engineer. The Contractor shall make periodical inspection especially before start of the rainy season and repair the waterproofing for any apparent defects to ensure effectiveness of water proofing during the guarantee period.

The Contractor shall submit a bank guarantee from a scheduled commercial bank (other than co-operative bank) for **10%** of the cost of roof insulation and water proofing works carried out before expiry of defect liability period for a period so as to make guarantee period good for a total period of 10 years (plus 3 month's grace period) from the date of acceptance of water proofing works of underground structures by the Engineer.

13.0 CONSTRUCTION MATERIALS TO BE BROUGHT BY THE CONTRACTOR:

All materials required for the work shall be supplied by the Contractor from NPCIL approved sources only.

As guidance to the Contractor, an indicative (not exhaustive) list of reputed/suggestive manufacturers of various materials is given in Annexure-I of Section C Notes of the tender. The Contractor shall to his satisfaction evaluate the manufacturers from the list of suggestive manufacturers as per the Contractor's in-house procedure and also evaluate the source where the same has not been qualified by NPCIL and in respect of other proposed manufacturers not included in the suggestive manufacturer's list and shall put up the evaluation report for approval of



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NPCIL before placement of PO. The purchaser will provide the list of approved manufacturers after placement of PO.



23/04/2025

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सह निदेशक (सीएमएम) Associate Director, C&MM

For and on behalf of Nuclear Power Corporation of India Limited
(The Purchaser)



SECTION – B2

COMMERCIAL TERMS AND CONDITIONS

SECTION – B2-I : (b) MODULE: M1 Sub Module S2

**BASIS OF PRICE, STATUTORY LEVIES, DELIVERY SCHEDULE,
TERMS OF PAYMENT ETC.**

(Design, Engineering, Construction, Supply, Erection, Commissioning & Testing of four number of Natural Draught Cooling Towers, Cooling Water Pump House and associated works)



1.0 SPECIFICATIONS TO BE FOLLOWED:

The work shall be carried out strictly in accordance with the drawings and contract specification. In the absence of any specification for any work or material, relevant Indian Standard Specifications will be applicable and where no Indian Standard Specification exists, relevant International Standard Specifications will apply. In absence of all these specifications work shall be carried out as per Manufacturer's specifications.

Further, in absence of any mention of specifications in the contract regarding work, material or workmanship, the decision of adaptability of relevant IS, BSS, American Standard Specifications or International standard, Manufacturer's specifications etc., will be entirely at the discretion of Engineer-in-charge and the same shall be binding on the Contractor.

2.0 GENERAL REQUIREMENT FOR COMMENCEMENT OF THE WORK AND SITE MOBILIZATION:

The Contractor shall mobilize site infrastructure viz. excavation equipment, plant machinery, batching plant, ice plant, plant & equipment for consolidation grouting dewatering, fabrication yards for formwork, re-steel, structural steel, embedded parts, concrete testing laboratory, geotechnical investigations, Site offices, Ware Houses, Stores, Work Shops and Personnel etc required for the satisfactory completion of the work as mentioned in tender document. Contractor shall during the contract period, augment and mobilize additional equipment, plant, machinery and labour, if found essential, at his own cost to meet the construction schedule.

Advance payment (interest bearing) upto 10% of contract price of respective sub modules shall be granted to the Contractor, if required by him, subjected to conditions as mentioned herein been fulfilled. The advance payment shall be against site mobilization, equivalent bank guarantee and performance security bond, shall be regulated as per terms and conditions of contracts.

If requested by the Contractor, advance payment admissible against completed milestones above can be released at any stage of the contract provided requisite conditions for release are fulfilled.

For release of advance payment, the Contractor shall submit the following program for the approval of Engineer-In-Charge on award of work:

- (a) The order in which the Contractor intends to carry out the Works, including the anticipated timing of each stage or activity or milestone of design, submission of Contractor's Documents, procurement, manufacture of Plant, delivery to Site, construction, erection and testing including resource mobilization details



- (b) Contractor's resource mobilization details stating reasonable estimate of the number of each class of Contractor's Personnel and of each type of Contractor's Equipment (separate categorization of available and newly to be procured for the project), required on the Site for each major stage/ activity.
- (c) Subsequent instalment to be released after ascertaining that the earlier advance has been utilized for intended purpose to the satisfaction of Engineer in Charge (EIC).

The additional mobilization advance of advance 5% against new plant and machinery shall be subject to the following conditions:

- (i) the contractor shall produce satisfactory proof of payment;
- (ii) such equipment is considered necessary by the engineer for the works;
- (iii) the equipment has been verified to have been brought to site and
- (iv) the contractor gives an undertaking on stamp paper that the equipment will work only on that job and will not be removed from the site without obtaining written approval from the engineer. No advance shall be admissible on equipment purchased under a hire purchase scheme/ financing arrangement or on hired equipment. In case of 'Machinery and Equipment advance', insurance and hypothecation to the employer should be ensured. The repayment of advances shall be done through proportionate percentage deductions from running bill (periodic/ interim payment). Part 'Bank Guarantees' (BGs) against the mobilization advance should be taken in as many numbers as the proposed recovery instalments and should be equivalent to the amount of each instalment.

All advances shall be used by the contractor exclusively for mobilization expenditure, including the acquisition of construction related plant and equipment. Should the contractor misappropriate any portion of the advance, it shall become due and payable immediately, and no further advance will be made to the contractor thereafter. In such cases, the contractor shall also be liable for appropriate action under the contract.

- 3.0** The NDCT and CWPH package (module M1_S2) is an EPC package. Complete Design and Engineering of the systems, components and civil structures are in scope of contractor as per tender specifications. Contractor has to submit design documents and drawings for NPCIL approval as per tender specifications. After award of contract, Contractor has to prepare complete Bill of quantities (BOQ) based on their design. Contractor has to submit the BOQ for each drawing in all disciplines for information. Consolidated BOQ shall also be submitted to NPCIL.



4.0 MODE OF MEASUREMENT:

Mode of measurement when not specified in the contract shall be in accordance with relevant Indian Standard (IS) Specifications and in case the same is not spelt out in IS, Engineer in Charge (EIC) decision shall be final and binding on the contractor.

5.0 PAYMENT FOR LUMP SUM ITEM:

The contractor shall submit breakup of the items including the quantities & rates in Annexure-M1S2-I of Section C-0 of module M1. Changes / modifications if any, proposed by contractor, at later date, in the list shall bear the approval of Purchaser.

Quantities provided by the Contractor shall not form basis for any claim by the Contractor on account of increase/ decrease in quantity.

No extra payment on account of increase in quantities at the completion of the lumpsum item is permissible. Similarly, no deduction in payment will be done in case actual quantities fall short of the quantities given in the tender document and / or after rationalization of quantities after changes / modifications as mentioned above.

Payment for the lump sum item of the work will be regulated by the following breakdown of lump sum item as detailed below:

The Detailed breakup of stage payment for Design (Section E-1-1) are as under:

S. No.	Stage Payment Schedule	Percentage payment of total amount of BOQ Sub-Head, under Section-E-1-1
E-1-1	DESIGN (DBR, DR, etc.), DRAWINGS AND DETAILING	
Item no. 1	Civil design-geotechnical, structural, drainage etc.	Up to 85 %
1	NDCT towers (4 numbers):	Up to 45 %
	a. Design basis reports, finalization of foundation system, structural arrangement of superstructure and approval of structural General arrangement drawings and approval of analysis report	5.0%
	b. Approval of detailed design of foundation and superstructure.	10.0%
	c. Approval of good for construction (GFC) drawings of foundation upto top of Raker Columns	15.0%
	d. Approval of good for construction drawings of superstructure above raker columns.	15.0%



S. No.	Stage Payment Schedule	Percentage payment of total amount of BOQ Sub-Head, under Section-E-1-1
2	Other miscellaneous structures: NDCT Internal structures, Water tunnel (WTL), hot water pipe tunnels, trenches, Plant drains, sludge pits, staircase with control room, gate and screen storage, support structures etc.	Up to 25 %
	a. Design basis reports if required, finalization of foundation system, structural arrangement, approval of seismic analysis report and General arrangement drawings.	5.0%
	b. Approval of detailed designs.	10.0%
	c. Approval of good for construction drawings.	10.0%
3	CWPH	Up to 15%
	a. Design basis reports, finalization of foundation system, structural arrangement of superstructure, approval of seismic analysis report (SAR) and General arrangement drawings.	2.5%
	b. Approval of detailed design of foundation and superstructure including SUMP MODEL study.	2.5%
	c. Approval of good for construction (GFC) drawings of foundation upto 100M Elevation	5.0%
	d. Approval of good for construction drawings of superstructure above CWPH roof.	5.0%
4	Completion of overall civil, structural, architectural, mechanical, electrical and control- instrumentation design work	15 %
Item nos. 2 to 4 of Section E-1-1	Thermal, Hydraulic, Mechanical Design, Control and Instrumentation, Electrical	upto 100%
1	a. Design basis reports, approval of seismic analysis reports if required, design report.	30.00%
	b. Approval of design reports and good for construction/erection drawings.	70.00%

Notes

Payment shall be made on pro rata basis and as decided by engineer in-charge based on quantum of work and list of drawings. The contractor shall submit the total list of engineering deliverable envisaged for his work along with 1st submission of design



S. No.	Stage Payment Schedule	Percentage payment of total amount of BOQ Sub-Head, under Section-E-1-1
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document. He may also submit break-up of activities for prorated basis of payment for approval of engineer in-charge.

The Detailed breakup of stage payment for Section E-1-3 (mechanical system/components) are as under:

Item no. of Section E-1-3	Stage-I Supply	Stage-II Fabrication & Erection	Stage-III Testing & Comm.	Stage-IV Submission of CCC
1	55%	35%	5%	5%
2	55%	35%	5%	5%
3	40%	50%	5%	5%
4	55%	35%	5%	5%
5	55%	35%	5%	5%
6	55%	35%	5%	5%
7	55%	35%	5%	5%
8	35%	55%	5%	5%
9	35%	55%	5%	5%
10	35%	55%	5%	5%
11	40%	50%	5%	5%
12	95%	0%		5%

Note: 1. The stage payment of individual items / scope will be done as indicated in the stage percentage of the lumpsum item given in the table.

2. Payment of NDCT 5A, 5B, 6A, 6B, CWPH and CMLC pipe line will be done on pro rata basis.

The Detailed breakup of stage payment for Section E-1-4 (electrical system/components) are as under:

Item No. of Section E-1-4	Stage-I Supply handling	Stage-II & Erection	Stage-III Testing & Commissioning	Stage-IV Submission of CCC
1	50%	35%	10%	5%
2	50%	35%	10%	5%
3	50%	35%	10%	5%
4	50%	35%	10%	5%
5	50%	35%	10%	5%
6	50%	35%	10%	5%
7	50%	35%	10%	5%



8	50%	35%	10%	5%
9	65%	20%	10%	5%
10	95%	0	0	5%
11	95%	0	0	5%

Note: The stage payment of individual items / scope will be done as indicated in the stage percentage of the lumpsum item given in the table.

6.0 MODE OF MEASUREMENT AND PAYMENT FOR ITEM RATE:

- 6.1 The execution of items listed in Section E-2 of the tender is subjected to the recommendation of Geologist. The payment of these items shall be released based upon the joint measurement of actually executed quantities under each item of work irrespective of the variation in the quantities.
- 6.2 Mode of measurement when not specified in the contract shall be in accordance with relevant Indian Standard (IS) Specifications and in case the same is not spelt out in IS, Engineer in Charge (EIC) decision shall be final and binding on the contractor.

7.0 PRICE ADJUSTMENT COMPONENTS:

For NDCT, CWPH and allied works, material/ labour component to be considered for the purpose of Contract Price adjustment are mentioned in Annexure-M1S2-I below:

ANNEXURE-M1S2-I

S.N.	Description	Stipulation
1	Price Adjustment / Escalation	Yes
2	VARIOUS COMPONENTS EXPRESSED AS A PERCENTAGE OF CONTRACT VALUE.	
	Unskilled labour component (lu)	17%
	Semiskilled labour component (lss)	0%
	Skilled labour component (ls)	5%
	Highly Skilled labour component (lhs)	0%
	MATERIAL COMPONENT	
	Ordinary Portland Cement (m)	08%
	Alloy steel Wire Rods (n)	25%
	Angles, Channels, Sections, Steel (Coated/not) (o)	5%
	All Commodities (q)	22%
	P.O.L Component (HSD) (d)	03%
	INDEX/ PRICES FORMING BASIS FOR ESCALATION	



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S.N.	Description	Stipulation
	Ordinary Portland Cement (M)	Wholesale price index applicable to Ordinary Portland Cement as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
	M₀ Material Indices Value of Ordinary Portland Cement for the month of September, 2023	M₀ = 134.9
	Alloy Steel wire rods (N)	Wholesale price index applicable to Alloy Steel wire rods as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
	N₀ Material Indices Value of Alloy Steel Wire Rods for the month of September, 2023	N₀ = 140.1
	Angles, Channels, Sections, Steel (Coated/not) (O)	Wholesale price index applicable to Angles, Channels, Sections, steel (coated/not coated) as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
	O₀ Material Indices Value of Angles, Channels, Sections, Steel (Coated/not) for the month of September, 2023	O₀ = 148.2
	(p)	NA
	All Commodities (Q)	Wholesale price indices applicable to All Commodities: as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
	Q₀ Material Indices Value of All commodities for the month of September, 2023	Q₀ = 151.8



S.N.	Description	Stipulation
	Labour (L)	Minimum wages in Rupees issued by office of Chief Labour Commissioner, Ministry of Labours & Employment as applicable on the last date of the month previous to the one under consideration. (Where in subscript “u”, “ss”, “s” and “hs” denotes the unskilled, semiskilled, skilled and highly skilled labour respectively) Kaiga-5&6, Site is coming under Area-C, as per Government Notification dated 19/01/2017.
	(L _{u0} & L _{s0} Labour Indices Value of Labour for the month of September, 2023	L _{u0} = (will be issued later) L _{s0} = (will be issued later)
	P.O.L Component (HSD) (D)	Price of High Speed Diesel (HSD) to be considered at Nearest Diesel Pump to Kaiga-5&6
	D₀ Indices Value of P.O.L Component High-Speed Diesel (HSD) for the month of September, 2023	D₀ = (will be issued later)

8.0 PRICING THE CHANGE PROPOSAL:

This clause is applicable to section E-2 (item rate) of tender. The rates for altered, extra or substituted item of work shall be worked out in accordance with Clause 19.4.3 (f) of the General condition contract (GCC/EPC-3/Rev.4). In case the rates for extra, altered or substituted item are not available in any part of Module of Schedule of quantities then the rate shall be determined based on Market rates, approved by the Engineer-incharge. A component of overheads and profit @ 15% will be considered for deriving market rates for extra, altered, and substituted items.

9.0 CONSTRUCTION PROGRAMME AND SCHEDULE:

9.1 CONTRACTOR'S SITE ORGANIZATION:

It is essential that the site organization is necessarily headed by an officer occupying a senior position in the organization having graduation in Civil Engineering from reputed institute with a minimum experience of fifteen (15) years in such project execution and shall be vested with powers to take prompt decision. It is also incumbent upon the Contractor that the progress of the contract is reviewed once a



month with the project authorities. In addition to the above, periodical reviews at management level shall also be conducted as and when required.

Qualification and experience of Project managers, Engineers, Supervisors, safety officers deployed by contractor as per mobilization schedule in any discipline (Planning, Execution, QA, Safety etc.) shall be as provided at organization chart of contractor in line with requirement as stipulated in the tender/contract.

It is to be noted that the time is essence of contract and in order to meet the schedules and to meet targets the Contractor has to plan for work round the clock shift right from the initial stages. Necessary supervisory staff and the labour force shall be deployed in each shift to ensure that the schedules are met with.

The detailed site organization chart along with qualification of all the key personnel of execution, QA, Safety and housekeeping groups, proposed to deploy on the work by the contractor shall include the number and category of personnel of different grades for supervisory works.

Contractor shall set up an independent Quality Management and Project Safety Systems showing all interfaces and submit all the requisite details.

10.0 CONSTRUCTION PROGRAMME:

The time allowed for carrying out the work shall be strictly observed by the contractor and shall deemed to be the essence of the contract and shall be reckoned from the date indicated in the work order. All works shall be completed in accordance with the construction schedule given hereunder in **Annexure-M1S2-II**.

On award of the work, the contractor shall submit a detailed construction time schedule, keeping the phasing of the work generally in line with the construction schedule proposed by NPCIL, for the approval of the Engineer which shall form the part of the contract. The contractor shall strictly adhere to such an approved L-1 network program submitted in Primavera software or any other software.

The work shall commence and complete in accordance with the schedule given hereunder in **Annexure-M1S2-II** of this Section. Monsoon and other inclement weather will not be considered as a reason for extension of time or any overstay compensation. Contractor shall prepare an overall and individual tower wise network to meet target dates.

The contractor shall prepare an overall activity network and submit for the approval of NPCIL. Further to the above, contractor shall prepare building / structure / tower wise detailed activity network showing all the activities to be completed to meet the scheduled targets. The building / structure /tower wise network shall contain the resources deployment plan of each activity and the invoicing pattern. Contractor



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shall therefore submit Level- I, Level- II, Level- III and Level- IV networks for all the construction activities to meet the various target dates as per the tender document and also prepare, submit six monthly rolling plans for execution of the work along with details of weekly quantities to be executed for the activities on day to day basis as required by the Engineer for monitoring the progress of work. The detailed methodology for progress reporting & monitoring and planning of the job shall be finalized immediately on commencement of job.

The contractor shall furnish the information in the requisite format at the respective periodicity as detailed below in both hard and soft format:

Sl. No.	Report / Information	Reporting Periodicity	Remarks
1.	Overall Network	Yearly	
2.	Overall contract time and progress chart	Quarterly	
3.	Tower wise detailed network including resource and invoice	Quarterly	

ANNEXURE-M1S2-II: COMPLETION PERIOD FOR VARIOUS ACTIVITIES

(A) COMPLETION PERIOD FOR NDCT AND ALLIED WORKS

S. no.	Description	Activity Start month (from stipulated work start date)	Activity Finish Month (from stipulated work start date)
		Unit- 5*	
		NDCT AND ALLIED WORKS	
1	DESIGN AND DRAWINGS APPROVAL		
1.1	APPROVAL OF DESIGN BASIS REPORTS	1	3
1.2	APPROVAL OF DESIGN REPORTS	3	10
1.3	APPROVAL OF GOOD FOR CONSTRUCTION DRAWING FOR FOUNDATION/SUBSTRUCTURE (SUPPORT OF RAKER COLUMNS- PEDESTALS)	4	6
1.4	APPROVAL OF GOOD FOR CONSTRUCTION DRAWING FOR RAKER COLUMNS, SHELL, INTERNAL STRUCTURES/ SYSTEM /COMPONENTS	6	10
2	MOBILIZATION		
2.1	FOR EXCAVATION, DEWATERING	1	2



S. no.	Description	Activity Start month (from stipulated work start date)	Activity Finish Month (from stipulated work start date)
2.2	FOR CONSTRUCTION WORKS	3	6
3.	EXCAVATION WORKS	2	6
4	GEOLOGICAL MAPPING FOR SHELL FOUNDATION	3	6
5	CONSOLIDATION GROUTING, IF REQUIRED	6	9
6	GEOLOGICAL MAPPING FOR INTERNAL STRUCTURES	8	10
6	SHELL FOUNDATION AND UPTO PEDESTALS INCLUDIGN TIE BEAMS (5A)	10	14
7	SHELL FOUNDATION AND UPTO PEDESTALS INCLUDIGN TIE BEAMS (5B)	12	16
8	INTERNAL STRUCTURE FOUNDATION, COLD WATER BASIN(5A)	10	13
9	INTERNAL STRUCTURE FOUNDATION, COLD WATER BASIN(5A)	12	15
10	INTERNAL BEAMS AND COLUMNS, LOWER LEVEL MAIN BEAMS	13	25
11	RAKER COLUMNS (5A)	14	17
12	RAKER COLUMNS (5B)	16	19
13	SHELL CONSTRUCTION (5A)	17	35
14	SHELL CONSTRUCTION (5B)	20	38
15	CASTING OF PRECAST MEMBERS	10	28
16	INSTALLATION OF PRECAST BEAMS, FILLS, UPPER LEVEL MAIN BEAMS, UPPER LEVEL PRECAST BEAMS, DISTRIBUTION PIPES (1A)	30	38
17	INSTALLATION OF PRECAST BEAMS, FILLS, UPPER LEVEL MAIN BEAMS, UPPER LEVEL PRECAST BEAMS, DISTRIBUTION PIPES (1B)	32	40
18	MISC WORKS	31	37
19	TOWER COMMISSIONING	38	42



(B) COMPLETION PERIOD FOR CWPH

S. no.	Description	Activity Start month (from stipulated work start date)	Activity Finish Month (from stipulated work start date)
	COOLING WATER PUMP HOUSE (CWPH) AND ASSOCIATED STRUCTURES/SYSTEMS	Unit- 5*	
1	APPROVAL OF DESIGN BASIS REPORT, ANALYSIS AND DESIGN, DESIGN REPORT, GFC DRAWINGS, ETC.	1	6
2	EXCAVATION AND DEWATERING	5	8
3	FOUNDATION - RAFT	9	12
4	CONSTRUCTION UPTO GL	13	17
5	WORK UPTO ROOF SLAB	18	25
6	MECH. ELECT & C&I	24	35
7	COMMISSIONING & TESTING	33	38

(C) CONTRACT MILESTONES FOR CMLC

S. no.	Description	Activity Start month (from stipulated work start date)	Activity Finish Month (from stipulated work start date)
	CMLC	Unit- 1*	
1.	APPROVAL OF DBRs, DESIGN REPORTS, GFC DRAWINGS ETC	1	3
2.	MOBILIZATION	1	3
3.	FABRICATION	3	30
4.	EXCAVATION	4	30
5.	INSTALLATION AND OVERALL COMPLETION	6	35

* Notes:

- Construction of NDCT 5A & 5B (Two numbers for Unit-5) and other required system shall be completed in 42 (Fourth two) months. The



zero date for start of work shall be reckoned from completion of 6th months from date of Purchase Order.

- ii. Construction of NDCT 6A & 6B (Two numbers for Unit-6) shall have a lag of maximum 6 (Six) Months from Unit-5 and shall be completed in 48 months.
- iii. The contractor shall put its all efforts to ensure the commissioning of the first composite unit along with allied works before synchronization of unit-5

11.0 REVIEW/ APPROVAL OF CONTRACTOR'S DOCUMENTS:

The contractor shall prepare and submit following documents for approval within one month of schedule start date of work:

11.1 Contractors work specific QA Manual:

Among other things this document shall also include roles and responsibilities of Project Manager, Works Manager and other key officials/ section In-charges and staff members of construction team having requisite qualification and experience connected with various identified construction activities in the form of an Organization Chart who shall be responsible to take instruction from NPCIL Engineer-in-Charge.

11.2 Construction Methodology for Contractor's Scope of Works:

A comprehensive construction methodology covering entire scope of contractor's works shall be prepared and submitted by the Contractor. The methodology shall also include work procedures and QA Plans for activities associated with the construction of all the buildings and structures covered in the scope of contract. Prior to starting of each activity, work procedure shall be prepared by the Contractor and submitted to Engineer-in-charge for acceptance.

11.3 Construction Pre-requisites:

The Contractor shall submit a time based schedule of Site Mobilization, establishment of site facilities, deployment of Plant & Machineries, qualification of construction materials & validation of construction processes such as concrete mix design as necessary for starting and completion of construction works as per specified work schedule.

12.0 STORAGE OF MATERIAL:

Contractor shall have sufficient storage area/ godowns for storing reinforcement steel, structural steel, embedded parts, cement and all other items required for work.



Some items such as polysulphide compound, epoxy paints are required to be stored in air-conditioned rooms.

13.0 PERFORMANCE TEST & GUARANTEE BOND: .

13.1 NATURAL DRAUGHT COOLING TOWERS:

Contractor shall guarantee that the Natural Draught Cooling Towers constructed will meet the ratings and thermal performance requirements at two points of operation conditions indicated in the specifications. The Cooling Tower Institute (CTI) approved test agency proposed by the Contractor shall be got approved from NPCIL. The agency shall have tested minimum two Natural Draught Cooling Towers of similar rating or 80% of current rating within last Ten years.

The guaranteed performance of the Natural Draught Cooling Towers (**Two numbers of any one unit**) shall be demonstrated by the contractor after considering CTI -ATC 105 tolerances while evaluating the performance guarantee test. If the test results arise from the performance guarantee test found deviated from the guaranteed values, the contractor shall be given an opportunity to modify the Natural Draught Cooling Towers as required to enable it to meet the guarantees. In the event of above such cases the Performance Guarantee Test shall be repeated within three months from the date on which the tower is ready for retest and cost of additional testing, cost of modification, including labour, materials etc., all-inclusive shall be at no extra cost to NPCIL. The chance for repeat Performance Guarantee Test will be given only once during the contract period. All the modifications carried out by the Contractor in cooling towers of one unit based on performance test results to meet the contractual requirements, shall be carried out in other remaining Natural Draught Cooling Towers as well, at no extra cost to NPCIL.

The Contractor shall submit a Bank Guarantee/Insurance Surety Bond from a scheduled commercial bank (other than co-operative bank) for an amount of **2.5% of Cost of Module M1 Sub module S2** toward thermal performance liabilities of Natural Draught Cooling Towers before expiry of defect liability period for a period so as to make guarantee period good for a total period of 5 years (plus 3 month's grace period) or after acceptance of the Performance Test report by NPCIL whichever is earlier.

In the event of non-availability of system loads (like Condenser) for conducting performance guarantee test of Natural Draught Cooling Towers, the contractor can demobilize his site resources after trial operation /commissioning of individual system included in the work. On availability of system loads the Engineer-in-charge shall intimate the contractor in writing for conducting the performance guarantee test. On receipt of written request of the engineer-in-charge, the contractor shall remobilize the resources and conduct the performance guarantee test of Natural Draught Cooling Towers at no extra cost to NPCIL.



In case the contractor fails to conduct the performance guarantee test in above prescribed time due to any reason or in case the actual cold water temperature as determined from the Performance Guarantee Test is higher than the predicted value and subsequently, the contractor fails to rectify the defects within 3 months after Performance Guarantee Test or contractor fails to meet the thermal performance requirements at two points of operation conditions indicated in the specifications and/or fails to rectify the defects after Performance Guarantee Test, NPCIL reserves the rights to forfeit performance Bank Guarantee/Insurance Surety Bond amount to rectify the defect on its own by NPCIL.

The Performance Bank Guarantee/Insurance Surety Bond shall be released to the contractor after acceptance of the Performance Guarantee Test report by NPCIL.

13.2 COOLING WATER PUMP HOUSE (CWPH):

The Contractor shall furnish guarantee against faults in the design of structures, equipment with associated auxiliaries covered under their scope of work. Further, the contractor shall also carry out at their own cost, all necessary improvements in the design of structures covered under the contract, so as to make good any inadequacies arising out of the aforementioned factors. Contractor shall guarantee that the Cooling Water Pump House offered shall meet all the technical requirements indicated in the specifications. The testing agency proposed by the Contractor for various tests shall be approved by NPCIL and shall have tested minimum pump flow rate of 25000 m³/hr within last seven years.

If the test results arise from the performance guarantee test found deviated from the guaranteed values, the contractor shall be given an opportunity to modify as required to enable it to meet the guarantees. In the event of above such cases, the Performance Guarantee Test shall be repeated within three months from the date on which it is ready for retest and cost of additional testing, cost of modification, including labour, materials etc., all-inclusive shall be at no cost to NPCIL. The chance for repeat Performance Guarantee Test will be given only once during the contract period. All the modifications carried out by the Contractor in one equipment to meet the contractual requirements shall be carried out at no cost to NPCIL in other similar equipment.

The performance test guarantee to cover the performance liabilities of the entire CCW & ASW system, structures and equipment included in the scope of the Package shall be 0.5% of Sub module cost (i.e., M1_S2), over and above the security deposit. This amount will be recovered from the RA bill/ final bill at the rate of 0.5% of each bill of this module till the recovery of full amount or contractor shall submit the equivalent amount of bank guarantee.



In the event of non-availability of system loads (like Condenser) for conducting performance guarantee test of the entire CCW & ASW system, the contractor can demobilize his site resources after trial operation /commissioning of individual system included in the work. On availability of system loads the Engineer-in-charge shall intimate the contractor in writing for conducting the performance guarantee test. On receipt of written request of the engineer-in-charge, the contractor shall remobilize the resources and conduct the performance guarantee test of the entire CCW & ASW system at no extra cost to NPCIL.

The contractor shall submit the renewed performance guarantee bond in the form of bank guarantee for a value of **0.5% of Sub module cost (i.e., M1_S2)**, with the initial validity of 36 months from date of issue completion certificate in the approved format of the Corporation. On submission of bank guarantee the deducted amount towards the Performance guarantee test from the running account bill will be released.

In case, the performance guarantee test cannot be carried out within the initial period of 36 months, the contractor shall extend the validity of the bond for 24 months at a time. If the extension of the bond is due to Corporation, then only the bank charges (if any) towards this extension of the validity of the bond shall be reimbursed by the Corporation to the contractor.

In case the contractor fails to conduct the performance guarantee test in above prescribed time due to any reason or in case the actual test parameter are not within the specified values and subsequently, the contractor fails to rectify the defects within 3 months after Performance Guarantee Test NPCIL reserves the rights to forfeit performance guarantee bond amount to rectify the defect on its own by NPCIL.

The Performance Guarantee Test bond shall be released to the contractor after acceptance of the Performance Guarantee Test report by NPCIL.

14.0 PROOF CONSULTANT:

All the works pertaining to this package i.e., DBR, DR, Analysis, design, construction drawings, approvals, supervision of construction and QA checks etc. shall be approved by NPCIL representative or NPCIL appointed third party Proof Consultants. The Contractor shall facilitate and provide all the necessary assistance to the approver in carrying out these checks at various stages and carry out suggested modifications.



15.0 CONSTRUCTION MATERIALS TO BE BROUGHT BY THE CONTRACTOR:

All materials required for the work shall be supplied by the Contractor from NPCIL approved sources only.

As guidance to the Contractor, an indicative (not exhaustive) list of reputed/suggestive manufacturers of various materials is given in Annexure-M1S2-I of Common SCC for submodule M1S1 to M1S4. The Contractor shall to his satisfaction evaluate the manufacturers from the list of suggestive manufacturers as per the Contractor's in-house procedure and also evaluate the source where the same has not been qualified by NPCIL and in respect of other proposed manufacturers not included in the suggestive manufacturer's list and shall put up the evaluation report for approval of NPCIL before placement of PO. The purchaser will provide the list of approved manufacturers after placement of PO.


23/04/2025

विपिन कुमार त्रिवेदी, (Vipin Kumar Trivedi)

सह निदेशक (सीएमएम) Associate Director, C&MM

**For and on behalf of Nuclear Power Corporation of India Limited
(The Purchaser)**



SECTION – B2

COMMERCIAL TERMS AND CONDITIONS

SECTION – B2-I : (c) MODULE: M1 Sub Module S3

**BASIS OF PRICE, STATUTORY LEVIES, DELIVERY SCHEDULE,
TERMS OF PAYMENT ETC.**

(Design, Engineering, Construction, Supply, Erection, Commissioning & Testing of four number of Induced Draught Cooling Towers (IDCT) and associated works)



1.0 SPECIFICATIONS TO BE FOLLOWED:

The work shall be carried out strictly in accordance with the drawings and contract specification. In the absence of any specification for any work or material, relevant Indian Standard Specifications will be applicable and where no Indian Standard Specification exists, relevant International Standard Specifications will apply. In absence of all these specifications work shall be carried out as per Manufacturer's specifications.

Further, in absence of any mention of specifications in the contract regarding work, material or workmanship, the decision of adaptability of relevant IS, BSS, American Standard Specifications or International standard, Manufacturer's specifications etc., will be entirely at the discretion of Engineer-in-charge and the same shall be binding on the Contractor.

2.0 GENERAL REQUIREMENT FOR COMMENCEMENT OF THE WORK AND SITE MOBILIZATION:

The Contractor shall mobilize site infrastructure viz. excavation equipment, plant machinery, batching plant, ice plant, plant & equipment for consolidation grouting dewatering, fabrication yards for formwork, re-steel, structural steel, embedded parts, concrete testing laboratory, geotechnical investigations, Site offices, Ware Houses, Stores, Work Shops and Personnel etc required for the satisfactory completion of the work as mentioned in tender document. Contractor shall during the contract period, augment and mobilize additional equipment, plant, machinery and labour, if found essential, at his own cost to meet the construction schedule.

Advance payment (interest bearing) upto 10% of contract price of respective sub modules shall be granted to the Contractor, if required by him, subjected to conditions as mentioned herein been fulfilled. The advance payment shall be against site mobilization, equivalent bank guarantee and performance security bond, shall be regulated as specified in Terms and Conditions of Contract.

If requested by the Contractor, advance payment admissible against completed milestones above can be released at any stage of the contract provided requisite conditions for release are fulfilled.

For release of advance payment, the Contractor shall submit the following program for the approval of Engineer-In-Charge on award of work:

- (a) The order in which the Contractor intends to carry out the Works, including the anticipated timing of each stage or activity or milestone of design, submission of Contractor's Documents, procurement, manufacture of Plant, delivery to Site, construction, erection and testing including resource mobilization details



- (b) Contractor's resource mobilization details stating reasonable estimate of the number of each class of Contractor's Personnel and of each type of Contractor's Equipment (separate categorization of available and newly to be procured for the project), required on the Site for each major stage/ activity.
- (c) Subsequent installment to be released after ascertaining that the earlier advance has been utilized for intended purpose to the satisfaction of Engineer in Charge (EIC).

The additional mobilization advance of advance 5% against new plant and machinery shall be subject to the following conditions:

- (i) the contractor shall produce satisfactory proof of payment;
- (ii) such equipment is considered necessary by the engineer for the works;
- (iii) the equipment has been verified to have been brought to site and
- (iv) the contractor gives an undertaking on stamp paper that the equipment will work only on that job and will not be removed from the site without obtaining written approval from the engineer. No advance shall be admissible on equipment purchased under a hire purchase scheme/ financing arrangement or on hired equipment. In case of 'Machinery and Equipment advance', insurance and hypothecation to the employer should be ensured.

The repayment of advances shall be done through proportionate percentage deductions from running bill (periodic/ interim payment). Part 'Bank Guarantees' (BGs) against the mobilization advance should be taken in as many numbers as the proposed recovery instalments and should be equivalent to the amount of each instalment.

All advances shall be used by the contractor exclusively for mobilization expenditure, including the acquisition of construction-related plant and equipment. Should the contractor misappropriate any portion of the advance, it shall become due and payable immediately, and no further advance will be made to the contractor thereafter. In such cases, the contractor shall also be liable for appropriate action under the contract

3.0 MODE OF MEASUREMENT AND PAYMENT FOR LUMPSUM ITEM (i.e., SECTION E-1 SOQR of the Tender):

- 3.1 Section M1-S3-E1 of Tender pertains to price of works included under lump sum basis in this sub-module. Section M1-S3-E-2 pertains to price of works included under item-rate basis.



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Mode of measurement when not specified in the tender shall be in accordance with relevant Indian Standard (IS) Specifications and in case the same is not spelt out in IS, Engineer in Charge (EIC) decision shall be final and binding on the contractor.

The payment for the “**Item no.1 of Section M1-S3-E-1**” of Bill of Quantities under Section E of Tender Part II (Price Bid) of the work will be regulated by the breakdown of stage payment schedule as given below:

Table-1: Payment schedule for Lump sum item no 1 of Schedule-E-1 of SOQR		
Sr. no	Stage Payment Schedule	Percentage payment of BOQ Item No 1
A.	DESIGN (DBR, DR, SAR, etc), DRAWINGS AND DETAILING	UPTO 3%
1.	Civil design-geotechnical, structural, drainage etc.	
1.1	IDCT towers (4 numbers): a. Design basis reports, finalization of foundation system, structural arrangement of superstructure, approval of seismic analysis report (SAR) and General arrangement drawings. b. Approval of detailed design of foundation and superstructure. c. Approval of good for construction (GFC) drawings of foundation. d. Approval of good for construction drawings of superstructure.	1.5%
1.2	Other miscellaneous structures: Cold Water tunnel (CWTL), hot water pipe tunnels & trenches, connection from IDCT sludge pits etc. to the plant drain chambers, sludge pits, staircase with control room, gate and screen storage, pedestals, support structures etc. a. Design basis reports if required, finalization of foundation system, structural arrangement, approval of seismic analysis report and General arrangement drawings. b. Approval of detailed designs. c. Approval of good for construction drawings.	0.5%
2.	Thermal, Hydraulic, Mechanical Design, Control and Instrumentation, Electrical	
2.1	IDCT towers: a. Design basis reports, approval of seismic analysis reports if required, design report. b. Approval of good for construction drawings.	0.25%
2.2	Hot water pipe, Cold water tunnel, other miscellaneous systems, components etc. a. Design basis reports, approval of seismic analysis reports, detailed design.	0.25%



3.	Approval of detailed designs from AERB a. 0.35% on approval of 1.1 (a) 1.1 (b) and 2.1(a) b. 0.15% on 1.2 (a) and 2.2(a).	0.50%
Note-1: a) Payment can be made on prorata basis of alphabetical numbering under different subheading provided above as decided by Engineer in Charge based on quantum of work and list of drawings. The contractor shall submit the total quantum of design input envisaged along with 1 st submission of design document. He may also submit break-up of activities for prorata basis of payment for approval of engineer in-charge.		
B-1.	CONSTRUCTION	UPTO 62%
4.	Construction of foundation and cold water basin upto top EL 100.	15%
5.	Construction of cold water outlet channel including its connection with cold water basin with cold water outlet channels.	5%
6.	On casting of tower frames including end walls, partition walls up to bottom fan deck slab.	15%
7.	On casting of fan deck slab and fan cylinders fill supporting structure.	13%
8.	On construction of trenches, sludge pit, pedestals, staircase with control room etc.	4%
9.	On construction of hot water trenches and tunnels on pro rata basis of its total length	10%
B-2.	SUPPLY & ERECTION OF MECHANICAL SYSTEM/EQUIPMENTS	UPTO 15%
10.	Supply, erection, testing, commissioning of mechanical system and components.	As per breakup provided at table-2 below
B-3	SUPPLY AND INSTALLATION OF C&I AND ELECTRICAL EQUIPMENTS.	UPTO 5%
11.	On supply of Instrumentation & Power Cables, Light channels/conduit, Instrumentation/electrical cable tray and metallic cable glands, etc.	1.5%
12.	On supply of Junction Box and Power supply distribution JB, Switch Mode Power Supply (SMPS), Marshalling Panels cum TT mounting panel, Control Power Supply Distribution Panels.	0.5%
13.	On supply of temperature sensor and transmitter (Thermowell, Line mounted RTDs with thermowell, RTDs, DIN Rail Mounted Temperature Transmitter, Multipoint temperature measurement assembly with RTDs, Head Mounted Temperature Transmitter) along with Instrument Support stand.	0.5%
14.	Vibration Monitoring System - Field vibration sensors, Vibration & key phasor Transmitters, JB's, key phasors, VMS panel & Calibration Kit and portable Shaker suitable for all sensors etc.	0.5%



15.	Supply of Electromagnetic & Multipath Clamp-on type Ultrasonic Flowmeter, Vibrating fork type level switch, Radar type level transmitter & RH and Temperature sensor-Transmitter along with Instrument Support stand	1%
16.	Balance items of instrumentation and electrical	0.5%
17.	On installation of Control & Instrumentation and electrical equipment and laying of Instrumentation & Power Cables	0.5%
C.	COMMISSIONING	
18.	On completion of commissioning of all components.	5%
D	PERFORMANCE TESTING	
19.	On performance testing of the tower (including hiring of test instruments).	10%
	Total	100%

Note-2:

- The Contractor shall submit the total list of equipment, materials (Mechanical, electrical and C&I) required for completeness of the system and the same shall be approved by NPCIL designer.
- For Sr. No. B-1, B-2 and B-3, payment shall be made on prorata basis for each IDCT tower.
- For Sr. No. B-1, B-2 and B-3, payment of construction/supply/erection/installation of structure, system, and components can be made on prorata basis based on appropriate units such as numbers, length, area, volume etc. Decision of Engineer in-charge shall be final in this regard.

Table-2: Detailed breakup of stage payment for mechanical system/components in continuation to Sr. no B-2: 10 of table-1 above.

B-2	SUPPLY & ERECTION OF MECHANICAL SYSTEM/EQUIPMENTS (upto 15%)						
Sl. No	ITEM DESCRIPTION	STAG E-1	STAGE-2	STAGE-3	STAGE-4	STAGE-5	Total percentage of Lumpsum Item
		SUPPLY	PRE-FABRICATION/ PREASS EMBLY	ERECT ION	TESTIN G AND COMMI SSIONI NG	SUBMISSI ON OF CCC	
		Percent of total value of each head (%)					
10.1	EXTERNAL HOT WATER PIPING & FITTINGS	35	20	35	5	5	9.0%



10.2	INTERNAL PIPING SYSTEM INCLUDING FITTINGS	35	20	35	5	5	0.75%
10.3	MATERIAL HANDLING EQUIPMENTS	50	5	30	10	5	1.0%
10.4	FILLS	35	25	30	5	5	0.4%
10.5	DRIFT ELEMATOR	35	25	30	5	5	0.7%
10.6	MOTOR	50	5	30	10	5	0.8%
10.7	GEAR BOX & TRANSMISSION SHAFT OF FOUR CELLS	40	10	40	5	5	1.0%
10.8	AXIAL FLOW FANS	50	5	30	10	5	0.5%
10.9	SCREENS GATES, LIFTING BEAMS AND ITS ASSOCIATED ACCESSORIES	40	20	30	5	5	0.8%
10.10	SUPPLY AND ACCEPTANCE OF MANDATORY SPARES	NA	NA	NA	NA	NA	0.05%

Note:

1. The stage payment of individual items/ scope will be done as indicated in the stage percentage of the total percentage of lump sum item given in table
2. Payment of IDCT-5A, 5B, 6A, 6B will be done proportionally.

The IDCT package (module M1_S3) is an EPC package. Complete Design and Engineering of the systems, components and civil structures are in scope of contractor as per tender specifications. Contractor has to submit design documents and drawings for NPCIL approval as per tender specifications. Contractor has to



prepare complete Bill of quantities (BOQ) based on their design. Consolidated BOQ shall also be submitted to NPCIL.

3.2 Mode of Measurement:

Mode of measurement when not specified in the tender shall be in accordance with relevant Indian Standard (IS) Specifications and in case the same is not spelt out in IS, Engineer in Charge (EIC) decision shall be final and binding on the contractor.

3.3 Payment for lump sum Item:

Lump sum cost of section-E of the Tender Document will remain unchanged irrespective of the change in items of works or quantities or rates w.r.t. to detailed design by bidder after award of work.

Quantities provided by the Contractor shall not form basis for any claim by the Contractor on account of increase/ decrease in quantity.

No extra payment on account of increase in quantities at the completion of the lumpsum item is permissible. Similarly, no deduction in payment will be done in case actual quantities fall short of the quantities given in the tender document and / or after rationalization of quantities after changes / modifications as mentioned above.

4.0 MODE OF MEASUREMENT AND PAYMENT FOR ITEM RATE (i.e. SECTION E-2):

4.1 Under section E-2, of the tender the payment shall be released based upon the joint measurement of actually executed quantities under each item of work irrespective of the variation in the quantities.

4.2 Mode of measurement when not specified in the tender shall be in accordance with relevant Indian Standard (IS) Specifications and in case the same is not spelt out in IS, Engineer in Charge (EIC) decision shall be final and binding on the contractor.

5.0 PRICE ADJUSTMENT COMPONENTS:

For IDCT and allied works, material/ labour component to be considered for the purpose of Contract Price adjustment are mentioned hereunder in ANNEXURE-M1S3-I.

ANNEXURE-M1S3-I

S.N.	Description	Stipulation
1	Price Adjustment / Escalation	Yes
3	VARIOUS COMPONENTS EXPRESSED AS A PERCENTAGE OF CONTRACT VALUE.	



S.N.	Description	Stipulation
	Unskilled labour component (lu)	19%
	Semiskilled labour component (lss)	0%
	Skilled labour component (ls)	5%
	Highly Skilled labour component (lhs)	0%
	MATERIAL COMPONENT	
	Ordinary Portland Cement (m)	08%
	Alloy steel Wire Rods (n)	27%
	Angles, Channels, Sections, Steel (Coated/not) (o)	3%
	_____ (p)	0%
	All Commodities (q)	20%
	P.O.L (HSD) component (d)	03%
	INDEX/ PRICES FORMING BASIS FOR ESCALATION	
	Ordinary Portland Cement (M)	Wholesale price index applicable to Ordinary Portland Cement as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
	M₀ Material Indices Value of Ordinary Portland Cement for the month of September, 2023	M₀ = 134.9
	Alloy Steel wire rods (N)	Wholesale price index applicable to Alloy Steel wire rods as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
	N₀ Material Indices Value of Alloy Steel Wire Rods for the month of September, 2023	N₀ = 140.1
	Angles, Channels, Sections, Steel (Coated/not) (O)	Wholesale price index applicable to Angles, Channels, Sections, Steel (Coated/not) as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
	O₀ Material Indices Value of Angles, Channels, Sections, Steel (Coated/not) for the month of September, 2023	O₀ = 148.2
	_____ (P)	NA



S.N.	Description	Stipulation
	All Commodities (Q)	Wholesale price indices applicable to All Commodities as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
	Q ₀ Material Indices Value of All commodities for the month of September, 2023	Q₀ = 151.8
	Labour (L)	Minimum wages in Rupees issued by office of Chief Labour Commissioner, Ministry of Labours & Employment as applicable on the last date of the month previous to the one under consideration. (Where in subscript “u”, “ss”, “s” and “hs” denotes the unskilled, semiskilled, skilled and highly skilled labour respectively) Kaiga-5&6, Site is coming under Area-C, as per Government Notification dated 19/01/2017.
	(L _{u0} & L _{s0}) Labour Indices Value of Labour for the month of September, 2023	L _{u0} = (will be issued later) L _{s0} = (will be issued later)
	P.O.L Component (HSD) (D)	Price of High Speed Diesel (HSD) to be considered at Nearest Diesel Pump to Kaiga-5&6
	D₀ Indices Value of P.O.L Component High-Speed Diesel (HSD) for the month of September, 2023	D₀ = (will be issued later)

6.0 PRICING THE CHANGE PROPOSAL: This Clause supplements Clause 19.4.3 (f) of GCC:

This clause is applicable to section E-2 (item rate) of Tender. The rates for altered, extra or substituted item of work shall be worked out in accordance with Clause 19.4.3 (f) of the General condition contract. In case the rates for extra, altered or substituted item are not available in any part of Module of Schedule of quantities



then the rate shall be determined based on Market rates, approved by the Engineer-incharge. A component of overheads and profit @ 15% will be considered for deriving market rates for extra, altered, and substituted items.

7.0 CONSTRUCTION PROGRAMME AND SCHEDULE:

7.1 CONTRACTOR'S SITE ORGANIZATION:

It is essential that the site organization is necessarily headed by an officer occupying a senior position in the organization having graduation in Civil Engineering from reputed institute with a minimum experience of fifteen (15) years in such project execution and shall be vested with powers to take prompt decision. It is also incumbent upon the Contractor that the progress of the contract is reviewed once a month with the project authorities. In addition to the above, periodical reviews at management level shall also be conducted as and when required.

Qualification and experience of Project managers, Engineers, Supervisors, safety officers deployed by contractor as per mobilization schedule in any discipline (Planning, Execution, QA, Safety etc.) shall be as provided at organization chart of contractor in line with requirement as stipulated in Section D of Module M1-S3 of the tender.

It is to be noted that the time is essence of contract and in order to meet the schedules and to meet targets the Contractor has to plan for work round the clock shift right from the initial stages. Necessary supervisory staff and the labour force shall be deployed in each shift to ensure that the schedules are met with.

The construction manpower shall be planned taking in to consideration the commencement and completion of various activities as detailed in this section.

The Contractor shall furnish a detailed site organization chart along with qualification of all the key personnel of execution, QA, Safety and housekeeping groups, he proposes to deploy on the works. The organization shall include the number and category of personnel of different grades for supervisory works.

Contractor shall set up an independent Quality Management and Project Safety Systems showing all interfaces and submit all the requisite details in line with the relevant Clauses of this section.

7.2 CONSTRUCTION PROGRAMME:

The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall deemed to be the essence of the contract and shall be reckoned from the date indicated in the work order. All works shall be



completed in accordance with the construction schedule given in **Annexure-II** hereunder.

ANNEXURE- II: COMPLETION PERIOD FOR VARIOUS ACTIVITIES

CONTRACT MILESTONES FOR IDCT AND ALLIED WORKS

Completion period for various activities for Unit - 5			
S.no.	Description	Activity Start Month (From Stipulated Work Start Date)	Activity Finish Month (From Stipulated Work Start Date)
		Unit-5*	
1.	Submission of Design & Approval		
a.	Submission of Thermal, Hydraulic, + Structural Design Basis reports of	00	02
b.	Approval of Seismic analysis and structural design reports of IDCT.	02	06
c.	Approval of Good for construction drawings of IDCT foundation.	06	09
d.	Approval of Good for construction drawings of IDCT superstructure.	08	10
e.	Submission & Approval of Design of pipelines, tunnels and trenches and other miscellaneous structures/systems/components.	08	10
f.	Approval of Good for construction drawings of miscellaneous structures/systems/components.	10	12
2.	Site Mobilization, establishment of batching plants, tower cranes, approval of concrete mix design etc.	04	08
3.	Construction of Foundation of IDCT and completion of cooling water basin	09	15
4.	Column from top of foundation upto deck slab	12	22
5.	Construction of Trench/Cold Water Tunnels/ Pedestals, Erection of Hot Water Piping, Cabling & all Instrumentation, etc	15	30



6.	Slab for Fan deck	18	28
7.	Casting of fan, gear box, motor, fill supporting structure, PVC fills, internal finishing and painting of cold water basin and internal members.	24	32
8.	Erection of fan, motor, etc.	30	33
9.	Commissioning	31	36

Note:

1. Construction of IDCT- 5A & IDCT- 5B shall be started simultaneously and completed in 36 months. The date for start of work shall be reckoned from completion of 12th months from date of Purchase Order.
2. Construction of IDCT- 6A & IDCT- 6B shall have a lag of 6(six) months from Unit- 5 and shall be completed in 42 months.
3. The contractor shall submit the Good for construction drawings three month prior to the scheduled requirement at site.

The contractor shall submit a detailed construction time schedule, keeping the phasing of the work generally in line with the construction schedule proposed by NPCIL, for the approval of the Engineer which shall form the part of the contract. The contractor shall strictly adhere to such an approved L-1 network program submitted in Primavera software or any other software.

The work shall commence and complete in accordance with the schedule given in **Annexure-II**. Monsoon and other inclement weather will not be considered as a reason for extension of time or any overstay compensation. Contractor shall prepare an overall and individual tower wise network to meet target dates.

The contractor shall prepare an overall activity network and submit for the approval of NPCIL. Further to the above, contractor shall prepare building / structure / tower wise detailed activity network showing all the activities to be completed to meet the scheduled targets. The building / structure /tower wise network shall contain the resources deployment plan of each activity and the invoicing pattern.

Contractor shall therefore submit Level- I, Level- II, Level- III and Level- IV networks for all the construction activities to meet the various target dates as per the tender document and also prepare, submit six monthly rolling plans for execution of the work along with details of weekly quantities to be executed for the activities on day to day basis as required by the Engineer for monitoring the progress of work. The detailed methodology for progress reporting & monitoring and planning of the job shall be finalized immediately on commencement of job.



The contractor shall furnish the information in the requisite format at the respective periodicity as detailed below in both hard and soft format:

Sl. No.	Report / Information	Reporting Periodicity	Remarks
1.	Overall Network	Yearly	
2.	Overall contract time and progress chart	Quarterly	
3.	Tower wise detailed network including resource and invoice	Quarterly	

8.0 REVIEW/ APPROVAL OF CONTRACTOR'S DOCUMENTS:

The contractor shall prepare and submit following documents for approval within one month of schedule start date of work:

8.1 Contractors work specific QA Manual:

Among other things this document shall also include roles and responsibilities of Project Manager, Works Manager and other key officials/ section In-charges and staff members of construction team having requisite qualification and experience connected with various identified construction activities in the form of an Organization Chart who shall be responsible to take instruction from NPCIL Engineer-in-Charge.

8.2 Construction Methodology for Contractor's Scope of Works:

A comprehensive construction methodology covering entire scope of contractor's works shall be prepared and submitted by the Contractor. The methodology shall also include work procedures and QA Plans for activities associated with the construction of all the buildings and structures covered in the scope of contract. Prior to starting of each activity, work procedure shall be prepared by the Contractor and submitted to Engineer-in-charge for acceptance.

8.3 Construction Pre-requisites:

The Contractor shall submit a time-based schedule of Site Mobilization, establishment of site facilities, deployment of Plant & Machineries, qualification of construction materials & validation of construction processes such as concrete mix design as necessary for starting and completion of construction works as per specified work schedule.



9.0 STORAGE OF MATERIAL:

Contractor shall have sufficient storage area/godowns for storing reinforcement steel, structural steel, embedded parts, cement and all other items required for work.

Contractor to note that some items such as polysulphide compound, epoxy paints are required to be stored in air-conditioned rooms.

10.0 PERFORMANCE TEST & GUARANTEE BOND:

Contractor shall guarantee that the Induced Draught Cooling Towers constructed will meet the ratings and thermal performance requirements at two points of operation conditions indicated in the specifications. The Cooling Tower Institute (CTI) approved test agency proposed by the Contractor shall be got approved from NPCIL. Performance Guarantee (PG) Test shall be conducted on minimum two towers with all cells in operation.

The Contractor shall submit a Bank Guarantee/Insurance Surety Bond from a scheduled commercial bank (other than co-operative bank) for an amount of **Rs. 6, 00,00,000/- (Rupees six crores only)** toward thermal performance liabilities of IDCT before expiry of defect liability period for a period so as to make guarantee period good for a total period of 5 years (plus 3 month's grace period) or after acceptance of the Performance Test report by NPCIL whichever is earlier.

If the contractor fails to conduct the performance guarantee test in above prescribed time due to any reason, then Corporation reserves the rights to encash the performance guarantee bond amount.

Bidder shall guarantee that the tower offered shall meet the ratings and performance requirements at two points of operation conditions indicated in the specifications. The guaranteed performance of the tower shall be demonstrated by the contractor after evaluating of P. G. test considering CTI - ATC 105 tolerances. If the test results are deviated from the guaranteed values the contractor shall be given an opportunity to modify the tower as required to enable it to meet the guarantees. In such cases the P. G. test shall be repeated within three months from the date on which the tower is ready for retest. The cost of modification, including labour, materials and additional testing shall be borne by the Contractor. The chance for repeat testing will be given only once during the contract period. All the modifications carried out by the Contractor in one cooling tower to meet the contractual requirements shall be carried out free of cost to the Purchaser in other towers. PG Test shall be conducted by CTI approved test agency in the presence of the Purchaser. The testing agency proposed by the Contractor shall be approved by the Purchaser. Testing agency shall have tested minimum two towers of similar rating or 80% of current rating within last five years.



In case the actual cold water temperature as determined from the PG test is higher than the predicted value and subsequently, the contractor fails to rectify the defect within 3 months after PG test, the purchaser reserves the right to encash performance guarantee bond and rectify the defect himself.

The performance guarantee bond shall be released to the contractor after acceptance of the performance guarantee test report by NPCIL.

11.0 CONSTRUCTION MATERIALS TO BE BROUGHT BY THE CONTRACTOR:

All materials required for the work shall be supplied by the Contractor from NPCIL approved source. As guidance to the Contractor, an indicative (not exhaustive) list of reputed/ suggestive manufacturers of various materials is given in Annexure-II of Section C Notes for submodule M1S1 to M1S4. The Contractor shall to his satisfaction evaluate the manufacturers from the list of suggestive manufacturers as per the Contractor's in-house procedure and also evaluate the source where the same has not been qualified by NPCIL and in respect of other proposed manufacturers not included in the suggestive manufacturer's list and shall put up the evaluation report for approval of NPCIL before placement of PO. The purchaser will provide the list of approved manufacturers after placement of PO.


23/04/2025

विपिन कुमार त्रिवेदी, (Vipin Kumar Trivedi)

सह निदेशक (सीएमएम) Associate Director, C&MM

**For and on behalf of Nuclear Power Corporation of India Limited
(The Purchaser)**



Nuclear Power Corporation of India Limited – KAIGA –5 6
CIVIL MODULE: M1-S4-Misc. Civil Works
Stages of Payment/ Payment schedule

Annexure-64

Stages of Payment: Planning & Design Works

All running bills & final bill shall be made to the contractor in accordance with the following schedule:

Sr. No.	Description of activity	Individual %	Cumulative %
1	Planning, designing, geotech survey & submission of drawings	3% of item No. 1 to 8 & 10 to 13 of SOQR	
1.01	Submission of Design Basis Report after vetting	0.25	0.25
1.02	Submission of Design Report after vetting	0.25	0.5
1.03	Submission of General Arrangement drawings after vetting	0.25	0.75
1.04	Submission of all architectural drawings as per requirement	0.25	1
1.05	Submission of all vetted steel structural, Concrete forming & Reinforcement Drawings	0.25	1.25
1.06	Approval of all design reports	0.25	1.5
1.07	Approval of all architectural drawings & issuance of the same for construction	0.25	1.75
1.08	Approval of all RCC / structural drawings & issuance of the same for construction	0.25	2
1.09	Submission of drawings for electrical, mechanical / piping, plumbing, fire fighting & internal & external services	0.25	2.25
1.1	Submission of drawings for electrical, mechanical / piping, plumbing, fire fighting & internal & external services	0.25	2.5
1.11	submission of geotech report / drawings after execution of geotechnical works	0.25	2.75
1.12	Approval of geotech report / drawings	0.25	3



Nuclear Power Corporation of India Limited – KAIGA –5 6
CIVIL MODULE: M1-S4-Misc. Civil Works
Stages of Payment/ Payment schedule

Stages of Payment: Project Building

All running bills & final bill shall be made to the contractor in accordance with the following schedule:

Sr. No.	Description of activity	Individual %	Cumulative %
1	Construction of Project Office Building EPC basis / mode.	92% of item No. 1 of SOQR	
1.01	Completion of excavation in all type of strata including hard rock & its disposal	1	1
1.02	PCC & completion of footing / foundation	0.5	1.5
1.03	Concreting of columns upto Plinth level & backfilling	0.5	2
1.04	concreting of plinth beams & masonry works below plinth, if required.	1	3
1.05	Concreting of all columns, beams upto Ground floor, concreting of GF slab	2.5	5.5
1.06	Concreting of all columns, beams upto First floor, concreting of FF slab	2.5	8
1.07	Concreting of all columns, beams upto Second floor, concreting of SF slab	3	11
1.08	Concreting of all columns, beams upto Third floor, concreting of TF slab	3	14
1.09	Concreting of all columns, beams upto Fourth floor, concreting of Fourth Floor slab	3	17
1.1	Completion of masonry work upto lintel level in GF	1	18
1.11	Completion of masonry work upto lintel level in FF	1	19
1.12	Completion of masonry work upto lintel level in SF	1	20
1.13	Completion of masonry work upto lintel level in TF	1	21
1.14	Completion of masonry work upto lintel level in fourth Floor	1	22
1.15	Completion of remaining masonry work in GF	1	23
1.16	Completion of remaining masonry work in FF	1	24
1.17	Completion of remaining masonry work in SF	1	25
1.18	Completion of remaining masonry work in TF	1	26
1.19	Completion of remaining masonry work in Fourth Floor	1	27
1.2	Waterproofing in terrace & mummy rooms	0.5	27.5
1.21	Waterproofing in all toilet / sunken areas	0.25	27.75
1.22	Completion of internal Plaster in GF	0.5	28.25
1.23	Completion of internal Plaster in FF	0.5	28.75
1.24	Completion of internal Plaster in SF	0.5	29.25
1.25	Completion of internal Plaster in TF	0.5	29.75
1.26	Completion of internal Plaster in Fourth Floor	0.5	30.25
1.27	Internal Painting of ground Floor	0.75	31
1.28	Internal Painting of first Floor	0.75	31.75



Nuclear Power Corporation of India Limited – KAIGA –5 6

CIVIL MODULE: M1-S4-Misc. Civil Works

Stages of Payment/ Payment schedule

Sr. No.	Description of activity	Individual %	Cumulative %
1.29	Internal Painting of second Floor	0.75	32.5
1.3	Internal Painting of third Floor	0.75	33.25
1.31	Internal Painting of fourth Floor	0.75	34
1.32	Granite works in all floors	1	35
1.33	Marble works at all floors	0.5	35.5
1.34	Flooring / skirting of ground floor incl. stair case	1	36.5
1.35	Flooring / skirting of first floor incl. stair case	1	37.5
1.36	Flooring / skirting of second floor incl. stair case	1	38.5
1.37	Flooring / skirting of third floor incl. stair case	1	39.5
1.38	Flooring / skirting of fourth floor incl. stair case	1	40.5
1.39	Fixing of doors & windows at all floors	2	42.5
1.4	False ceiling of ground floor	0.5	43
1.41	False ceiling of first floor.	0.5	43.5
1.42	False ceiling of second floor	0.5	44
1.43	False ceiling of third floor	0.5	44.5
1.44	False ceiling of fourth floor	0.5	45
1.45	Complete external plaster	4	49
1.46	completion of external painting	4	53
1.47	Structural glazing as per approved drawings	2	55
1.48	Wall cladding as per approved drawings	2	57
1.49	completion of internal water supply piping	1	58
1.5	completion of internal sanitary piping	1	59
1.51	fixing of all sanitary fitting, fixtrure	2	61
1.52	external piping for water supply incl. all valves, fitting	1	62
1.53	external piping for sanitary works	1	63
1.54	completion of area development within boundary of building incl. landscaping & hardscaping	3	66
1.55	railing & parapets at all locations	0.5	66.5
1.56	Electrical Works incl. DG, Lifts, power backups	13	79.5
1.57	Firefighting works	0.5	80
1.58	Ventilation works	1	81
1.59	Interior works	0.5	81.5
1.6	Accoustic Works	0.5	82
1.61	On completion of entire works as given in scope & as per directives of engineer	10	92
2	Submission of all as-built drawings, test document & complete handing over of the building	5	



Nuclear Power Corporation of India Limited – KAIGA –5 6
CIVIL MODULE: M1-S4-Misc. Civil Works
Stages of Payment/ Payment schedule

Stages of Payment: O&M Building

All running bills & final bill shall be made to the contractor in accordance with the following schedule:

Sr. No.	Description of activity	Individual %	Cumulative %
1	Construction of O & M Building on EPC basis / mode.	92% of item No. 1 of SOQR	
1.01	Completion of excavation in all type of strata including hard rock & its disposal	1	1
1.02	PCC & completion of footing / foundation	0.5	1.5
1.03	Concreting of columns upto Plinth level & backfilling	0.5	2
1.04	concreting of plinth beams & masonry works below plinth, if required.	1	3
1.05	Concreting of all columns, beams upto Ground floor, concreting of GF slab	3	6
1.06	Concreting of all columns, beams upto First floor, concreting of FF slab	3	9
1.07	Concreting of all columns, beams upto Second floor, concreting of SF slab	3	12
1.08	Concreting of all columns, beams upto Third floor, concreting of TF slab	2.5	14.5
1.09	Completion of masonry work upto lintel level in GF	1	15.5
1.1	Completion of masonry work upto lintel level in FF	1	16.5
1.11	Completion of masonry work upto lintel level in SF	1	17.5
1.12	Completion of masonry work upto lintel level in TF	1	18.5
1.13	Completion of remaining masonry work in GF	1	19.5
1.14	Completion of remaining masonry work in FF	1	20.5
1.15	Completion of remaining masonry work in SF	1.5	22
1.16	Completion of remaining masonry work in TF	2	24
1.17	Waterproofing in terrace & mummy rooms	1	25
1.18	Waterproofing in all toilet / sunken areas	0.25	25.25
1.19	Completion of Internal Plaster in GF	0.5	25.75
1.2	Completion of internal Plaster in FF	0.5	26.25
1.21	Completion of internal Plaster in SF	0.5	26.75
1.22	Completion of internal Plaster in TF	0.5	27.25
1.23	Internal Painting of ground Floor	0.75	28
1.24	Internal Painting of first Floor	0.75	28.75
1.25	Internal Painting of second Floor	0.75	29.5
1.26	Internal Painting of third Floor	0.75	30.25
1.27	Granite works in all floors	1	31.25
1.28	Marble works at all floors	0.5	31.75
1.29	Flooring / skirting of ground floor incl. stair case	1.25	33
1.3	Flooring / skirting of first floor incl. stair case	1.25	34.25
1.31	Flooring / skirting of second floor incl. stair case	1.25	35.5
1.32	Flooring / skirting of third floor incl. stair case	1.25	36.75
1.33	Fixing of doors & windows at all floors	2.25	39



Nuclear Power Corporation of India Limited – KAIGA –5 6
CIVIL MODULE: M1-S4-Misc. Civil Works
Stages of Payment/ Payment schedule

Sr. No.	Description of activity	Individual %	Cumulative %
1.34	False ceiling of ground floor	0.5	39.5
1.35	False ceiling of first floor	0.5	40
1.36	False ceiling of second floor	0.5	40.5
1.37	False ceiling of third floor	0.5	41
1.38	Complete external plaster	4	45
1.39	completion of external painting	4	49
1.4	Structural glazing as per approved drawings	2	51
1.41	Wall cladding as per approved drawings	2	53
1.42	completion of internal water supply piping	2	55
1.43	completion of internal sanitary piping	1	56
1.44	fixing of all sanitary fitting, fixtrure	3	59
1.45	external piping for water supply incl. all valves, fitting	2	61
1.46	external piping for sanitary works	2	63
1.47	completion of area development within boundary of building incl. landscaping & hardscaping	3	66
1.48	railing & parapets at all locations	0.5	66.5
1.49	Electrical Works incl. DG, Lifts, power backups	13	79.5
1.5	Firefighting works	0.5	80
1.51	Ventilation system works	1	81
1.52	Interior works	0.5	81.5
1.53	Accoustic Works	0.5	82
1.54	On completion of entire works as given in scope & as per directives of engineer	10	92
2	Submission of all as-built drawings, test document & complete handing over of the building	5	



Nuclear Power Corporation of India Limited – KAIGA –5 6
CIVIL MODULE: M1-S4-Misc. Civil Works
Stages of Payment/ Payment schedule

Stages of Payment: Canteen Building

All running bills & final bill shall be made to the contractor in accordance with the following schedule:

Sr. No.	Description of activity	Individual %	Cumulative %
1	Construction of Canteen Building on EPC basis / mode.	92% of item No. 1 of SOQR	
1.01	Completion of excavation in all type of strata including hard rock & its disposal	1	1
1.02	PCC & completion of footing / foundation	0.5	1.5
1.03	Concreting of columns upto Plinth level & backfilling	0.5	2
1.04	concreting of plinth beams & masonry works below plinth, if required.	1	3
1.05	Concreting of all columns, beams upto Ground floor, concreting of GF slab	5	8
1.06	Concreting of all columns, beams upto First floor, concreting of FF slab	5	13
1.07	Completion of masonry work upto lintel level in GF	1	14
1.08	Completion of masonry work upto lintel level in FF	1	15
1.09	Completion of remaining masonry work in GF	2	17
1.1	Completion of remaining masonry work in FF	2	19
1.11	Waterproofing in terrace & mummy rooms	1	20
1.12	Waterproofing in all toilet / sunken areas	0.5	20.5
1.13	Completion of internal Plaster in GF	1	21.5
1.14	Completion of internal Plaster in FF	1	22.5
1.15	Internal Painting of ground Floor	2	24.5
1.16	Internal Painting of first Floor	2	26.5
1.17	Granite works in all floors	3	29.5
1.18	Marble works at all floors	3	32.5
1.19	Flooring / skirting of ground floor incl. stair case	3	35.5
1.2	Flooring / skirting of first floor incl. stair case	3	38.5
1.21	Fixing of doors & windows at all floors	2	40.5
1.22	False ceiling of ground floor	0.5	41
1.23	False ceiling of first floor	0.5	41.5
1.24	Complete external plaster	4	45.5
1.25	completion of external painting	4	49.5
1.26	Structural glazing as per approved drawings	2	51.5
1.27	Wall cladding as per approved drawings	2	53.5
1.28	completion of internal water supply piping	2	55.5
1.29	completion of internal sanitary piping	1	56.5
1.3	fixing of all sanitary fitting, fixtrure	3	59.5
1.31	external piping for water supply incl. all valves, fitting	2	61.5
1.32	external piping for sanitary works	2	63.5
1.33	completion of area development within boundary of building incl. landscaping & hardscaping	3	66.5



Nuclear Power Corporation of India Limited – KAIGA –5 6
CIVIL MODULE: M1-S4-Misc. Civil Works
Stages of Payment/ Payment schedule

Sr. No.	Description of activity	Individual %	Cumulative %
1.34	railing & parapets at all locations	0.5	67
1.35	Electrical Works incl. UPS, earthing, lightning protections, power backups	13	80
1.36	Firefigting works	0.5	80.5
1.37	Ventilation system works	1	81.5
1.38	Interior works	0.5	82
1.39	On completion of entire works as given in scope & as per directives of engineer	10	92
2	Submission of all as-built drawings, test document & complete handing over of the building	5	



Nuclear Power Corporation of India Limited – KAIGA –5 6
CIVIL MODULE: M1-S4-Misc. Civil Works
Stages of Payment/ Payment schedule

Stages of Payment: O&M WH Building

All running bills & final bill shall be made to the contractor in accordance with the following schedule:

Sr. No.	Description of activity	Individual %	Cumulative %
1	Construction of O & M Ware house on EPC basis / mode.	92% of item No. 1 of SOQR	
1.01	Completion of excavation in all type of strata including hard rock & its disposal	1	1
1.02	PCC & completion of footing / foundation	1	2
1.03	Concreting of columns upto Plinth level & backfilling	1	3
1.04	concreting of plinth beams & masonry works below plinth, if required.	1	4
1.05	Concreting of all columns, beams upto Ground floor, concreting of GF slab	7	11
1.06	Concreting of all columns, beams upto First floor, concreting of FF slab	7	18
1.07	Completion of masonry work upto lintel level in GF	1	19
1.08	Completion of masonry work upto lintel level in FF	1	20
1.09	Completion of remaining masonry work in GF	2	22
1.1	Completion of remaining masonry work in FF	2	24
1.11	Waterproofing in terrace & mummy rooms	1	25
1.12	Waterproofing in all toilet / sunken areas	1	26
1.13	Completion of internal Plaster in GF	1	27
1.14	Completion of internal Plaster in FF	1	28
1.15	Internal Painting of ground Floor	3	31
1.16	Internal Painting of first Floor	3	34
1.17	Granite works in all floors	0.5	34.5
1.18	Marble works at all floors	0.5	35
1.19	Flooring / skirting of ground floor incl. stair case	3	38
1.2	Flooring / skirting of first floor incl. stair case	3	41
1.21	Fixing of doors & windows at all floors	2	43
1.22	False ceiling of ground floor	0.5	43.5
1.23	False ceiling of first floor	0.5	44
1.24	Complete external plaster	5	49
1.25	completion of external painting	5	54
1.26	Structural glazing as per approved drawings	2	56
1.27	Wall cladding as per approved drawings	2	58
1.28	completion of internal water supply piping	2	60
1.29	completion of internal sanitary piping	1	61
1.3	fixing of all sanitary fitting, fixtrure	1	62
1.31	external piping for water supply incl. all valves, fitting	2	64
1.32	external piping for sanitary works	2	66
1.33	completion of area development within boundary of building incl. landscaping & hardscaping	3	69



Nuclear Power Corporation of India Limited – KAIGA –5 6
CIVIL MODULE: M1-S4-Misc. Civil Works
Stages of Payment/ Payment schedule

Sr. No.	Description of activity	Individual %	Cumulative %
1.34	railing & parapets at all locations	1	70
1.35	Electrical Works incl. UPS, earthing, lightning protections, power backups	8	78
1.36	Firefighting wrks	1	79
1.37	Ventilation system works	1	80
1.38	Hoist & mechanical works	2	82
1.39	On completion of entire works as given in scope & as per directives of engineer	10	92
2	Submission of all as-built drawings, test document & complete handing over of the building	5	



Nuclear Power Corporation of India Limited – KAIGA –5 6
CIVIL MODULE: M1-S4-Misc. Civil Works
Stages of Payment/ Payment schedule

Stages of Payment: RCA Shop

All running bills & final bill shall be made to the contractor in accordance with the following schedule:

Sr. No.	Description of activity	Individual %	Cumulative %
1	Construction of Reactor Component Assembly (RCA) Shop on EPC basis / mode.	92% of item No. 1 of SOQR	
1.01	Completion of excavation in all type of strata including hard rock & its disposal	1	1
1.02	PCC & completion of footing / foundation	1	2
1.03	Concreting of columns upto Plinth level & backfilling	1	3
1.04	concreting of plinth beams & masonry works below plinth, if required.	1	4
1.05	Concreting of all columns, beams upto Ground floor, concreting of GF slab	7	11
1.06	Concreting of all columns, beams upto First floor, concreting of FF slab	7	18
1.07	Completion of masonry work upto lintel level in GF	1	19
1.08	Completion of masonry work upto lintel level in FF	1	20
1.09	Completion of remaining masonry work in GF	2	22
1.1	Completion of remaining masonry work in FF	2	24
1.11	Water proofing in terrace & mummy rooms	2	26
1.12	Waterproofing in all toilet / sunken areas	1	27
1.13	Completion of internal Plaster in GF	2	29
1.14	Completion of internal Plaster in FF	2	31
1.15	Internal Painting of ground Floor	3	34
1.16	Internal Painting of first Floor	3	37
1.17	Granite works in all floors	0.5	37.5
1.18	Marble works at all floors	0.5	38
1.19	Flooring / skirting of ground floor incl. stair case	3	41
1.2	Flooring / skirting of first floor incl. stair case	3	44
1.21	complete structural steel works	3	47
1.22	Fixing of doors & windows at all floors	2	49
1.23	False ceiling of ground floor	0.5	49.5
1.24	False ceiling of first floor	0.5	50
1.25	Complete external plaster	4	54
1.26	completion of external painting	5	59
1.27	Structural glazing as per approved drawings	0.5	59.5
1.28	Wall cladding as per approved drawings	0.5	60
1.29	completion of internal water supply piping	2	62
1.3	completion of internal sanitary piping	1	63
1.31	fixing of all sanitary fitting, fixtrure	2	65
1.32	external piping for water supply incl. all valves, fitting	2	67
1.33	external piping for sanitary works	2	69



Nuclear Power Corporation of India Limited – KAIGA –5 6

CIVIL MODULE: M1-S4-Misc. Civil Works

Stages of Payment/ Payment schedule

Sr. No.	Description of activity	Individual %	Cumulative %
1.34	completion of area development within boundary of building incl. landscaping & hardscaping	2	71
1.35	railing & parapets at all locations	1	72
1.36	Electrical Works incl. UPS, earthing, lightning protections, power backups	7	79
1.37	Firefighting works	1	80
1.38	Ventilation system works	1	81
1.39	Hoist & mechanical works	1	82
1.4	On completion of entire works as given in scope & as per directives of engineer	10	92
2	Submission of all as-built drawings, test document & complete handing over of the building	5	



Nuclear Power Corporation of India Limited – KAIGA –5 6
CIVIL MODULE: M1-S4-Misc. Civil Works
Stages of Payment/ Payment schedule

Stages of Payment: RC Shed

All running bills & final bill shall be made to the contractor in accordance with the following schedule:

Sr. No.	Description of activity	Individual %	Cumulative %
1	Construction of Reactor Component (RC) shed on EPC basis / mode.	92% of item No. 1 of SOQR	
1.01	Completion of excavation in all type of strata including hard rock & its disposal	5	5
1.02	PCC & completion of footing / foundation	5	10
1.03	Concreting of columns upto Plinth level & backfilling	3	13
1.04	concreting of plinth beams & masonry works below plinth, if required.	3	16
1.05	Structural steel works for all columns, beams upto Ground floor	7	23
1.06	Completion of masonry work upto lintel level in GF	1	24
1.07	Completion of wall cladding works in GF	10	34
1.08	Flooring / skirting of ground floor incl. stair case	5	39
1.09	complete structural steel works	5	44
1.1	Fixing of doors & windows at all floors	3	47
1.11	completion of roofing works	10	57
1.12	complete Wall cladding as per approved drawings	11	68
1.13	completion of area development within boundary of building incl. landscaping & hardscaping	2	70
1.14	Electrical Works incl. UPS, earthing, lightning protections, power backups	11	81
1.15	Firefighting works	1	82
1.16	On completion of entire works as given in scope & as per directives of engineer	10	92
2	Submission of all as-built drawings, test document & complete handing over of the building	5	



Nuclear Power Corporation of India Limited – KAIGA –5 6
CIVIL MODULE: M1-S4-Misc. Civil Works
Stages of Payment/ Payment schedule

Stages of Payment: ES Ball Filling shed

All running bills & final bill shall be made to the contractor in accordance with the following schedule:

Sr. No.	Description of activity	Individual %	Cumulative %
1	Construction of EndShield Ball Filling Shed on EPC basis / mode.	92% of item No. 1 of SOQR	
1.01	Completion of excavation in all type of strata including hard rock & its disposal	5	5
1.02	PCC & completion of footing / foundation	5	10
1.03	Concreting of columns upto Plinth level & backfilling	3	13
1.04	concreting of plinth beams & masonry works below plinth, if required.	3	16
1.05	Structural steel works for all columns, beams upto Ground floor	7	23
1.06	Completion of masonry work upto lintel level in GF	1	24
1.07	Completion of wall cladding works in GF	10	34
1.08	Flooring / skirting of ground floor incl. stair case	5	39
1.09	complete structural steel works	5	44
1.1	Fixing of doors & windows at all floors	3	47
1.11	completion of roofing works	10	57
1.12	complete Wall cladding as per approved drawings	11	68
1.13	completion of area development within boundary of building incl. landscaping & hardscaping	2	70
1.14	Electrical Works incl. UPS, earthing, lightning protections, power backups	5	75
1.15	Firefighting works	1	76
1.16	Hoist & mechanical works	6	82
1.18	On completion of entire works as given in scope & as per directives of engineer	10	92
2	Submission of all as-built drawings, test document & complete handing over of the building	5	



Nuclear Power Corporation of India Limited – KAIGA –5 6
CIVIL MODULE: M1-S4-Misc. Civil Works
Stages of Payment / Payment schedule

Stages of Payment: Calandria Shed

All running bills & final bill shall be made to the contractor in accordance with the following schedule:

Sr. No.	Description of activity	Individual %	Cumulative %
1	Construction of Calandria storage Shed on EPC basis / mode.	92% of item No. 1 of SOQR	
1.01	Completion of excavation in all type of strata including hard rock & its disposal	5	5
1.02	PCC & completion of footing / foundation	5	10
1.03	Concreting of columns upto Plinth level & backfilling	3	13
1.04	concreting of plinth beams & masonry works below plinth, if required.	3	16
1.05	Structural steel works for all columns, beams upto Ground floor	7	23
1.06	Completion of masonry work upto lintel level in GF	1	24
1.07	Completion of wall cladding works in GF	10	34
1.08	Flooring / skirting of ground floor incl. stair case	5	39
1.09	complete structural steel works	5	44
1.1	Fixing of doors & windows at all floors	3	47
1.11	completion of roofing works	10	57
1.12	complete Wall cladding as per approved drawings	11	68
1.13	completion of area development within boundary of building. incl. landscaping & hardscaping	2	70
1.14	Electrical Works incl. UPS, earthing, lightning protections, power backups	11	81
1.15	Firefighting works	1	82
1.16	On completion of entire works as given in scope & as per directives of engineer	10	92
2	Submission of all as-built drawings, test document & complete handing over of the building	5	



Nuclear Power Corporation of India Limited – KAIGA –5 6
CIVIL MODULE: M1-S4-Misc. Civil Works
Stages of Payment/ Payment schedule

Stages of Payment: STP

All running bills & final bill shall be made to the contractor in accordance with the following schedule:

Sr. No.	Description of activity	Individual %	Cumulative %
1	Construction of Sewage Treatment Plant (STP) on EPC mode	92% of item No. 1 of SOQR	
1.01	Completion of excavation in all type of strata including hard rock & its disposal for STP excl. sewer lines	2	2
1.02	Completion of all civil works including concreting of tanks, chambers	7	9
1.03	complete construction of panel room in all respect incl. panels, lighting, windows, painting, doors, flooring, etc.	3	12
1.04	Completion of excavation in all type of strata including hard rock & its disposal for sewer lines	3	15
1.05	laying & fixing of sewer lines / networks	13.5	28.5
1.06	Supply & erection of mechanical items incl. pumps, tanks, valves, etc.	10	38.5
1.07	commissioning of entire system	25	63.5
1.08	completion of area development within boundary of building incl. landscaping & hardscaping	2	65.5
1.09	Electrical Works incl. UPS, earthing, lightning protections, power backups	2.5	68
1.1	Firefighting works	0.5	68.5
1.11	C&I / Communication system works	1	69.5
1.12	maintainance after satisfactory completion of one year	7.5	77
1.13	maintainance after satisfactory completion of second year	10	87
1.14	On completion of entire works as given in scope & as per directives of engineer	5	92
2	Submission of all as-built drawings, test document & complete handing over of the building	5	



Nuclear Power Corporation of India Limited – KAIGA –5 6
CIVIL MODULE: M1-S4-Misc. Civil Works
Stages of Payment/ Payment schedule

Stages of Payment: BARCIS Shop

All running bills & final bill shall be made to the contractor in accordance with the following schedule:

Sr. No.	Description of activity	Individual %	Cumulative %
1	Construction of BARCIS Shop on EPC basis / mode.	92% of item No. 1 of SOQR	
1.01	Completion of excavation in all type of strata including hard rock & its disposal	5	5
1.02	PCC & completion of footing / foundation	5	10
1.03	Concreting of columns upto Plinth level & backfilling	5	15
1.04	concreting of plinth beams & masonry works below plinth, if required.	5	20
1.05	Concreting of all columns, beams upto Ground floor, concreting of GF slab	7	27
1.06	Completion of masonry work upto lintel level in GF	5	32
1.07	Completion of remaining masonry work in GF	5	37
1.08	Waterproofing in terrace & mummy rooms	2	39
1.09	Completion of internal Plaster in GF	5	44
1.1	Internal Painting of ground Floor	5.5	49.5
1.11	Flooring / skirting of ground floor incl. stair case	6	55.5
1.12	complete structural steel works	3	58.5
1.13	Fixing of doors & windows at all floors	2	60.5
1.14	False ceiling of ground floor	0.5	61
1.15	Complete external plaster	4	65
1.16	completion of external painting	6	71
1.17	completion of area development within boundary of building incl. landscaping & hardscaping	2	73
1.18	railing & parapets at all locations	1	74
1.19	Electrical Works incl. UPS, earthing, lightning protections, power backups	7	81
1.2	Firefighting works	1	82
1.21	On completion of entire works as given in scope & as per directives of engineer	10	92
2	Submission of all as-built drawings, test document & complete handing over of the building	5	



Nuclear Power Corporation of India Limited – KAIGA –5 6
CIVIL MODULE: M1-S4-Misc. Civil Works
Stages of Payment/ Payment schedule

Stages of Payment: Open storage area

All running bills & final bill shall be made to the contractor in accordance with the following schedule:

Sr. No.	Description of activity	Individual %	Cumulative %
1	Construction of Open storage area on EPC basis / mode.	92% of item No. 1 of SOQR	
1.01	Completion of site grading incl. hard rock if exposed & its disposal	5	5
1.02	Grade slab	50	55
1.03	completion of area development within boundary of building incl. landscaping & hardscaping	4	59
1.04	Electrical Works incl. UPS, earthing, lightning protections, power backups	6	65
1.05	Firefighting works	2	67
1.07	Hoist & mechanical works	15	82
1.08	On completion of entire works as given in scope & as per directives of engineer	10	92
2	Submission of all as-built drawings, test document & complete handing over of the building	5	



Nuclear Power Corporation of India Limited.– KAIGA –5 6
CIVIL MODULE: M1-S4-Misc. Civil Works
Stages of Payment/ Payment schedule

Stages of Payment: IDCT Chemical Dosing Shed

All running bills & final bill shall be made to the contractor in accordance with the following schedule.

Sr. No.	Description of activity	Individual %	Cumulative %
1	Construction of IDCT Chemical dosing shed on EPC basis / mode.	92% of item No. 1 of SOQR	
1.01	Completion of excavation in all type of strata including hard rock & its disposal	5	5
1.02	PCC & completion of footing / foundation	5	10
1.03	Concreting of columns upto Plinth level & backfilling	5	15
1.04	concreting of plinth beams & masonry works below plinth, if required.	5	20
1.05	Concreting of all columns, beams upto Ground floor,	7	27
1.06	Completion of masonry work upto lintel level in GF	5	32
1.07	Completion of remaining masonry work in GF	5	37
1.08	Completion of internal Plaster in GF	5	42
1.09	Internal Painting of ground Floor	2	44
1.1	Flooring / skirting of ground floor incl. stair case	6	50
1.11	complete structural steel works	9	59
1.12	Fixing of doors & windows at all floors	2	61
1.13	Complete external plaster	4	65
1.14	completion of external painting	5	70
1.15	completion of area development within boundary of building incl. landscaping & hardscaping	2	72
1.16	railing & parapets at all locations	1	73
1.17	Electrical Works incl. UPS, earthing, lightning protections, power backups	7	80
1.18	Firefighting works	1	81
1.19	C&I / Communication system works	1	82
1.2	On completion of entire works as given in scope & as per directives of engineer	10	92
2	Submission of all as-built drawings, test document & complete handing over of the building	5	



SECTION – B2

COMMERCIAL TERMS AND CONDITIONS

SECTION – B2-I : (d) MODULE: M1 Sub Module S4

**BASIS OF PRICE, STATUTORY LEVIES, DELIVERY SCHEDULE,
TERMS OF PAYMENT ETC.**

(Construction of various Miscellaneous Buildings / structures)



1.0 SPECIFICATIONS TO BE FOLLOWED:

The work shall be carried out strictly in accordance with the drawings and contract specification. In the absence of any specification for any work or material, relevant Indian Standard Specifications will be applicable and where no Indian Standard Specification exists, work shall be carried out as per Manufacturer's specifications.

Further, in absence of any mention of specifications in the contract regarding work, material or workmanship, the decision of adaptability of relevant IS, BSS, American Standard Specifications or International standard, Manufacturer's specifications etc, will be entirely at the discretion of Engineer-in-charge and the same shall be binding on the Contractor.

2.0 SCOPE OF WORK:

The scope of work in this sub module S4 (Miscellaneous Civil Structures) shall be as per the scope provided in brief in table 1 of drawing no. KAIGA-5&6/81100/M1S4/TD1/R0 and as in **Annexure I** hereunder.

The composite package on EPC mode for these buildings is prepared with a single point responsibility of the Contractor including planning, designing, procurement & construction.

All these Buildings will be Engineered and designed by Contractor.

ANNEXURE-I

FACILITIES TO BE INCLUDED IN THE BUILDINGS IN BRIEF:

Project Office Building (Sl. no 1 of Schedule E)

Terminal Points: 160.57 X 63.30m

Sr. No.	Floor	Facilities
1	Ground Floor	Entrance lobby, passages, model room, lift lobby, gents & ladies' toilet, accessible toilet, AHU room, server room, electric panel room, pantry, canteen, kitchen, pot wash, conference room
2	First Floor	Lift lobby, gents, ladies & accessible toilet, AHU room, workstations, cubicles, cabins, offices, supervisor's rooms, passages, lobby, briefing room, Auditorium
3	Second Floor	VC Room, workstations, cubicles, cabins, PA rooms, conference room, lobby, gents, ladies & accessible toilet, supervisors' room
4	Third Floor	Workstations, cubicles, cabins, PA rooms, conference room, lobby, gents, ladies & accessible toilet, supervisor's rooms



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5	Fourth Floor	VIP Dining Hall, Workstations, PA rooms, Visitor lounge, SD Room, CCE Room, PD Room, Ante rooms, Pantry
6	Terrace	Open terrace, lift machine room, OH water tank
7	Service Block	Driver room, Supervisors room, AC plant room, Electrical panel room, pump room, underground sump, parking
8	Parking	Sufficient nos of parking slot for vehicles (two / four-wheeler), covered parking. If space available is limited, latest technology of multi-level parking shall be followed.

O&M Office Building (Sl no 2 of Schedule E)**Terminal Points:** Front: 30m, Sides: 15m, Rear: 15m

Sr. No.	Floor	Facilities
1	Ground Floor	Entrance lobby, passages, model room, lift lobby, gents & ladies' toilet, accessible toilet, AHU room, server room, electric panel room, pantry, canteen, kitchen, pot wash, supervisors' room, cabins
2	First Floor	Lift lobby, gents, ladies & accessible toilet, AHU room, workstations, cubicles, cabins, offices, supervisors' rooms, passages, lobby, briefing room
3	Second Floor	VC Room, workstations, cubicles, cabins, PA rooms, conference room, lobby, gents, ladies & accessible toilet, supervisors' room, Conference room
4	Third Floor	VIP Dining Hall, Workstations, PA rooms, Visitor lounge, SD Room, CS Room, Ante rooms, Pantry, offices & cabins
6	Terrace	Open terrace, lift machine room, OH water tank
7	Service Block	Driver room, Supervisors room, AC plant room, Electrical panel room, pump room, underground sump, parking
8	Parking	Sufficient nos. of parking slot for vehicles (two / four-wheeler), covered parking. If space available is limited, latest technology of multi-level parking shall be followed.

Canteen Building (Sl. no 3 of Schedule E)**Terminal Points:** Refer relevant drawings of canteen building

Sr. No.	Floor	Facilities
1	Ground Floor	Entrance lobby / foyer, passages, officer tiffin's, staff tiffin's, dining hall, gents & ladies' toilet, accessible toilet, cooking areas (veg & non-veg), supervisor room, electric panel room, pantry, cold storage, pot wash,
2	First Floor	VIP dining room, Executive Dining room, gents, ladies & accessible toilet, AHU room, passages, lobby,
3	Service Block	Driver room, Staff rest rooms, AC plant room, Electrical panel room, pump room, underground sump,



4	Parking	Sufficient nos. of parking slot for vehicles (two / four-wheeler), covered parking.
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O&M Ware House Building (Sl. no 4 of Schedule E)

Terminal Points: 109.240 X 93.950m

Sr. No.	Floor	Facilities
1	Ground Floor	High Bay, Low Bay, Gent & ladies' toilet, passages, electrical room, tools & clothing room, electronic room, store, security room, medicine store, gas store,
2	First Floor	Offices, gents, ladies & accessible toilet, AHU room, electric room, passages, lobby,
3	Parking	Sufficient nos. of parking slot for vehicles (two / four-wheeler), covered parking.
4	Boundary	Front: 15m, Sides: 10m, rear: 10m
5	Separate / isolated areas for each facility	Paint & solvent storage, Acid Storage, Compressed gas storage, Oil drums storage & Weigh bridge, Open storage facility by casting of RCC grade slab, providing compound walls with gate & security post.

Reactor Component Assembly Shop (Sl. no 5 of Schedule E)

Terminal Points: Front: 15m, Sides: 10m, rear: 10m

Sr. No.	Floor	Facilities
1	Ground Floor	Central Hall (assembly shop), Gents & ladies' toilet, passages, electrical room, tools room, store, security room
2	First Floor	Offices, gents & accessible toilet, Conference Room, Pantry, AHU room, electric room, passages, lobby,
3	Parking	Sufficient nos of parking slot for vehicles (two / four-wheeler), covered parking.

Reactor Component Shed (Sl. no 6 of Schedule E)

Terminal Points: Front: 10m, Sides: 5m, rear: 5m

Sr. No.	Floor	Facilities
1	Ground Floor	Central Hall (assembly shop), Store,

BARCIS SHOP (Sl. no 7 of Schedule E)

Terminal Points: Front: 10m, Sides: 5m, rear: 5m

Sr. No.	Floor	Facilities
1	Ground Floor	Central Hall (assembly shop), Store,



IDCT Chemical dosing shed (Sl. no 8 of Schedule E)**Terminal Points:** Front: 10m, Sides: 5m, rear: 5m

Sr. No.	Floor	Facilities
1	Ground Floor	Chemical Storage room, Dosing room /area

Main Plant Boundary (Sl. no 9 of Schedule E)**Terminal Points:** As per drawing No. KAIGA-5&6/81100/M1S4/ TD1/R0

Sr. No.	Floor	Facilities
1	--	1. Construction of boundary wall using RCC including barbed wire & concertina.2. Area grading of 10m width on either side of MPB with proper drainage arrangement.3. Cross-drainage works including providing necessary columns, beams & grills for passage of water.4. Construction of watch towers at requisite locations.

Open Storage Facility (Sl no 10 of Schedule E)**Terminal Points:** 4000 Sqm

Sr. No.	Floor	Facilities
1	---	Excavation, backfilling, construction of grade slab using RCC including PCC base, fencing around the areas along with security post, drainage arrangement.

Sewage Treatment Plant (Sl. no 11 of Schedule E)**Terminal Points:** 40 x 40m

Sr. No.	Floor	Facilities
1		1. STP using Membrane Bio Reactor (MBR) technology. 2. From connecting the lines within boundary areas to treatment and disposal of waste including but not limited to Screen Chamber - Oil and Grease chamber - Collection Sump / Pumping Station - Equalization tank - Primary Clarifier - Sludge Pit (if required, as per design) - Fine Screen Chamber Aeration Tank - Membrane Tank - Back pulse Tank (if required as per design) - Treated water Tank - Sludge Sump - Filter Press platform and shed - Sludge drying bed



End Shield Ball Filling shed (Sl. no 12 of Schedule E)

Terminal Points: Front: 10m, Sides: 5m, rear: 5m

Sr. No.	Floor	Facilities
1	Ground Floor	Central Hall (assembly shop), casting of RCC foundation for End-shield, Industrial flooring, doors, windows, ventilators, exhaust fan, wherever required, verandah, porch & portico to maintain clean room condition. Dismantling of structure after completion of intended purpose.

Calandria shed (Sl. no of 13 Schedule E)

Terminal Points: Front: 10m, Sides: 5m, rear: 5m

Sr. No.	Floor	Facilities
1	Ground Floor	Central Hall (assembly shop), casting of RCC foundation for calandria, Industrial flooring, doors, windows, ventilators, exhaust fan, wherever required, veranda, porch & portico to maintain clean room condition. Dismantling of structure after completion of intended purpose.

3.0 TECHNICAL SPECIFICATIONS AND DRAWINGS:

Contractor will issue construction drawings in a manner to suit the construction programme. Contractor shall plan his resources taking this aspect in to account. The Engineering, Procurement and Construction of buildings/facilities are included in the scope and necessary drawings required for the construction shall be submitted by the contractor for acceptance by NPCIL prior to start of the work.

The work shall conform to the technical specifications specified in Section-C of the tender.

The work shall also conform to “released for construction drawings” and to such other drawings relating thereto as may be furnished from time to time by the Engineer in explanation of details or modifications, including such modifications as the Engineer may consider necessary to meet the conditions encountered during the execution of the work.

If a drawing is revised or a DCN (Design Change notice) is issued before actual completion of any activity, the time delay on account of changes/ reworking will be addressed in the following manner: -

Minor changes / improvements / modifications required in materials procured and processes involved necessitated due to nature of job, urgency at site and other site constraints may be taken up after written approval from the engineer-in-charge without affecting the quality of final & finished product.



4.0 ENGINEERING, DESIGN DOCUMENTS & DRAWINGS:

The contractor shall carry out detailed design of the structure including foundation, based on final seismic analysis results, analysis of piping etc soil/ rock characteristic below foundation together with the final allowable bearing pressure confirmed by the Engineer. The detailed design shall comply with the requirements of all approved and relevant codes of practice.

The entire analysis and design of the structure are subjected to checking, review and concurrence of the proof consultant deployed by the Contractor. The proof consultant shall be engaged by the Contractor at their own cost with the approval of NPCIL. The Contractor and their proof consultant shall carry out all the works that are required for the satisfactory completion of the review process and participate in all the discussions/ meetings if called by NPCIL any time. NPCIL approval does not absolve the bidder from his responsibility to design and construction.

The Contractor shall prepare Design Basis Report (DBR) and after checking, review and approval by proof check consultant shall submit it to NPCIL for approval. The DBR shall cover the entire design basis proposed, loads and details load combinations, analysis methodology, design methods, acceptance criteria, testing methodologies etc. Report on Static as well as Dynamic Analysis (DAR) will have to be submitted after clearance of DBR. Reports on detailed Design Calculations shall also be submitted for review and approval. All the documents shall be subjected to checking, review and approval stages in line with Quality Assurance procedures of NPCIL and shall be reviewed and cleared by proof check consultant before submission to NPCIL for acceptance. Any modifications required during the review in the form redesigning of member sizes, reinforcement or change in framing details or foundation are to account for the revised analysis shall be carried out by the Contractor at no extra cost to NPCIL.

All the connections for internals packing, equipment/piping support, etc. are to be properly designed to seismically qualify for loadings as per relevant IS Code. The qualification reports shall be submitted for review and approval. The latest revision of the Codes and Standards shall be adopted for the design of the structure.

The contractor, on award of work, shall furnish, discuss and finalize with NPCIL the engineering deliverable list and information flow schedule. The dates, for submission of drawings, finalized in the above engineering schedule shall be strictly adhered to, which is essential for the timely completion of the work.

If a drawing is revised before actual completion of any activity, the cost and time delay on account of changes/ reworking will be attributable to the Contractor



5.0 QUANTITIES / AREAS CONSIDERED IN SOQR:

Areas provided, if any, against each item are tentative/indicative and minimum and Contractor may provide the required facilities on higher areas (subject to availability of areas at site). This increase in areas will not form basis for any claim by the Contractor on account of increase/ decrease in areas.

Areas mentioned in Schedule of Quantities refers to area proposed to be occupied by building / structure at FGL/Natural ground level and does not represent the plinth area / areas of all floors & excludes boundary areas.

6.0 RATES: This Clause supplements Clause 3.1.4 of GCC.

Unless otherwise stated in the schedule of quantities, rates for all items shall be for the complete work including supplying and fixing of all materials, labour, tools & plant, appliances, transport, water, electricity, insurance, labour cess, taxes etc., contractor's supervision, overheads, profits, quality and safety requirements, firefighting arrangements, workmen amenities such as medical facility, drinking water facility and sewage systems with adequate number of bath/toilets, crèche etc complete to meet the technical and statutory requirements and any other item which is necessary for the satisfactory completion of the job.

It may further be noted that the Contractor, when called for by NPCIL, shall furnish detailed analysis in support of the rates quoted by him against each item of the tender. NPCIL reserves the right to utilize the analysis thus supplied in setting any deviations or claims arising on this contract.

7.0 PRICE ADJUSTMENT COMPONENTS:

For Miscellaneous Civil works, material/ labour component to be considered for the purpose of Contract Price adjustment are mentioned in **Annexure-II** to this Sub Module specific Special Conditions of Contract.

Annexure-II

SR. No.	Description	Stipulation
1	VARIOUS COMPONENTS EXPRESSED AS A PERCENTAGE OF CONTRACT VALUE.	
	Unskilled labour component (lu)	6%
	Semiskilled labour component (lss)	7%
	Skilled labour component (ls)	13%
	Highly Skilled labour component (lhs)	0%
	MATERIAL COMPONENT	
	Ordinary Portland Cement (m)	06%
	Alloy steel Wire Rods (n)	26%



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SR. No.	Description	Stipulation
	Angles, Channels, Sections, Steel (Coated/not) (o)	6%
	_____ (p)	0%
	All Commodities (q)	18%
	P.O.L component (HSD) (d)	03%
	INDEX/ PRICES FORMING BASIS FOR ESCALATION	
	Ordinary Portland Cement (M)	Wholesale price index applicable to Ordinary Portland Cement as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
	M₀ Material Indices Value of Ordinary Portland Cement for the month of September, 2023	M₀ = 134.9
	Alloy Steel wire rods (N)	Wholesale price index applicable to Alloy Steel wire rods as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
	N₀ Material Indices Value of Alloy Steel Wire Rods for the month of September, 2023	N₀ = 140.1
	Angles, Channels, Sections, Steel (Coated/not) (O)	Wholesale price index applicable to <u>Angles, Channels, Sections, steel (coated/not)</u> as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
	O₀ Material Indices Value of Angles, Channels, Sections, Steel (Coated/not) for the month of	O₀ = 148.2
	_____ (P)	NA
	All Commodities (Q)	Wholesale price indices applicable to "All commodities" as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
	Q₀ Material Indices Value of All commodities for the month of September, 2023	Q₀ = 151.8



SR. No.	Description	Stipulation
	Labour (L)	Minimum wages in Rupees issued by office of Chief Labour Commissioner, Ministry of Labours & Employment as applicable on the last date of the month previous to the one under consideration. (Where in subscript “u”, “ss”, “s” and “hs” denotes the unskilled, semiskilled, skilled and highly skilled labour respectively) Kaiga-5&6, Site is coming under Area-C, as per Government Notification dated 19/01/2017.
	(L_{u0} , L_{ss0} & L_{s0}) Labour Indices Value of Labour for the month of September, 2023	L_{u0} = (will be issued later) L_{ss0} = (will be issued later) L_{s0} = (will be issued later)
	P.O.L component (HSD)	Price of High-Speed Diesel (HSD) to be considered at Nearest Diesel Pump to Kaiga-5&6.
	D₀ Indices Value of P.O.L Component High-Speed Diesel (HSD) for the month of September, 2023	D₀ = (will be issued later)

8.0 PRICING THE CHANGE PROPOSAL:

The rates for altered, extra or substituted item of work shall be worked out in accordance with Clause 19.4.3 of the General condition contract (GCC/EPC-3/Rev.4). In case the rates for extra, altered or substituted item are not available in any part of Module of Schedule of quantities then the rate shall be determined based on Market rates, approved by the Engineer-in-charge. A component of overheads and profit @ 15% will be considered for deriving market rates for extra, altered, and substituted items.

9.0 CONSTRUCTION PROGRAMME AND SCHEDULE:

9.1 CONSTRUCTION PROGRAMME:

The time allowed for carrying out the work as entered in the tender shall be strictly observed by the Contractor and shall deemed to be the essence of the contract and



shall be reckoned from the date indicated in the work order. All works shall be completed in accordance with the construction schedule given below in **Annexure-III**.

On award of the work, the Contractor shall submit a detailed construction time schedule, keeping the phasing of the work generally in line with the construction schedule proposed by NPCIL, for the approval of the Engineer which shall form the part of the contract. The Contractor shall strictly adhere to such an approved L-1 network program submitted in Primavera, MS Office or any other software.

9.2 CONSTRUCTION SCHEDULE PLANNING AND REPORTING:

The work shall commence and complete in accordance with the schedule given in **Annexure-III** of this Section. Monsoon and other inclement weather will not be considered as a reason for extension of time or any overstay compensation. Contractor shall prepare an overall and building wise network to meet target dates.

ANNEXURE –III

KAIGA-5&6 - Schedule of construction for various buildings/structures

Sr. No.	Building Name	Construction period in months
1	Project Office Building	24
2	O&M Office Building	24
3	Canteen Building	18
4	O&M Ware House	18
5	Reactor Component Assembly Shop	12
6	Reactor Component Shed	12
7	BARCIS Shop	24
8	IDCT Chemical Dosing Shed	30
9	Main Plant Boundary	30
10	Open Storage Facility	12
11	Sewage Treatment Plant	24
12	End shield Ball filling Shed	10
13	Calandria Storage Shed	10

10.0 REVIEW/ APPROVAL OF CONTRACTOR'S DOCUMENTS:

The contractor shall prepare and submit following documents for approval within a one month of schedule start date of work:

CONSTRUCTION PRE-REQUISITES:

The Contractor shall submit a time-based schedule of Site Mobilization, establishment of site facilities, deployment of Plant & Machineries, qualification of construction materials & validation of construction processes such as concrete mix



design as necessary for starting and completion of construction works as per specified work schedule.

CONTRACTORS WORK SPECIFIC QA MANUAL:

Among other things this document shall also include roles and responsibilities of Project Manager, Works Manager and other key officials /section In-charges and staff members of construction team having requisite qualification and experience connected with various identified construction activities in the form of an Organization Chart who shall be responsible to take instruction from NPCIL Engineer-in-Charge.

CONSTRUCTION METHODOLOGY FOR CONTRACTOR'S SCOPE OF WORKS:

A comprehensive construction methodology covering entire scope of contractor's works shall be prepared and submitted by the Contractor. The methodology shall also include work procedures and QA Plans for activities associated with the construction of all the buildings and structures covered in the scope of contract. Prior to starting of each activity, work procedure shall be prepared by the Contractor and submitted to Engineer-in-charge for acceptance.

11.0 CONTRACTOR'S SITE ORGANIZATION:

11.1 It is essential that the site organization is necessarily headed by an officer occupying a senior position in the organization having graduation in Civil Engineering from reputed institute with a minimum experience of fifteen (15) years in such project execution and shall be vested with powers to take prompt decision. It is also incumbent upon the Contractor that the progress of the contract is reviewed once a month with the project authorities. In addition to the above, periodical reviews at management level shall also be conducted as and when required.

11.2 It is to be noted that the time is essence of contract and in order to meet the schedules and to meet targets the Contractor has to plan for work round the clock shift right from the initial stages. Necessary supervisory staff and the labour force shall be deployed in each shift to ensure that the schedules are met with.

11.3 The construction manpower shall be planned taking in to consideration the commencement and completion of various activities as detailed in the **Annexure-III** of this section given below.

11.4 The Contractor shall furnish a detailed site organization chart along with qualification of all the key personnel of execution, QA, Safety and housekeeping groups, he proposes to deploy on the works. The required details shall be provided in Section D of this sub module (M1S4) in the tender. The organization shall include



the number and category of personnel of different grades for supervisory works up to the grade of Foreman/Asst. Foreman. (The distribution of staff and personnel shall be building wise/schedule wise/activity wise).

11.5 The Contractor shall also submit his assessed phase wise, induction of skilled, semi-skilled, un-skilled work force of all categories for the satisfactory and timely completion of the contract. The skilled, semi-skilled categories are khalasis, operators for cranes, pumps, compressors, electricians and operators, attendants, licensed blasters, operators for shovels, dozers, transport vehicles etc, as per Section-D of Sub-Module M1S4 of this tender.

11.6 Contractor shall set up an independent Quality Management and Project Safety Systems showing all interfaces and submit all the requisite details in line with the relevant Clauses of this section.

12.0 STORAGE OF MATERIAL:

Contractor shall have sufficient storage area/ godowns for storing reinforcement steel, structural steel, embedded parts, cement and all other items required for work.

Some items such as polysulphide compound, epoxy paints are required to be stored in air-conditioned / well ventilated rooms.

13.0 PERFORMANCE BOND TOWARDS WATERPROOFING OF UNDERGROUND STRUCTURES:

Contractor shall make periodical inspection and repair the waterproofing for any apparent defects to ensure complete waterproofing during the guarantee period. The Contractor shall submit a bank guarantee from a scheduled commercial bank (other than co-operative bank) for an amount of **10%** of the cost of water proofing works carried out. The Performance Bond/ Bank Guarantee shall be valid for a period of ten (10) years from the date of acceptance of the water proofing work (underground structures) by NPCIL.

14.0 PERFORMANCE BOND TOWARDS ROOF INSULATION AND WATERPROOFING:

The Contractor shall be responsible for maintaining the roof top insulation for a period of 10 years from the date of acceptance of the water proofing work by the Engineer. The Contractor shall make periodical inspection especially before start of the rainy season and repair the waterproofing for any apparent defects to ensure effectiveness of water proofing during the guarantee period.

The Contractor shall submit a bank guarantee from a scheduled commercial bank (other than co-operative bank) for 10% of the cost of roof insulation and water



proofing works carried out before expiry of defect liability period for a period so as to make guarantee period good for a total period of 10 years (plus 3 month's grace period) from the date of acceptance of water proofing works of underground structures by the Engineer.

15.0 CONSTRUCTION MATERIALS TO BE BROUGHT BY THE CONTRACTOR:

All materials required for the work shall be supplied by the Contractor from NPCIL approved source. As guidance to the Contractor, an indicative (not exhaustive) list of reputed/ suggestive manufacturers of various materials is given in **Annexure-IV**. The Contractor shall to his satisfaction evaluate the manufacturers from the list of suggestive manufacturers as per the Contractor's in-house procedure and also evaluate the source where the same has not been qualified by NPCIL and in respect of other proposed manufacturers not included in the suggestive manufacturer's list and shall put up the evaluation report for approval of NPCIL before placement of PO. The purchaser will provide the list of approved manufacturers after placement of PO. The brand / manufacturer which has already been used in the construction of Nuclear Power Project deemed to be qualified and used in this work without further qualification of it after approval from Engineer-In-Charge. Contractor shall have to submit requisite or supporting documents to this effect.

16.0 Stages of Payment: Planning and Design Works/Project Building/O&M Building/Canteen Building/ O&M Warehouse Building/RCA Shop/RC Shed/ES Ball Filling Shed/Calandria Shed/STP/BARCIS Shop/Open Storage Area/IDCT Chemical Dosing Shed:

All running Bills and Final Bills shall be made to the Contractor in accordance as per **Annexure-64**.

ANNEXURE-IV

Indicative list of reputed manufacturers of various materials

SR No.	MATERIAL	PREFERED MAKE/ BRAND
1	Ordinary Portland Cement / Portland Pozzolana Cement	Ultra Tech, A.C.C, Gujarat Ambuja, Birla, Jaypee, JK Cement, JSW Cement
2	White Cement	J.K, Birla
3	Reinforcement Steel	Tata Steel, SAIL, RINL, JSW, ESSAR, Indian Iron & Steel Co. Ltd.
4	Stainless Steel	TATA Steel, SAIL, Indian Iron & Steel Co. Ltd., RIPL, Jindal Stainless Steel, JSW
5	Parallel Threaded Couplers	DEXTRA, Splicetek,
6	Chemical for post-concrete anchoring	HILTI, Fischer



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7	Structural Steel/Tubes	Tata Steel, SAIL, RINL, JSW, APL Apollo, Maharashtra seamless, ESSAR, Indian Iron & Steel Co. Ltd.
8	PVC Water Stopper	Arti Polymers, Kanta Polymers
9	Polysulphide Compound	Hindustan Mineral Products Pvt. Ltd., Hindocha, Choksey Chemicals
10	Plasticizer, Super Plasticizer, Admixtures, Other construction chemicals	MC Bauchemie, Sika, Fosroc, BASF, Structural Water Proofing Company, CICO, Chryso India Pvt. Ltd., Concrete work Construction Chemical (CWC), Tremco CPG (India) Pvt. Ltd.
11	Polymer modified cementitious grout / Tile adhesive	LATECRETE, FOSROC, BASF, ACC, SIKKA, Mc Bauchemie
12	Waterproofing Compound	BASF, FOSROC, SIKKA, Mc Bauchemie
13	Silicon based water repellent/ Weather sealant	GE Plastics, Dow Corning, Wacker,
14	Plywood	Kitply, Green ply, Century
15	Flush door shutters	Greenply, sen Harvik, century
16	High-pressure laminate	Greenlam, Century, Decolam, Kitply
17	Metal-Fire rated Door Shutters	Signum, IndigaTech
18	Fire rated vision panels	SAINT GOBAIN, PILKINGTON, SCHOTT, FERILITE, PYRO
19	Aluminium Extrusions	HINDALCO, JINDAL
20	Fastners	HILTI, FISHER
21	SS Railing	KICH, Godrej, HafFele
22	SS Hardware and accessories for Doors	DORMA, HAFELE, KICH,
23	Hermitically sealed performance glass toughened Glass, DGU	SAINT GOBAIN, ASAHI, PILKINGTON
24	Particle board	Greenlam, Merino, Kitply
25	Melamine Polish	ASIAN PAINTS (MELAMYNE GOLD), PIDILITE INDUSTRIES (WUDFIN), ICI DULUX (TIMBERTONE)
26	Cement Based Wall putty	Birla wall care, JK White, Berger, Asian Paints
27	Acrylic Plastic Emulsion Paint	Asian Paints :(Apcolite Heavy Duty Premium Emulsion Paint), Nerolac: Impression, Berger: Easy Clean, ICI-Dulux: 3 in 1
28	Premium Acrylic Emulsion Paints (Interior)	Asian Paints :(Royal Luxury Emulsion), Berger: Silk, ICI-Dulux: Velvet touch
29	Textured Exterior Paint	Asian paints, Nerolac, Berger Paints, ICI
30	Acrylic Smooth Exterior Paint	Asian Paints :(Apex/Professional Premium Exterior Emulsion), Nerolac: XL, Berger: weather Coat, ICI-Dulux: Weather Shield



31	Premium Acrylic Smooth Exterior Paint with Silicon additive	Asian Paints: Apex Ultima, Nerolac: XL Total, Berger: weather Coat all guard, ICI-Dulux: Weather Shield max
32	Synthetic Enamel Paint	Asian Paints: Apcolite Premium Gloss Enamel, Nerolac: Synthetic Hi Gloss, Berger: Luxol Hi Gloss, ICI-Dulux: Gloss Synthetic Enamel
33	Steel Primer (Red Oxide Zinc Chromate Primer)	Asian paints, Berger, ICI, NEROLAC
34	Wood Primer	Asian paints, Berger, ICI, NEROLAC
35	Mortice lock	Godrej, Harrison
36	SPIDER FITTINGS	DORMA, HAFELE, GEZE 369
37	Gypsum Board	SAINT GOBAIN,
38	Aluminium Structural Members - Windows, Glazing and Partitions	Hindalco, Indalco, Jindal Aluminium Ltd.
39	Aluminum composite panel (ACP)	ALSTRONG, ALUCOBOND, ALUDECOR
40	FLOOR SPRING/DEAD LOCK/DOOR CLOSERS/PANIC BAR	DORMA, GEZE, HAFELE.
41	ALL TYPE OF SILICONE	DOW CORNING, GE SILICON
42	Metallic False Ceiling	Armstrong, Hunter Douglas, SAINT GOBAIN
43	Floor & Wall Tiles: Ceramic / Vetrified tiles / Antiskid / Matt /	KAJARIA, JOHNSON, NITCO,
44	Clear / Float / Frosted Glass / Mirror	ST. GOBAIN, MODIGUARD, ASAHI,
45	Vitreous Chinaware sanitary work	Parryware, Hindware, Jaquar, Kohler
46	Bathroom accessories (Towel ring, Towel rack, Soap Dish Holder, etc)	Parryware, Hindware, Jaquar, Kohler
47	Water supply CP Fittings & Accessories	Jaquar, Kohler, Roca.
48	Stainless Steel Sink	Nirali, Cera, Jaquar,
49	C P Brass fittings	JAQUAR, KOHLER, ROCA.
50	GI Pipes	Zenith, Tata, Jindal
51	Valves	Zoloto, Sant, KIRLOSKAR, LEADER
52	HDPE Pipe	Reliance, Jain Pipes, Supreme
53	DI Pipes AND Fittings	ELECTROSTEEL, Kesoram, JINDAL, TATA
54	UPVC / CPVC Pipe & Fittings	Finolex, Supreme, Prince, Astral.



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Note: Engineer-in-Charge reserves the right to add/ delete any material / brand.



23/04/2023

विपिन कुमार त्रिवेदी, (Vipin Kumar Trivedi)

सह निदेशक (सीएमएम) Associate Director, C&MM

**For and on behalf of Nuclear Power Corporation of India Limited
(The Purchaser)**



SECTION-B

SECTION – B2

COMMERCIAL TERMS AND CONDITIONS

SECTION – B2-II : MODULE: M2 Reactor Module

**BASIS OF PRICE, STATUTORY LEVIES, DELIVERY SCHEDULE,
TERMS OF PAYMENT ETC.**



1.0 PRICE ADJUSTMENT COMPONENTS:

Fixed, Material and Labour indices involved in Supply item under Module M2 are as follows:

Item	Value of Coefficient	Source of Indices
Fixed Portion (F)	0.15	----
<u>Material Portion</u> M: Mild Steel - Flat products	a = 0.13	Wholesale price index with Base 2011-12=100 as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
<u>Material Portion</u> N: Stainless Steel – Semi finished	b = 0.27	
<u>Material Portion</u> O: Forgings of steel	c = 0.10	
<u>Labour Portion</u> L: Labour Index (All India Average)	lb=0.35	"All India Average" Consumer Price Index Numbers for Industrial workers (CPI-IW) with Base 2016=100 Published by Labour Bureau of Shimla

Description	Value
M₀ Material Indices Value of Mild Steel - Flat products for the month of September, 2023	M₀ = 144.7
N₀ Material Indices Value of Stainless Steel- Semi finished for the month of September, 2023	N₀ = 137.1
O₀ Material Indices Value of Forgings of steel for the month of September, 2023	O₀ = 174
L₀ All India Average CPI-IW Labour Indices Value for the month of September, 2023	L₀ = 137.5

(Signature)
23/04/2025

विपिन कुमार त्रिवेदी, (Vipin Kumar Trivedi)

सह निदेशक (सीएमएम) Associate Director, C&MM

For and on behalf of Nuclear Power Corporation of India Limited
(The Purchaser)



SECTION-B

SECTION – B2

COMMERCIAL TERMS AND CONDITIONS (Module wise)

SECTION – B2-III : MODULE: M3 Nuclear & Mechanical System (N&MS)

**BASIS OF PRICE, STATUTORY LEVIES, DELIVERY SCHEDULE,
TERMS OF PAYMENT ETC.**



1.0 PRICE ADJUSTMENT COMPONENT FOR SUPPLY PORTION OF MODULE M3:

Fixed, Material and Labour indices involved in Supply item under Module M3 are as follows:

Component	Symbol	Value of Co-efficient	Source of Indices used
Fixed Portion	F	0.15	----
<u>Material Portion</u> M: Manufacture of Basic Metals	a	a = 0.30	Wholesale price index with Base 2011-12=100 as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
<u>Material Portion</u> N: Manufacture of Fabricated Metal Products, except Machinery and Equipment	b	b = 0.24	
<u>Material Portion</u> O: Manufacture of Rubber & Plastic Products	c	c = 0.01	
<u>Labour Portion</u> L: Labour Index (All India Average)	l _b	l _b =0.30	All India Average" Consumer Price Index Numbers for Industrial workers (CPI-IW) with Base 2016=100 Published by Labour Bureau of Shimla

Description	Value
M₀ Material Indices Value of Manufacture of Basic Metals for the month of September, 2023	M₀ = 143
N₀ Material Indices Value of Manufacture of Fabricated Metal Products, except Machinery and Equipment for the month of September, 2023	N₀ = 139.4
O₀ Material Indices Value of Manufacture of Rubber & Plastic Products for the month of September, 2023	O₀ = 128
L₀ All India Average CPI-IW Labour Indices Value for the month of September, 2023	L₀ = 137.5



2.0 SITE MOBILIZATION BY CONTRACTOR:

Contractor shall need to establish following facilities for site works:

2.1 Clean workshops for PHT feeder fabrication & mock up and stainless steel fabrication works of sufficient capacity separately. These shops should have adequate space for storing of cleaned and fabricated materials till they are taken for erection.

2.1.1 The clean workshops (for PHT feeders fabrication, PHT feeder mockup & Stainless steel fabrication shop) is defined as an area, dust free at any time. Clean workshop for feeders & S.S. fabrication shall be suitably equipped with Air washing plant & ducting arrangements for adequate ventilation and dust control. It shall communicate with washing facilities for pipeline materials. It shall be suitably ventilated for comfort of working personnel. It shall have double door entry arrangement for dust control. The floors shall be kept clean by frequent washing and / or passing a vacuum cleaner. All persons in clean shop area shall be required to wear clean white overalls, hand gloves and shoe covers.

2.1.2 The clean workshops shall have sufficient space for storage of prefabricated pipe spools also. In this regard the largest space requirement is for prefabrication and storage for "PHT Feeders".

2.1.3 Contractor is recommended to build clean shops of following area / sizes:

- i. Feeder fabrication shop - 30m x 35m
- ii. Feeder mock up shop - 25m x 35m x 15m (height)

2.2 Valve testing facility (VTF).

3.0 METHOD OF MEASUREMENT:

3.1 Measurements and Pricing for site / erection related activities for sub- Module S1 (Primary Piping Package) , Sub-Module S3 (Common Service Package) and Sub Module-5 (Chilled Water Plant for High Enthalpy Area Cooling (CHWP) only:

1. Linear measurements will be in meters corrected to the nearest centimeter.
2. Measurement of weight will be in metric tonnes corrected to the nearest kilogram.
3. Area measurement will be in Sq. m. corrected to the nearest Sq.cm.
4. Measurement for supply of items shall be made as per units and quantities indicated item-wise in Schedule of Prices.
5. For computation of Inch-Meter (Inch-meter), inch-bend and Inch-Diameter (Inch-Dia) nominal bore (NB) of the pipe shall be considered.
6. For computation of inch-meter for reducers & unequal tee major diameter (NB) shall be considered.



7. For the purpose of measurement, all sizes below 25NB (for pipes, fittings, valves, strainers, other pipeline components/ specialties/ accessories etc.) shall be considered as 25mm NB and for the sizes 25 NB and above actual size shall be taken for measurement.
8. For computation of inch-mtr, the equivalent length will be considered as below:
 - i. In case of each valve, strainer and expansion joint of sizes below 900 mm diameter (NB) – One meter.
 - ii. In case of each valve strainer and expansion joint of sizes for 900 NB & above – Actual length in meter.
 - iii. In case of fittings of all sizes -0.5 meter
9. For nozzle welds, the size of outlet pipe (NB) shall be considered. Reinforcement, if required, shall be considered as part of nozzle weld including supply of reinforcement pad material, cutting of plate, edge preparations, bending, etc. Welding of pad with main pipe shall be considered for outer and inner diameters of pad. Outer diameter of reinforcement pad shall be considered equivalent to nearest NB. Inner diameter of reinforcement pad shall be considered equivalent outlet size.
10. Quoted unit welding rates shall be considered for pipes and fittings upto / equivalent of Sch. 80 / extra strong wall thickness. In case of thickness above schedule 80, one and a half times of corresponding rates shall be considered.
11. Pipes and fittings of Feeder System (USI: 33116) are purchased with special dimensions. The thickness of pipe and fittings shall be considered as Sch. 80.
12. The payment/ measurement of fabrication and erection of support/ platform etc. shall be made on actual weight basis.
13. Activity of erection of C&I items such as conductivity element, moisture element, thermo well, etc., is considered equivalent to erection of pipe fittings. Payment shall be made on Inch-meter basis.
14. Erection of C&I (Instruments) items which are to be installed on the equipment and are supplied with equipment is considered as part of equipment erection and no separate payment shall be made. However, erection of the C&I items (Instruments) which are to be installed on the equipment and are supplied separately, shall be considered for payment as piping fittings.
15. High pressure pipe coupling (Grayloc type) for PHT feeder and other systems is considered as flange. Erection and making of high pressure coupling joint includes installation of seal rings.
16. Rates of making screwed joints includes all operations such as cutting, facing, threading, making threaded joint, including supply of Teflon tape / compound, sealant, etc.
17. Rates of seal welding of screwed joints include all operations such as preparatory work of screwed joints for seal welding, complete seal welding and merging / dressing of threads.
18. The welding of slip on flanges is a combination of fillet weld and seal weld. This will be considered as a single joint for the purpose of payment of welding. However, payment of LPE / MPE on these joint shall be considered



for both welds.

19. The fabrication of CS/SS support includes handling, cutting, drilling, grinding, bending, welding, machining, etc., the cost of supports will include the cost of NDE as per the levels of inspections indicated in technical specification.
Fabrication and erection of SS part of platforms/ walkway/ stairs shall be considered as SS support fabrication and erection.
20. The fabrication and erection of CS support includes grit blasting and the application of approved epoxy primer (100 DFT) as per the specifications.
21. Erection of supports (including Snubbers, Self-Lubricating pads (Lubrite type), and spring hangers etc.) includes installation, anchoring and grouting to building structure, supply and installation of fasteners Ubolts, placing, holding or anchoring of pipe(s) to the supports, adjustment of supports, etc. EPs provided for the critical supports installation are required to be scraped/machined to achieve the required tolerance, and machined shims (BRASS/ CS/ SS) to achieve the elevation, the cost of these activities to be built in the support erection.
22. Filling of lead shielding balls in the penetration sleeves or fixing lead shielding bricks shall be paid as per supports erection rate.
23. Fabrication and erection of SS enclosure for Johnson screen mesh shall be considered as SS support item.
24. For Erection of Stainless-steel pipe on CS support poison plate/shims/sheets of brass or SS are required to be provided. The cost of these items is deemed to be included in the SS pipe erection work.
25. Penetration bellows including sealing plate is considered as piping component and accordingly erection will be considered on Inch-meter and Inch-Dia basis.
26. Erection of closure/ sealing plates as per drawings for EP sealing shall be considered as supply, fabrication and erection of support and payment accordingly shall be made on weight basis.
27. Rate of tubing erection includes cleaning, laying, welding, bending, crimping, erection of tube fittings, swaging, and clamping of tubes with its support, tagging, qualification requirement, etc. as per NPCIL specification. Measurement will be taken along the centre line of tube / tube fittings.
28. The rate of fabrication and erection of platform includes cutting, grinding, bending, welding, NDT, fixing of platform by welding or with anchor fasteners wherever EPs are not provided and including grit blasting and the application of epoxy primer (100 DFT).
29. Ultrasonic inspection of bends is scanning / mapping of bent portion with UT probe. The rate is inclusive of all consumables and activities required to perform the work.
30. Cost of erection of below mentioned equipment includes transportation, handling, installation, alignment, installation of all types of associated supports such as hanger rods, girder assembly, guide supports, spring hangers, snubber supports, etc. as applicable as per drawings and specifications. All temporary structures required for alignment shall be arranged by Contractor at his own



cost.

- i. Steam generators
 - ii. PDHRS tanks/heat exchangers
 - iii. ECCS light water accumulators
 - iv. ECCS air accumulators
 - v. PHT Pressuriser
 - vi. Moderator heat exchangers
- 31.** All materials required for qualification of machines, tools, plants, procedures, welders, bends, lapping, burnishing etc. whatsoever required for the works shall be to the Contractor's account. Contractor shall note that wastage of materials on account of these shall not be considered extra.
- 32.** Basis of payment for the Lumpsum Package for chiller units, compressor along with dryers, heat tracing system, CBLCC, Incineration system & Dyke tanks, etc will be based on price break-up issued after completion of detailed engineering by contractor.
- 33.** Cost of excavation and back filling of earth-work, wrapping and coating with the rmo fusible tapes as per tender specifications or AWWA / IS standards etc., pertaining to buried piping/components under this package, shall be included in the unit rate of erection for buried piping. No separate payment will be made for excavation and back filling, wrapping and coating etc.
- 34.** No separate payment will be made for erection of items like washers, nuts, bolts, lock nuts etc. Cost of these items is included in the pipe erection cost.
- 35.** Cost of flushing of erected piping systems including cost for chemicals if any, is included in pipe erection cost.
- 36.** Basis of payment of equipment in sub-module-5 like chillers, pump-motor units, control panels etc. will be the number of units supplied/erected. The erection cost includes grouting of foundation bolt, dry packing, alignment of motor and pump coupling using dial gauge. The erection cost of equipment includes the commissioning. Items for which basis of payment is number/meter is covered in detail under contract.

3.2 Measurements and Pricing for site / erection related activities for sub-Module S2 (Nuclear Ventilation Package) only:

- 3.2.1** Unit rate for erection includes all costs of unloading, storing, handling, fabrication, edge preparation, welding, inspection, testing, painting, wooden saddles, etc., packing like shims etc., sealants like Teflon, poly sulphide compound, silicone sealant for GI duct joint etc., welding electrodes, filler wires, consumables like industrial gases, oil, grease, or any other consumable, cost of water, power, machinery for fabrication, erection, inspection, NDT examination, testing and commissioning, labour, supervision, and any other item / work whatsoever required for completion of erection.



Unit rate of erection of CS duct & Structural supports is inclusive of supply and application of paint as per tender specification and no separate payment shall be made against supply and application of paint for erection of CS duct & structural supports.

The quantities of all items mentioned in Section-E of this procurement specification are based on best estimates and are adequate to give a fair idea to the Contractor about the quantum of work. Payment, however, will be on actual quantities executed at site as certified by the PURCHASER 's representative.

3.3 Measurements and Pricing for site / erection related activities for sub-Module S2 (Nuclear Ventilation Package) GI duct work only:

Actual erected quantity of GI ducts & duct fittings shall be measured in sq. m. and same shall be certified by Engineer in-charge at site. The final payment adjustment towards supply, fabrication and erection of GI ducts will be on actual erected quantity measured in sq. m.

Duct folding allowance shall be to the account of contractor and no separate payment shall be made towards the same.

The supply of GI ducts & duct fittings includes bracings, companion angle flanges, nuts, bolts, gaskets, rivets, tie-rods, sealants etc. and no separate payment shall be made against these accessories.

The clause no. 15.6.1 (vi) of GCC regarding definition of scrap stands superseded by the clause as 15.6.1 (vi) GI sheets- less than 1m X 1.25 m. All other sub-clauses under GCC clause no. 15.6 for definition of scrap shall remain unchanged.

3.4 Measurements and Pricing for site / erection related activities for Sub Module 2 (Nuclear Ventilation Package) Structural support work only:

The final payment adjustment towards supply, fabrication & erection of ducting, piping, equipment supports, sealing plates and structural platform will be based on actual erected quantity certified by Engineer in-charge at site.

The rate of supply, fabrication and erection shall include handling, transportation, trimming, straightening, edge preparation, supply and application of paints as per specification, grouting, finishing.

No separate payment shall be made for supply and erection of bolts, nuts, lock nuts, washers etc. for supports. Cost of these items shall be included in the cost of support work.

The weight of structural steel items shall be calculated wherever necessary on basis of IS Hand Book. If Sections are different than IS Section, then Measurement Hand Book shall be referred. Actual weighing of fabricated items may be done, if necessary, to verify the weight.



3.5 Measurements and Pricing for site / erection related activities for Sub Module2 (Nuclear Ventilation Package) Duct Insulation only:

The final payment toward supply & erection of duct insulation shall be based on actual erected quantity of insulation measured in sq. m. and outside dimension after insulation shall be considered for estimating total insulation area (sq. m.) and IS 14164 is not applicable for measurement of insulation.

Payment for different type of insulations shall be as follows:

a) Acoustic Insulation:

Supply payment shall be made against supply of fibre glass insulation. Supply cost towards all other accessories like perforated sheets, RP tissue etc. required as per specification includes in erection cost.

b) Indoor thermal insulation:

Supply payment shall be made against supply of PUF/ expanded polystyrene (EPS) board. Supply cost towards all other accessories like aluminium sheets, bituminous/non-bituminous paints etc. required as per includes in erection cost.

c) Outdoor Insulation

Supply payment shall be made against supply of PUF/expanded polystyrene (EPS) board. Supply cost towards all other accessories like sand, cement enamel paint, water proofing compound etc. required as per specification includes in erection cost.

Wastage/scrap shall be to the account of the contractor.

3.6 Measurements and Pricing for site / erection related activities for Sub Module2 (Nuclear Ventilation Package) Supply and erection of equipment only:

Basis of payment for the equipment like, package unit (dryer plant and air washer plant including their internal piping, ducting, equipments, vent, drain, instrumentation, electrical works etc.), other Fan-motor units, coolers, Tanks, Dampers, grilles, diffusers, etc. will be based on the number of units supplied / erected certified by Engineer-In-charge.

No separate payment will be made for items like nuts, bolts, washers, gaskets, packing, shims, painting, making dressing of foundation. Their cost includes in supply and erection cost of equipment.

3.7 Measurements and Pricing for site / erection related activities for Sub Module 2 (Nuclear Ventilation Package) Piping and CS Ducting only:

- i) Measurement of actual erected quantity of piping/ CS circular duct will be on linear measurements and will be measured up to outer face of flanges.
- ii) Pipelines / CS ducting shall be measured along the centre line of pipes/ / CS ducting and curvilinear centre line of bends up to flanges. Branch connections



for branch size up to 50 mm NB shall be measured from outside surface of header pipe. For stub-in connections in sizes 65 mm and above, measurement shall be taken from the centre line of header.

- iii) The erection of bends, elbow, caps, tees, unions, reducers, shall be on item rate basis.
- iv) Erection of all types of valves, dampers, penetration bellows, expansion joints, tanks, critical isolation dampers along with local accumulator tanks, on-line instruments, etc., will be paid as per the rates given in the Schedule of Prices. Contractor to note that items as mentioned in section C-1 clause No 4.1(25) of the tender shall have to be compulsorily tested in "Valve Testing Facility" (VTF) to be setup by the Contractor at site at his own cost. Erection rates are inclusive of these requirements.
- v) Vents and drains shall be measured from O.D. of pipe line and shall be paid for at the corresponding unit rates for similar size of pipe.
- vi) Fabrication of spool pieces for the temporary use to aid Contractor's work such as fabrication, erection, flushing and testing of piping shall be done by contractor, from the pipes and plates to be arranged by Contractor at no extra cost to the Purchaser.
- vii) Gouging of caps and closures on equipment and other terminal points, wherever required, is in the scope of work of Contractor and includes in the unit rate for erection of piping.
- viii) Open ends of pipes/ducts shall be blanked for hydrostatic /air integrity and leak tests and these blanks shall be removed and edge preparation shall be done after testing is completed by the contractor within his quoted rates.
- ix) Minor Civil works, which shall be included in the erection cost and for which no separate payment will be made, are as follows:-
 - (a) Rectification/ enlargement of existing duct/ pipe penetration, equipment foundations pockets, levelling, roughening and finishing of foundation surface.
 - (b) Filling of balance area is gap between duct & pipe and opening up to 100 mm after passing the duct/ pipe line with polystyrene board & sand cement, plaster etc.
 - (c) Sealing of all roof penetration opening shall be done with sealing plate welded with EP & poly-sulphide compound. No extra payment shall be made against welding of seal plate & polysulphide compound.
 - (d) Removal of civil slurry/ muck from the piping.
- x) Joint at terminal point, is in the scope of ventilation contract. All necessary material/ labour required for this purpose is to be arranged by the package contractor at no extra cost to purchaser.



xi) Cost of cleaning/ flushing of erected ducting and piping systems is included in erection cost of piping / ducting.

xii) Basis of payment for concrete expansion fasteners will be on the number of units supplied & erected at site.

xiii) NDT Examination

NDT examination of weld joints in pipes/ducts, support fabrication work shall be done as specified in PC-P-344 and PC-E- 773. Cost of NDT examination shall be included in the cost of erection. No separate payment will be made on NDT examination within the scope of the contract.

The Contractor shall procure and use the approved make and brand of the NDT materials both the consumables as well as non-consumables.

3.8 Measurements and Pricing for site / erection related activities for Sub Module 2 (Nuclear Ventilation Package) only: Damper (rectangular balancing damper, rectangular isolation damper manual & pneumatically operated, fire damper) and Grills

The final payment adjustment towards supply & erection of damper shall be based on actual erected quantity measured in cross sectional area (without flange area) in Sq.m.

The final payment adjustment towards supply & erection of grills & diffuser shall be based on actual erected quantity measured in cross sectional area of collar in Sq.m.

3.9 Measurements and Pricing for site / erection related activities for Sub Module 2 (Nuclear Ventilation Package) only: Payment of items indicated as spares quantities / Essential spares

Basis of payment for essential (mandatory) spare equipment / components shall be as per the quantities indicated in SOR and after receipt & acceptance of the material at purchaser's site stores.

4.0 SCOPE OF FACILITIES:

4.1 For Module -3 Sub-Module S4 (Plant Water Package) Only Clause no. 4.1.1 of General Conditions of Contract - GCC/EPC-3/R-4 is hereby amended and replaced as below:

Unless otherwise expressly limited in the Technical Specifications, the Contractor's obligations to cover the detailed design and engineering of the facilities, supply of all Plant and Equipment (covering design, engineering, procurement, manufacture, Quality Assurance, testing, packing & forwarding transportation and delivery at site) and the performance of all Installation Services (required for unloading & storage at site, erection/ installation, associated civil works, Pre-commissioning/ commissioning and Performance Testing of the Facilities) in accordance with the



plans, procedures, specifications, drawings, codes and any other documents as specified in the Technical Specifications, as lump-sum Engineering, Procurement and Construction (EPC) package contract is included in the scope of the contractor. Such specifications include, but not limited to, the provisions of Supervision and Engineering services, Supply of Labour, Transportation (including, without limitation, unloading and hauling to, from and at the Site) and Storage of Contractor's Equipment, Construction Utilities and Supplies, Structures and Facilities, Erection & Commissioning Consumables, equipment required for inspection and testing and Commissioning, Spares and Accessories etc

4.2 This additional clause is applicable for Module 3 Sub-Module S4 (Plant Water Package):

Design of certain tunnels & trenches (T&T) is not in the scope of this package. However, all civil work for construction of these T&T is in the scope of this package. NPCIL will issue the construction drawings for such T&T to the contractor. The construction of these T&T will be payable on item rate basis as per "Detailed Schedule of Quantities and Rates for Civil Works – PC Unit Rate Portion" of Section-E -M3-S4-4 (Module-3 Sub Module-4) of the tender. All tunnels & trenches other than the above (NPCIL designed) will be deemed to be included in lump sum price as per "Detailed Schedule of Quantities and Rates for Civil Works" of Section-E-M3-S4 of the tender.

Under section E-M3-S4-4 of the tender and the payment shall be released based upon the joint measurement of actually executed quantities under each item of work irrespective of the variation in the quantities.

5.0 MATERIAL ACCOUNTING: This clause is applicable for Sub Module S4 (Plant Water Package).

5.1 Surplus Material:

During execution of the Contract and on attaining completion and handing over of the Facilities, the Contractor shall tally all items/materials as per BOQ (refer SCC Clause No.31 of the tender) have been delivered. Ownership of any Plant and Equipment and other materials in excess of the requirements for the Facilities (i.e. surplus material) shall revert to the Contractor upon completion of the Facilities and Guarantee Test or at such earlier time when the Purchaser and the Contractor agree that the surplus materials in question are no longer required for the Facilities, provided quantity of any Plant and Equipment specifically stipulated in the tender shall be the property of the Purchaser whether or not incorporated in the Facilities. The Contractor shall remove from the Site such surplus material brought by him in pursuance of the Contract, subject to the Contractor producing the necessary clearance from the relevant authorities (Customs, Excise etc), if required by law, in respect of re-export or disposal of the surplus materials locally. The liability for the payment of the applicable Taxes/Duties if any, on the surplus material so re-exported and/or disposed locally shall be that of the Contractor.



In case the laws require the Purchaser to take prior permission of the Relevant Authorities before handing over the surplus material to the Contractor, the same shall be obtained by the Contractor at his cost, on behalf of the Purchaser.

The Contractor shall also indemnify to keep the Purchaser harmless from any act of omission or negligence on the part of the Contractor in following the statutory requirements with regard to removal/disposal of surplus material. The Indemnity Bond shall be furnished by the Contractor as per the Contract.

In the event the Contractor is not able to procure and produce necessary clearance from the relevant authorities (Customs, Excise etc) in respect of re-export or disposal of the surplus material, such material out of the BOQ shall be handed over to the Purchaser and deposited at the Purchaser's Stores at Site.

5.2 Scrap/Wastage:

The term Scrap shall refer to scrap/waste/remnants arising out of the fabrication/structural work (structural steel work and piping work) at the project/site in the course of execution of the Contract.

Scrap shall also include any wastage of cables during the termination process while installing the cables. The ownership of such scrap shall vest with the Contractor except in cases where items have been issued by the Purchaser from its stores for their installation only without any adjustment to contract price. The removal of scrap shall be subject to the contractor producing the necessary clearance from the relevant Authorities (Customs/Excise etc), if required by law, in respect of disposal of the scrap. The liability for payment of the applicable taxes/duties, if any, shall be that of the Contractor.

The Contractor shall also indemnify to keep the Purchaser harmless from any act of omission or negligence on the part of the Contractor in following the statutory requirements with regard to removal/disposal of Scrap. The Indemnity Bond shall be furnished by the Contractor as per Contract. In case the law requires the Purchaser to take prior permission of the relevant authorities before handing over the scrap to the Contractor, the same shall be obtained by the Contractor at his cost, on behalf of the Purchaser.

6.0 RETURN OF SURPLUS MATERIAL TO THE PURCHASER- Module 3 Sub Module S4 (Plant Water Package):

Any Surplus material that the Purchaser has agreed to accept / retain subject to respective SCC clause of the tender shall be delivered, unloaded and placed at a designated place in Purchaser's stores at site. No payment on account of loading, carting, transportation, unloading, stacking, hoisting and hauling will be made by the Purchaser.



7.0 PRICING THE CHANGE PROPOSAL: for Module 3 Sub Module S4 (Plant Water Package):

7.1 Additional cost implication, if any, due to change in the Facilities can be claimed by the Contractor only in the following cases:

- (a) Change in boundary conditions of the technical specifications due to Purchaser's requirement.
- (b) Change requested by the Purchaser after Purchaser's approval of engineering, drawings, documents and/or during execution of the Facilities as per the Contract, resulting into
 - (i) already procured items turning surplus/waste and consequent additional procurement of items and/or
 - (ii) re-work on the Facilities or part of the Facilities at Site.

7.2 Additional cost to be claimed by the Contractor pursuant to GCC sub-clause No. 19.4.1 (a) and (b) of the tender will be worked out as below:

7.2.1 For supply of items other than for Civil Works:

The Purchaser will reimburse the actual cost of procurement of additional quantity of existing purchase order items and/or new items i.e. FOR site price inclusive of all taxes, duties and freight charges and will admit the handling charges @ 15% on the above FOR site price. While undertaking the procurement of these items, the Contractor will follow their purchase procedure/practices and submit related documents in support of his claim.

7.2.2 **For Erection & Commissioning and Civil Works:** Additional cost implication will be mutually agreed between the parties based on Purchaser's cost estimates.

8.0 Billing for supply and erection for Sub Module S4 (Plant Water Package):

Measurements, Billing Break-Up and Payment for Supply/ Erection

1.0 Supply payment for pipes, fittings, valves, flanges etc., will be done on the basis of supplied quantities. Erection payment of pipes, fittings, etc., will be released for piping length actually erected on the basis of percentage. No separate payment will be made for erection of pipe fittings, reducer, expander, tee, branch saddle of HDPE, etc. Payment for erection of valves shall, be as per actual quantities erected.

2.0 No separate payment will be made for pipe jointing whether it is metallic pipe weld or HDPE jointing by heating & pressing. The costs of such special methodology & consumables used for jointing shall be included in pipe erection.

3.0 No separate payment will be made for supply & erection of fasteners & Gaskets, washers etc contractor to include all such costs in piping, flanges, valves supply/erection.



- 4.0 Basis of payment for supports, sealing plates and structural steel will be in terms of percentage of total quantity as per drawing actually erected.
- 5.0 For equipment like Transformers, MCCs, PLC panels, tanks, pumps, BWRO system, UV, UF, MB, EDI skids etc, payment for supply and erection will be on the basis of nos. actually supplied and erected.
- 6.0 Cost for cleaning / flushing of erected piping systems including cost of chemicals if any, is included in pipe length erection cost.
- 7.0 No separate payment will be made for items like, washers, packing, shims, painting, making dressing of foundation, making any opening or making it good or any such material / work. Their cost is included in rates of erection costs

9.0 PRICE ADJUSTMENT COMPONENT FOR CIVIL WORKS OF MODULE M3:

Component	Symbol	Value of Co-efficient All other Civil works	Source of Indices used
Fixed Portion (F)	F	0.15	----
Unskilled labour	l_u	0.08	Minimum wages in Rupees issued by office of Chief Labour Commissioner, Ministry of Labours & Employment as applicable on the last date of the month previous to the one under consideration. (Where in subscript "u", "ss", and "s" denotes the unskilled, semiskilled and skilled labour respectively). Kaiga-5&6, Site is coming under Area-C, as per Government Notification dated 19/01/2017
Semi-skilled labour	l_{ss}	0	
Skilled labour	l_s	0.12	
Ordinary Portland Cement (M)	m	0.12	Wholesale price index with Base 2011-12=100 as published by Economic Advisor to Government of
Manufacture of basic Metals (N)	n	0.28	



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All commodities (Q)	q	0.22	India, Ministry of Commerce & Industry.
P.O.L component: (HSD) (D)	d	0.03	Price of High-Speed Diesel (HSD) to be considered at Nearest Diesel pump to Kaiga-5&6.

Description	Value
M₀ Material Indices Value of Ordinary Portland Cement for the month of September, 2023	M₀ = 134.9
N₀ Material Indices Value of Manufacture of basic Metals for the month of September, 2023	N₀ = 143
Q₀ Material Indices Value of All commodities for the month of September, 2023.	Q₀ = 151.8
L_{u0} & L_{s0} Labour Indices Value of Labour for the month of September, 2023	L_{u0} = (will be issued later) L_{s0} = (will be issued later)
D₀ Material Indices Value of P.O.L component: (HSD) for the month of September, 2023.	D₀ = (will be issued later)

10.0 FORMAT FOR “INDEMNITY BOND”:

Only applicable for Module 3 Sub-Module S4 (Plant Water Package):

An Indemnity bond shall be submitted by the contractor for removal / disposal of Surplus Material / Scrap. **The Format of the bond will be issued later.**

11.0 Special Conditions For O&M Contract of Sub Module 4 (Plant Water Package):

The O&M contract shall consist of three parts:

Part 1- Operation & maintenance of ClO₂ for disinfection of domestic water system and up-keeping the total ClO₂ plant (for IDCT & NDCT) for about 1 year before handing over of the system.

Part 2- Full load operation of ClO₂ plant for 2 years soon after commissioning and handing over of the system.



Part 3- Operation of DM Plant for full load operation of 2 years soon after commissioning and handing over of the system.

11.1 Partial operation of ClO₂ plant (part 1):

It is required to commission the ClO₂ plant first and also to operate (on partial load) and maintain this plant for disinfection of domestic water system till handing over of the entire system. However, the specific instructions to start the O&M contract of ClO₂ Plant for disinfection of domestic water system shall be given in writing by the engineer-in-charge.

Time frame of one year may be decreased or increased depending on the actual operating requirements. Accordingly, payment shall be made on monthly basis.

Chemicals required for this phase of operation of ClO₂ Plant excluding HCL & NaClO₂, shall be supplied by the contractor without any extra cost to NPCIL. HCL & NaClO₂ payment shall be made as per actual supplied quantity as and when required. For commissioning purpose, full tank quantity of chemicals in all tanks should be filled.

11.2 Full load operation of ClO₂ and DM plant:

After operational acceptance and handing over of ClO₂ and DM plant in line with Clause no.4.2.2 of GCC/EPC-3/R4 and after receiving a written communication from NPCIL, the Contractor shall commence full load operation of ClO₂ plant, Filtration and DM plant for another period of 2 years as per Purchase order awarded for O&M contract. At the start of the O&M contract, chemicals in all respective tanks shall be filled upto full capacities and resins shall be supplied for full charges. Supply of required quantities of chemicals except HCL, NaClO₂ & resins for the whole O&M contract period shall be under the scope of the contractor. HCL, NaClO₂, & resin shall be supplied by contractor as and when required and payment shall be made as per actual supplied quantity. The contractor shall also leave chemicals and resins to the full capacities of the tanks at the time of handing over of DM, Filtration and ClO₂ plants after completion of O&M contract.

11.3 Insurance:

11.3.1 General Requirements for Insurances:

The Contractor shall, "at his own cost", take out and maintain in effect the following Insurance based on reinstatement value during the performance of the contract and the Purchaser shall be named as coinsured under all insurance policies. All Insurer's rights of subrogation against co-insured shall be waived. Deductibles / excesses if any, under the insurance policies shall be borne by the Contractor. The identity of the insurers and the type of policies shall be subject to the approval of the Purchaser.



Unless otherwise stated, insurances under this sub-clause shall cover all physical loss / damage and third party liability subject only to minimum compulsory / general exclusions.

Alterations to the terms of insurance shall not be made without the approval of the Purchaser.

The required insurance coverage referred to and set forth in this clause shall in no way affect or limit Contractor's liability with respect to performance of the work or any obligation under the contract / law.

11.3.2 Cargo Insurance during Transport:

During Marine transit (Sea/Air) and Inland transportation, covering loss or damage as per ICC – clause –‘A’ with War / Strike-Riot-Civil Commotions (SRCC) provisions, for full replacement value of the consignment/cargo from the Contractor's or Sub-contractor's works or Stores until arrival at project site.

11.3.3 Storage-cum- Erection Insurance / Contractor's All Risk Insurance Policy:

Insurance should cover physical loss or damage to the facilities at site against All Risks including Terrorism occurring prior to the completion and handing over of facilities.

11.3.4 Insurance for Contractor's Personnel:

The Contractor shall effect and maintain insurance against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed at site by the Contractor or any other of the Contractor's Personnel.

In accordance with the applicable statutory requirement, the Contractor should take Workmen's Compensation Insurance for his workmen. The phrase "Purchaser's interest is protected" shall be endorsed in the Policy.

11.3.5 Third Party Liability Insurance:

Covering bodily injury or death suffered by Third parties (including Purchaser's personnel) and loss or damage to the property occurring in connection with the supply and installation of the facilities.

11.3.6 Automobile Liability Insurance:

Contractor shall maintain automobile liability insurance covering all owned, non-owned and hired automobiles, trucks and other vehicles used by Contractor or its sub-Contractors in connection with the execution of contract.

11.3.7 Additional Insurance:

Any other insurance that may become applicable during execution of the contract shall be arranged by the Contractor at his own cost.



11.3.8 In all insurance policies mentioned in this clause- except for Third Party liability insurance and Automobile insurance, the Purchaser shall be named as “Loss Payee”.

11.3.9 Unless otherwise provided in the contract, the Contractor shall prepare and conduct all and any claims made under the policies effected by it pursuant to GCC/EPC-3/Rev.4 sub-clause 6.11 of the tender and the monies payable by any insurers to the Purchaser – as ‘Loss Payee’ shall in turn be paid to the Contractor as per the procedure outlined in GCC/EPC-3/Rev.4 sub-clause 10.3.10 of the tender. The Purchaser shall give to the Contractor all such reasonable assistance as may be required by the Contractor in preparation and / or settlement of claims with the insurers. With respect to insurance claims in which the Purchaser’s interest is involved, the Contractor shall not give any release or make any compromise with the insurer without the prior written consent of the Purchaser.

11.3.10 a) Wherever the total damages / loss of equipment / materials would occur, the Contractor would be entitled to payment to all amounts received from the insurer(s) except the following amounts :

(i) the amount paid to the Contractor under the contract in respect of equipment / materials /services damaged / lost, excluding pro-rata initial / mobilization advance but including the entire amount of Price Adjustment, if any, already paid to the Contractor.

(ii) taxes, duties, and other statutory levies, which have already been reimbursed by the Purchaser. In the event the claim money settled is less than the total of the amounts in (i) & (ii) above, then the entire claim money settled will be retained by the Purchaser and the Contractor will fore with pay the Purchaser the shortfall amount between the claim money received from the insurer(s) and the total of the amounts as per (i) & (ii) mentioned above. Subsequent payments, if any, due under the contract shall be regulated by the relevant terms of payment.

(b) In case of partial damage to any equipment / material during any stage, upon rectification of the damaged equipment / material to the satisfaction of the Purchaser, the Contractor shall be paid to the extent of claims settled by the Insurer(s).

(c) In both the scenario’s (a) & (b) above, any amount(s) disputed by the Insurers and / or not settled/ paid by them shall be to the Contractor’s account.

11.3.11 The Contractor shall ensure that, where applicable, its sub-Contractor(s) shall take out and maintain in effect adequate insurance policies for their personnel and vehicles and for work executed by them under the contract, unless such sub-Contractors are covered by the insurance policies taken out by the Contractor.

12.0 O&M MANPOWER:

Contractor’s manpower shall be deployed for O&M jobs by the contractor only after they are imparted with specialised training by NPCIL. Hence, frequent changes of



manpower shall be discouraged. In case of change of manpower due to unavoidable situations, there shall be an overlapping period of at least one week for changing from old to new manpower with due consent of the Engineer-in-charge.

13.0 MEDICAL FACILITIES:

Medical facilities for the contractor's manpower at NPCIL hospital shall be provided only for emergency cases on chargeable basis depending on availability of such facilities with NPCIL.

14.0 BG FOR O&M WORK:

Bank Guarantee of **3%** of O&M Contract value as towards security deposit shall be submitted separately within 30 days from the date of issue of specific instructions from the Engineer-In-Charge regarding commencement of O&M contract. The **Performance Security Bond (PSB) for Sub Module 4** shall be released to the contractor only after satisfying the related terms and conditions and submission of BG for O&M work.

This Security Deposit BG shall be extended from time to time, as required, till the completion of O&M Contract.

15.0 PAYMENT TERMS FOR O&M PORTION OF THE CONTRACT:

Payment towards O&M charges will be released along with applicable GST and Price Adjustment as applicable on monthly Basis after completion of Operation and Maintenance for a particular month and on submission of following documents:

- 1) Unconditional order acceptance (For the first month only)
- 2) Invoice in triplicate along with advanced stamped receipt.
- 3) A valid Security Deposit Bank Guarantee.
- 4) Copy of insurance policy/ Certificate of Insurance.
- 5) Authentic copies of indices pertaining to applicable end dates for arriving at price component due to price adjustment.
- 6) A Certificate issued by the Chief Construction Engineer / Chief Superintendent Kaiga-5&6 or his authorized representative stating that the contractor has satisfactorily completed Operation and Maintenance of System and monthly payment can be released.

For Price Adjustment, if indices for a particular month are not yet published, the payment for price adjustment can be claimed separately later.



16.0 PRICE ADJUSTMENT FOR O&M PORTION:

The price adjustment formula for the various components of the Contract Price shall be as follows: -

$$ACV_1 = CV (F + l \times L_1 / L_0 + m \times M_1 / M_0 + n \times N_1 / N_0 + o \times O_1 / O_0 + p \times P_1 / P_0 + q \times Q_1 / Q_0)$$

Where:

ACV1 Adjusted contract price i.e. value of O&M cost after application of above price adjustment formula.

CV: Base contract price, subject to price adjustment, i.e. the cost of the operating and maintaining of the plant in the given period for which the Price Adjustment is to be calculated; excluding cost of material supplied or services rendered at fixed prices by the Purchaser and the cost of extra items for which rates have been worked out based on market rates and as agreed mutually.

F Fixed component will not be subject to any adjustment under this formula or otherwise.

The component and corresponding value of coefficients applicable for price adjustment is given in the table below.

Component	Symbol	Value of Coefficient	Source of Indices
Fixed Portion	F	0.15	----
Manufacture of other chemical products (M)	m	0.30	Wholesale price index with Base 2011-12=100 as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
Labour	lss	0.55	Minimum wages in Rupees issued by office of Chief Labour Commissioner, Ministry of Labours & Employment as applicable on the last date of the month previous to the one under consideration. semiskilled labour) (Where in subscript "ss" denotes the semiskilled labour). Kaiga-5&6, Site is



			coming under Area-C, as per Government Notification dated 19/01/2017
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Description	Value
M₀ Material Indices Value of Manufacture of other chemical products for the month of September, 2023	M₀ = 134.1
L_{ss0} Labour Indices Value of Labour for the month of September, 2023	L_{ss0} = (will be issued later)

Price Adjustment shall be calculated for every billing month. Along with the monthly bill, the Contractor shall submit to Engineer-in-charge a written notice indicating new values of the indices of material and labour components, if any, and their effective dates along with authenticated documentary evidence. The PURCHASER shall make payments after verification of the values of such indices notified by the CONTRACTOR.

Subscript:

‘0’ - refers to the indices as prevailing on the seventh day prior to due date of submission of Bid (both Part-I and Part – II) i.e. **September, 2023**. The Contractor shall submit authentic copies within 30 days of issue of Purchase Order.

‘1’-refers to the values of corresponding Labour/Material indices as applicable for the month just preceding the month of Operation & Maintenance contract for which invoice is submitted.

17.0 SPARES FOR O&M WORK (SPARES FOR CLO₂ PLANTS AND DM PLANTS):

Spares for CLO₂ plants and DM plants as per specification shall be supplied by the contractor along with the supply of equipment & system. These items will be stored in NPCIL store. These spares will be issued to O&M contractor on replacement basis by brand new spare to meet urgent requirements of the plant. The O&M contractor shall follow above arrangement for use of spares and consumable supplied by contractor against this package.

18.0 PENALTY:

- 18.1 The work shall be executed strictly as per the tender specifications and as detailed in the scope of work. The agency shall be responsible for providing timely and uninterrupted services. Failure to comply with the work as per requirement shall attract deduction of a predetermined amount from the contractor's bill as given below:



18.1.1 GENERAL PENALTIES FOR DM WATER SYSTEM OPERATION AND MAINTENANCE (GST shall be extra as applicable): -

a) Quality and Quantity:

The contractor shall be responsible towards operation & maintenance of the system to achieve the specified quality and quantity and as per the design standards considered for DM Water Plant. Failure to generate water of specified quality as per the design parameters shall be treated as plant outage.

b) Any expenditure incurred on procurement of DM Water from external sources or any expenditure on account of operation & maintenance of plants incurred by NPCIL due to above event at (a) shall be recovered from the supplier.

c) Compliance to Maintenance Schedule:

If the work is delayed beyond the maintenance schedule agreed with the Engineer-In-Charge, the delayed period shall be treated as outage.

d) The contractor shall maintain minimum inventory of 200 m³ in each DM storage tank provided the DM Water consumption of the plant is within the maximum rated capacity of DM Water Plant. In case due to any reason beyond the control of contractor he is not in a position to maintain the level, he shall take prior approval from Engineer-In-Charge. In case there is a short fall in level without the approval of engineer-in-charge penalty will be imposed on the contractor at the rate of Rs. 200/m³ of DM Water not produced as per level measurement subject to maximum of Rs.10,000/- at a time.

e) The chemistry of DM Water at DM storage tank shall be maintained as per specification. If the chemistry is not maintained within the specified limits, it will be considered as non production. The rate of penalty will be Rs.200/m³ of DM Water not produced as per level measurement subject to maximum of Rs. 10,000/- at a time.

f) If power plant is forced to Shut down because of water chemistry not maintained in DM Water Plant or non-availability of DM Water a lump sum amount of Rs.25,000/- will be levied per outage.

g) Contractor shall maintain required manpower in round the clock shift and general shift as per specification. If in any case the contractor fails to maintain required manpower in round the clock shift & general shift penalty will be imposed at a rate of Rs.1,000/- per person per shift.

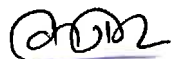
In case, the contractor fails to do maintenance of any equipment which is in scope of contractor and the same is done by NPCIL, the penalty will be imposed on contractor as decided mutually by the contractor and Engineer-In-Charge.

18.1.2 GENERAL PENALTIES FOR ClO2 PLANT FOR OPERATION AND MAINTENANCE (GST shall be extra as applicable):

a) If NPCIL incurs any expenditure on account of operation & maintenance of ClO2 system, the same shall be recovered from the contractor.



- b) If the work is delayed beyond the maintenance schedule as agreed upon, the delayed period will be treated as outage. Penalty of Rs. 5,000/- per week per equipment will be imposed on the contractor on account of this delay.
- c) If chlorine dioxide is not dosed twice in 24 hours in any of the systems then a lump sum amount of Rs.10,000/- (Rupees ten thousand only) will be recovered from the contractor per system per unit, e.g. NDCTs and IDCTs of each reactor unit.
- d) Contractor shall maintain required manpower in round the clock shift as well as in general shift. In case contractor fails to maintain required manpower penalty will be imposed at a rate of Rs.1,000/- per person per shift.
- e) If contractor fails to do maintenance of any equipment & NPCIL does the maintenance of equipment on behalf of the contractor, penalty will be imposed on contractor as per nature of maintenance as decided by the Engineer-In-Charge.
- f) Any interruption in dosing of domestic water system more than 8 hours, a penalty of lump sum amount of Rs.2,000/- per shift will be levied.



23/04/2025

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(The Purchaser)**



SECTION-B

SECTION – B2

COMMERCIAL TERMS AND CONDITIONS

SECTION – B2-IV : (a) MODULE: M4 Sub-Module S1

**BASIS OF PRICE, STATUTORY LEVIES, DELIVERY SCHEDULE,
TERMS OF PAYMENT ETC.**

(MAIN PLANT ELECTRICAL SYSTEM)



1.0 DETAILS OF PRICE ADJUSTMENT COMPONENTS FOR SUPPLY PORTION:

Component	Symbol	Value of Co-efficient	Source of Indices used
Fixed Portion	F	0.15	----
<u>Material Portion</u> M: Manufacture of Basic Metals	a	0.48	Wholesale price index with Base 2011-12=100 as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
<u>Material Portion</u> N: Manufacture of Plastic Products	b	0.06	
<u>Material Portion</u> O: Manufacture of Other Rubber Products (O)	c	0.01	
<u>Labour Portion</u> L: Labour Index (All India Average)	lb	0.30	All India Average" Consumer Price Index Numbers for Industrial workers (CPI-IW) with Base 2016=100 Published by Labour Bureau of Shimla

Description	Value
M₀ Material Indices Value of Manufacture of Basic Metals for the month of September, 2023	M₀ = 143
N₀ Material Indices Value of Manufacture of Plastic Products for the month of September, 2023	N₀ = 138.2
O₀ Material Indices Value of Manufacture of Other Rubber Products for the month of September, 2023	O₀ = 106.8
L₀ All India Average CPI-IW Labour Indices Value for the month of September, 2023	L₀ = 137.5

2.0 THE BILL OF QUANTITY:

The Bill of Quantity issued along with the tender is only tentative and the Contractor may proceed with procurement of 75% of such tendered BOQ except cable trays, cable tray accessories and cable tray support structures. BOQ for 75% of tendered quantity for cable trays, cable tray accessories and cable tray support structures shall be issued by Purchaser as per the following timeline.



- i) Unit-1: Within 18 months from the date of issue of the Purchase Order.
- ii) Unit-2: Within 24 months from the date of issue of the Purchase Order.

Any subsequent procurement would be done by the Contractor only after getting approval of the BOQ prepared by the Contractor based on the detailed engineering/construction drawings issued by the Purchaser. However, the Contractor shall bear the responsibility of correctness of the BOQ arrived at by him/her based on the detailed engineering/construction drawings issued by the Purchaser. Schedule of release of engineering/ construction drawings shall be furnished to the Contractor within 2 months after placement of Purchase Order.

3.0 ROUTINE TEST, SPECIAL TESTS, TYPE TEST, SPECIAL TYPE TESTS, SEISMIC QUALIFICATIONS/TESTING:

Routine Test, Special tests, Type Test, Special Type Tests, Seismic Qualifications/Testing and any other testing required for imported equipment/components/parts for use in Power Supply System and Network as per the tender.

The Contractor is required to meet the testing requirement as specified in the tender document.

4.0 PRIORITY OF DOCUMENTS:

In case of conflict in priority of documents specified in Technical Specification No. PC-E-00431 and SCC-Common, priority of documents specified in Technical Specification No. PC-E-00431 shall govern.


23/04/2025

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(The Purchaser)**



SECTION – B2

COMMERCIAL TERMS AND CONDITIONS (Module wise)

SECTION – B2-IV : (b) MODULE: M4 Electrical Module Sub-Module S2

**BASIS OF PRICE, STATUTORY LEVIES, DELIVERY SCHEDULE,
TERMS OF PAYMENT ETC.**

(Switchyard)



1.0 GENERAL OBLIGATIONS:

The Contractor shall design, procure / manufacture (including associated Procurement and/or subcontracting), install and complete the Facilities with due care and diligence in accordance with the Contract and with the Purchaser's instructions. The contractor shall remedy any defects in the facilities occurring in defect liability period, and remedy latent defects within a further period of five (05) years from end of defect liability period.

2.0 SCOPE OF FACILITIES:

Unless otherwise expressly limited in the Technical Specifications, the Contractor's obligations cover the detailed design and engineering of the facilities, supply of all Plant and Equipment (covering design, engineering, procurement, manufacture, Quality Assurance, testing, packing & forwarding transportation and delivery at site) and the performance of all Installation Services (required for unloading & storage at site, erection/ installation, associated civil works, Pre-commissioning/ commissioning and Performance Testing of the Facilities) in accordance with the plans, procedures, specifications, drawings, codes and any other documents as specified in the Technical Specifications, as a lump-sum Engineering, Procurement and Construction (EPC) package. The scope shall also include, but are not limited to, the provisions of Supervision and Engineering services, Supply of Labour, Transportation (including, without limitation, unloading and hauling to, from and at the Site), Storage, Contractor's Equipment, Construction Utilities and Supplies, Structures and Facilities, Erection & Commissioning Consumables, equipment required for inspection and testing and Commissioning, Spares and Accessories as per the specifications.

3.0 DETAILS OF PRICE ADJUSTMENT COMPONENTS FOR SUPPLY PORTION:

Component	Symbol	Value of Co-efficient	Source of Indices used
Fixed Portion	F	0.15	----
<u>Material Portion</u> M: Manufacture of Basic Metals	a	0.48	Wholesale price index with Base 2011-12=100 as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
<u>Material Portion</u> N: Manufacture of Plastic Products	b	0.06	
<u>Material Portion</u>	c	0.01	



O: Manufacture of Other Rubber Products (O)			
<u>Labour Portion</u>	l_b	0.30	All India Average" Consumer Price Index Numbers for Industrial workers (CPI-IW) with Base 2016=100 Published by Labour Bureau of Shimla
L: Labour Index (All India Average)			

Description	Value
M₀ Material Indices Value of Manufacture of Basic Metals for the month of September, 2023	M₀ = 143
N₀ Material Indices Value of Manufacture of Plastic Products for the month of September, 2023	N₀ = 138.2
O₀ Material Indices Value of Manufacture of Other Rubber Products for the month of September, 2023	O₀ = 106.8
L₀ All India Average CPI-IW Labour Indices Value for the month of September, 2023	L₀ = 137.5

4.0 **PRICE ADJUSTMENT COMPONENT FOR CIVIL WORKS OF MODULE M4 S2:**

Component	Symbol	Value of Co-efficient All other Civil works	Source of Indices used
Fixed Portion (F)	F	0.15	----
Unskilled labour	l_u	0.08	Minimum wages in Rupees issued by office of Chief Labour Commissioner, Ministry of Labours & Employment as applicable on the last date of the month previous to the one under consideration. (Where in subscript "u" and "s" denotes the unskilled and skilled labour respectively). Kaiga-5&6, Site is coming under Area-C, as per Government Notification dated 19/01/2017
Skilled labour	l_s	0.12	



Manufacture of Cement, Lime & Plaster (M)	m	0.04	Wholesale price index with Base 2011-12=100 as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
Manufacture of basic Metals (N)	n	0.36	
All commodities (Q)	q	0.22	
P.O.L component: (HSD) (D)	d	0.03	Price of High-Speed Diesel (HSD) to be considered at Nearest Diesel pump to Kaiga-5&6.

Description	Value
M₀ Material Indices Value of Manufacture of Cement, Lime & Plaster for the month of September, 2023	M₀ = 137.4
N₀ Material Indices Value of Manufacture of basic Metals for the month of September, 2023	N₀ = 143
Q₀ Material Indices Value of All commodities for the month of September, 2023.	Q₀ = 151.8
L_{u0} & L_{s0} Labour Indices Value of Labour for the month of September, 2023	L_{u0} = (will be issued later) L_{s0} = (will be issued later)
D₀ Material Indices Value of P.O.L component: (HSD) for the month of September, 2023.	D₀ = (will be issued later)

5.0 BILL OF QUANTITIES (BOQ):

The Contractor shall furnish the detailed price break-up within a specified time frame. This detailed break-up of items and prices shall be considered as Bill of Quantities (BOQ).

In case of requirement of any additional items/quantities beyond this BOQ to complete the facilities as per the scope of the Tender, the prices of such additional items/quantities are deemed to have been included in the Contract Price and as such additional price implications if any, are to be absorbed by the Contractor. However, if any of the quantities/items delivered as per this BOQ are found to be excess on completion and handing over of the facilities, such items shall remain to be the property of the Purchaser.

In case the contractor brings in some items in excess of the quantities/items mentioned in the BOQ to meet the exigencies of the Site works, all such excess items



if left over after the execution of the contract, are allowed to be taken back by the contractor.

6.0 MATERIAL ACCOUNTING (For Item Rate):

Material Accounting for items/ materials supplied by the Contractor

(a) Surplus Material:

During execution of the Contract and on attaining completion and handing over of the Facilities, the Contractor shall tally all items/materials as per BOQ (refer Clause No. 5 above) have been delivered. Ownership of any Plant and Equipment and other materials in excess of the requirements for the Facilities (i.e. surplus material) shall revert to the Contractor upon completion of the Facilities and Guarantee Test or at such earlier time when the Purchaser and the Contractor agree that the surplus materials in question are no longer required for the Facilities, provided quantity of any Plant and Equipment specifically stipulated in the tender shall be the property of the Purchaser whether or not incorporated in the Facilities. The Contractor shall remove from the Site such surplus material brought by him in pursuit of the Contract, subject to the Contractor producing necessary clearance from the relevant authorities (Customs, Excise etc.), if required by law, in respect of re-export or disposal of the surplus materials locally. The liability for the payment of the applicable Taxes/Duties if any, on the surplus material so re-exported and/or disposed off locally shall be that of the Contractor.

In case the laws require the Purchaser to take prior permission of the relevant Authorities before handing over the surplus material to the Contractor, the same shall be obtained by the Contractor at his cost, on behalf of the Purchaser.

The Contractor shall also indemnify to keep the Purchaser harmless from any act of omission or negligence on the part of the Contractor in following the statutory requirements with regard to removal/disposal of surplus material. The Indemnity Bond shall be furnished by the Contractor as per the Contract.

In the event the Contractor is not able to procure and produce necessary clearance from the relevant authorities (Customs, Excise etc.) in respect of re-export or disposal of the surplus material, such material outside the scope of BOQ shall be handed over to the Purchaser and deposited at the Purchaser's Stores at Site.

(b) Scrap/Wastage:

The term Scrap shall refer to scrap/waste/remnants arising out of the fabrication/structural work (structural steel work and piping work) at the project/site in the course of execution of the Contract. Scrap shall also include any wastage of cables during the termination process while installing the cables.

The ownership of such scrap shall vest with the Contractor except in cases where items have been issued by the Purchaser from their stores for the installation only without any adjustment to contract price. The removal of scrap shall be subject to the contractor producing the necessary clearance from the relevant Authorities (Customs/Excise etc.), if required by law, in respect of disposal of the scrap. The



liability for payment of the applicable taxes/duties, if any, shall be that of the Contractor.

The Contractor shall also indemnify to keep the Purchaser harmless from any act of omission or negligence on the part of the Contractor in following the statutory requirements with regard to removal/ disposal of Scrap. The indemnity Bond shall be furnished by contractor in NPCIL approved format, which will be issued to the successful bidder after award of contract. In case the law require the Purchaser to take prior permission of the relevant authorities before handing over of the scrap to the Contractor, the same shall be obtained by the Contractor at his cost, on behalf of the Purchaser.

7.0 RETURN OF SURPLUS MATERIAL TO THE PURCHASER:

Any Surplus material that the Purchaser as agreed to accept / retain subject to Clause No. 6 above and 15.5.2 (c) of GCC, shall be delivered, unloaded and placed at a designated place in Purchaser's stores at site. No payment on account of loading, carting transportation, unloading, stacking, hoisting and hauling will be made by the Purchaser.

8.0 PRICING THE CHANGE PROPOSAL:

8.1 Additional cost implication, if any, due to change in the Facilities can be claimed by the Contractor only in the following cases:

- (a) Change in boundary conditions of the technical specifications due to Purchaser's requirement.
- (b) Change requested by the Purchaser after Purchaser's approval of engineering, drawings, documents and/or during execution of the Facilities as per the Contract, resulting into (i) already procured items turning surplus/waste and consequent additional procurement of items and/or (ii) re-work on the Facilities or part of the Facilities at Site.

8.2 Additional cost to be claimed by the Contractor pursuant to above sub-clause No. 8.1 (a) and (b) will be worked out as below:

- (a) For supply of items other than for Civil Works:

The Purchaser will reimburse the actual cost of procurement of additional quantity of existing purchase order items and/or new items i.e. FOR site price inclusive of all taxes, duties and freight charges and will admit the handling charges @ 15% on the above FOR site price. While undertaking the procurement of these items, the Contractor will follow their purchase procedure/practices and submit related documents in support of his claim.

- (b) For Erection & Commissioning and Civil Works: Additional cost implication will be mutually agreed between the parties based on Purchaser's cost estimates.



9.0 Routine Test, Special Tests, Type Test, Special Type Tests, Seismic Qualifications / Testing and any other testing required for imported equipment/components/parts for use in Power Supply System and Network as per the tender.

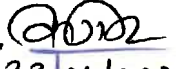
- 9.1 The Contractor shall meet the testing requirement as specified in tender document.
- 9.2 Charges for all the Tests/ Qualifications which are listed in the contract Price schedule shall be claimed separately. Charges for all other tests/ qualifications required to be carried out as per tender are included in the Price for supply of items and shall not be claimed/ paid separately.

10.0 VALIDITY PERIOD OF TYPE TEST REPORTS FOR COMPONENTS/ BOUGHT OUT ITEMS:

For components/ bought out items, validity period of Type test reports shall be reviewed on a case to case basis subject to Supplier / OEM furnishing undertaking that there is no major change in design of the item from the type tested sample of the item.

11.0 PRIORITY OF DOCUMENTS:

In case of conflict in priority of documents specified in Technical Specification No. PC-E-00430 and SCC-Common, priority of documents specified in Technical Specification No. PC-E-00430 shall govern.


23/04/2025

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**For and on behalf of Nuclear Power Corporation of India Limited
(The Purchaser)**



SECTION – B2

COMMERCIAL TERMS AND CONDITIONS

SECTION – B2-IV : (c) MODULE: M4 Electrical Module Sub-Module S3

**BASIS OF PRICE, STATUTORY LEVIES, DELIVERY SCHEDULE,
TERMS OF PAYMENT ETC.**

(Power Transformers and Shunt Reactors)



1.0 PRICE ADJUSTMENT FORMULA FOR SUPPLY PORTION:

Component	Symbol	Value of Co-efficient	Source of Indices used
Fixed Portion	F	0.15	----
<u>Material Portion</u> M: Copper (C)	a	0.23	For the materials the indices issued by IEEMA for Price Variation of Power Transformers
<u>Material Portion</u> N: CRGO Electrical Steel Lamination (ES)	b	0.22	
<u>Material Portion</u> O: Steel: (IS) plates 10 mm thick	c	0.04	
<u>Material Portion</u> P: Insulating Material (IM)	d	0.05	
<u>Material Portion</u> Q: Transformer Oil (TO)	e	0.06	
<u>Labour Portion</u> L: Labour Index (All India Average)	lb	0.25	All India Average" Consumer Price Index Numbers for Industrial workers (CPI-IW) with Base 2016=100 Published by Labour Bureau of Shimla

Description	Value as per IEEMA Circular
M₀ Material Indices Value of Copper (C) for the month of September, 2023	M₀ = (will be issued later)
N₀ Material Indices Value of CRGO Electrical Steel Lamination (ES) for the month of September, 2023	N₀ = (will be issued later)
O₀ Material Indices Value of Steel: (IS) plates 10 mm thick for the month of September, 2023	O₀ = (will be issued later)
P₀ Material Indices Value of Insulating Material (IM) for the month of September, 2023	P₀ = (will be issued later)
Q₀ Material Indices Value of Transformer Oil (TO) for the month of September, 2023	O₀ = (will be issued later)
L₀ All India Average CPI-IW Labour Indices Value for the month of September, 2023	L₀ = 137.5



2.0 Routine Test, Special tests, Type Test, Special Type Tests, Seismic Qualifications/Testing and any other Testing:

2.1 The Contractor shall meet the testing requirement as specified in the tender.

2.2 Charges for all the Tests/ Qualifications which are listed in the contract Price schedule shall be claimed separately. Charges for all other tests/ qualifications required to be carried out as per tender are included in the Price for supply of items and shall not be claimed/ paid separately.

3.0 PENALTY FOR EXCEEDING MAXIMUM LOSSES FOR SHUNT REACTORS:

Penalty shall be levied if losses measured during Factory Acceptance Test (FAT)/Routine tests are more than maximum specified values up to +10% tolerances as specified in the tender.

Penalty shall be levied as follows:

$$\text{Penalty (in Rs.)} = (A1 \times D)$$

A1 = Difference in KW of Total losses from specified maximum Total loss.

$$D = \text{Rs. } 10,00,000 / \text{kW}$$

4.0 PENALTY FOR EXCEEDING MAXIMUM LOSSES FOR POWER TRANSFORMERS:

Penalty shall be levied if losses measured during Factory Acceptance Test (FAT)/Routine tests are more than maximum specified values (Up to +10% tolerances for total loss and +15% tolerances for individual component losses) as specified in the tender.

Penalty shall be levied as follows:

$$\text{Penalty (in Rs.)} = (A1 \times D) + (B1 \times E) + (C1 \times F)$$

A1 = Difference in KW of Iron losses from specified maximum no-load loss.

B1 = Difference in KW of Copper losses from specified maximum load loss.

C1 = Difference in KW of Cooler consumption from specified maximum Aux. loss.

$$D = 10,00,000 / \text{KW}$$

$$E = 8,00,000 / \text{KW}$$

$$F = 8,00,000 / \text{KW}$$



5.0 PRIORITY OF DOCUMENTS:

In case of conflict in priority of documents specified in Technical Specification No. PC-E-00432 and SCC-Common, priority of documents specified in Technical Specification No. PC-E-00432 shall govern.



23/04/2025

विपिन कुमार त्रिवेदी, (Vipin Kumar Trivedi)

सह निदेशक (सीएमएम) Associate Director, C&MM

For and on behalf of Nuclear Power Corporation of India Limited
(The Purchaser)



SECTION – B2

COMMERCIAL TERMS AND CONDITIONS

SECTION – B2-IV : (d) MODULE: M4 Electrical Module Sub-Module S4

**BASIS OF PRICE, STATUTORY LEVIES, DELIVERY SCHEDULE,
TERMS OF PAYMENT ETC.**

(Diesel Generators)



1.0 GENERAL OBLIGATIONS:

The Contractor shall design, procure / manufacture (including associated Procurement and/or subcontracting), install and complete the Facilities with due care and diligence in accordance with the Contract and with the Purchaser's instructions. The contractor shall remedy any defects in the facilities occurring in defect liability period, and remedy latent defects within a further period of five (05) years from end of defect liability period.

2.0 SCOPE OF FACILITIES:

Unless otherwise expressly limited in the Technical Specifications, the Contractor's obligations cover the detailed design and engineering of the facilities, supply of all Plant and Equipment (covering design, engineering, procurement, manufacture, Quality Assurance, testing, packing & forwarding transportation and delivery at site) and the performance of all Installation Services (required for unloading & storage at site, erection/ installation, associated civil works, Pre-commissioning/ commissioning and Performance Testing of the Facilities) in accordance with the plans, procedures, specifications, drawings, codes and any other documents as specified in the Technical Specifications, as a lump-sum Engineering, Procurement and Construction (EPC) package. The scope shall also include, but not limited to, the provisions of Supervision and Engineering services, Supply of Labour, Transportation (including, without limitation, unloading and hauling to, from and at the Site), Storage, Contractor's Equipment, Construction Utilities and Supplies, Structures and Facilities, Erection & Commissioning Consumables, equipment required for inspection and testing and Commissioning, Spares and Accessories as per the specifications.

3.0 PRICE ADJUSTMENT COMPONENT FOR SUPPLY PORTION OF MODULE M3:

Fixed, Material and Labour indices involved in Supply item under Module M4 S4 are as follows:

Component	Symbol	Value of Co-efficient	Source of Indices used
Fixed Portion	F	0.15	----
<u>Material Portion</u> M: Manufacture of Basic Metals	a	0.06	Wholesale price index with Base 2011-12=100 as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
<u>Material Portion</u> N: Manufacture of Fabricated Metal Products, except Machinery and Equipment	b	0.06	



PURCHASE ORDER NO. CMM/FTP/09-30-1-1255/PO/0047

<u>Material Portion</u> O: Manufacture of Computer, Electronic and Optical products	c	0.03	
<u>Material Portion</u> P: Manufacture of Electrical Equipment	d	0.15	
<u>Material Portion</u> Q: Manufacture of Machinery and Equipment	e	0.30	
<u>Labour Portion</u> L: Labour Index (All India Average)	l _b	0.25	All India Average" Consumer Price Index Numbers for Industrial workers (CPI-IW) with Base 2016=100 Published by Labour Bureau of Shimla

Description	Value
M₀ Material Indices Value of Manufacture of Basic Metals for the month of September, 2023	M₀ = 143
N₀ Material Indices Value of Manufacture of Fabricated Metal Products, except Machinery and Equipment for the month of September, 2023	N₀ = 139.4
O₀ Material Indices Value of Manufacture of Computer, Electronic and Optical products for the month of September, 2023	O₀ = 119.8
P₀ Material Indices Value of Manufacture of Electrical Equipment for the month of September, 2023	P₀ = 131.3
Q₀ Material Indices Value of Manufacture of Machinery and Equipment for the month of September, 2023	Q₀ = 129.2
L₀ All India Average CPI-IW Labour Indices Value for the month of September, 2023	L₀ = 137.5

4.0 BILL OF QUANTITIES (BOQ):

Contractor shall furnish the detailed price break-up within a specified time frame. This detailed break-up of items and prices shall be considered as Bill of Quantities (BOQ).



In case of requirement of any additional items/quantities beyond this BOQ to complete the facilities as per the scope of the Tender, the prices of such additional items/quantities are deemed to have been included in the Contract Price and as such additional price implications if any, are to be absorbed by the Contractor. However, if any of the quantities/items delivered as per this BOQ are found to be excess on completion and handing over of the facilities, such items shall remain to be the property of the Purchaser.

In case the contractor brings in some items in excess of the quantities/items mentioned in the BOQ to meet the exigencies of the Site works, all such excess items if left over after the execution of the contract, are allowed to be taken back by the contractor.

5.0 MATERIAL ACCOUNTING:

5.1 Material Accounting for items/ materials supplied by the Contractor

(a) Surplus Material:

During execution of the Contract and on attaining completion and handing over of the Facilities, the Contractor shall tally all items/materials as per BOQ (refer clause No. 4 above) have been delivered. Ownership of any Plant and Equipment and other materials in excess of the requirements for the Facilities (i.e. surplus material) shall revert to the Contractor upon completion of the Facilities and Guarantee Test or at such earlier time when the Purchaser and the Contractor agree that the surplus materials in question are no longer required for the Facilities, provided quantity of any Plant and Equipment specifically stipulated in the tender shall be the property of the Purchaser whether or not incorporated in the Facilities. The Contractor shall remove from the Site such surplus material brought by him in pursuit of the Contract, subject to the Contractor producing necessary clearance from the relevant authorities (Customs, Excise etc.), if required by law, in respect of re-export or disposal of the surplus materials locally. The liability for the payment of the applicable Taxes/Duties if any, on the surplus material so re-exported and/or disposed off locally shall be that of the Contractor.

In case the laws require the Purchaser to take prior permission of the relevant Authorities before handing over the surplus material to the Contractor, the same shall be obtained by the Contractor at his cost, on behalf of the Purchaser.

The Contractor shall also indemnify to keep the Purchaser harmless from any act of omission or negligence on the part of the Contractor in following the statutory requirements with regard to removal/disposal of surplus material. The Indemnity Bond shall be furnished by the Contractor as per the format enclosed with this GCC.

In the event the Contractor is not able to procure and produce necessary clearance from the relevant authorities (Customs, Excise etc.) in respect of re-export or disposal of the surplus material, such material outside the scope of BOQ shall be handed over to the Purchaser and deposited at the Purchaser's Stores at Site.

(b) Scrap/Wastage:



The term Scrap shall refer to scrap/waste/remnants arising out of the fabrication/structural work (structural steel work and piping work) at the project/site in the course of execution of the Contract. Scrap shall also include any wastage of cables during the termination process while installing the cables.

The ownership of such scrap shall vest with the Contractor except in cases where items have been issued by the Purchaser from their stores for the installation only without any adjustment to contract price. The removal of scrap shall be subject to the contractor producing the necessary clearance from the relevant Authorities (Customs/Excise etc.), if required by law, in respect of disposal of the scrap. The liability for payment of the applicable taxes/duties, if any, shall be that of the Contractor.

The Contractor shall also indemnify to keep the Purchaser harmless from any act of omission or negligence on the part of the Contractor in following the statutory requirements with regard to removal/ disposal of Scrap. The Indemnity Bond shall be furnished by contractor in NPCIL approved format, which will be issued to the successful bidder after award of contract. In case the law requires the Purchaser to take prior permission of the relevant authorities before handing over of scrap to the Contractor, the same shall be obtained by the Contractor at his cost, on behalf of the Purchaser.

6.0 RETURN OF SURPLUS MATERIAL TO THE PURCHASER:

Any Surplus material that the Purchaser as agreed to accept / retain subject to Clause No. 5 above and 15.5.2 (c) of GCC shall be delivered, unloaded and placed at a designated place in Purchaser's stores at site. No payment on account of loading, carting transportation, unloading, stacking, hoisting and hauling will be made by the Purchaser.

7.0 PRICING THE CHANGE PROPOSAL:

7.1 Additional cost implication, if any, due to change in the Facilities can be claimed by the Contractor only in the following cases:

- (a) Change in boundary conditions of the technical specifications due to Purchaser's requirement.
- (b) Change requested by the Purchaser after Purchaser's approval of engineering, drawings, documents and/or during execution of the Facilities as per the Contract, resulting into (i) already procured items turning surplus/waste and consequent additional procurement of items and/or (ii) re-work on the Facilities or part of the Facilities at Site.

7.2 Additional cost to be claimed by the Contractor pursuant to above sub-clause No.

7.1 (a) and (b) will be worked out as below:

- (a) For supply of items other than for Civil Works:



PURCHASE ORDER NO. CMM/FTP/09-30-1-1255/PO/0047

The Purchaser will reimburse the actual cost of procurement of additional quantity of existing purchase order items and/or new items i.e. FOR site price inclusive of all taxes, duties and freight charges and will admit the handling charges @ 15% on the above FOR site price. While undertaking the procurement of these items, the Contractor will follow their purchase procedure/practices and submit related documents in support of his claim.

(b) For Erection & Commissioning and Civil Works: Additional cost implication will be mutually agreed between the parties based on Purchaser's cost estimates.

8.0 Routine Test, Special Tests, Type Test, Special Type Tests, Seismic Qualifications / Testing and any other testing.

The Contractor shall meet the testing requirement as specified in the module M4 sub module S4 of the tender.

9.0 Charges for all the Tests/ Qualifications which are listed in Price schedule of module M4 sub module S4 shall be claimed separately. Charges for all other tests/ qualifications required to be carried out as per Section C of tender and any other testing as per contract is included in the Price for supply of items and shall not be claimed/ paid separately.

10.0 Validity period of Type test reports for components/ bought out items

For components/ bought out items, validity period of Type test reports shall be reviewed on a case to case basis subject to Supplier/ OEM furnishing undertaking that there is no major change in design of the item from the type tested sample of the item.

11.0 PRIORITY OF DOCUMENTS:

In case of conflict in priority of documents specified in Technical Specification No. PC-E-00433 and SCC-Common, priority of documents specified in Technical Specification No. PC-E-00433 shall govern.


23/04/2025

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For and on behalf of Nuclear Power Corporation of India Limited
(The Purchaser)

SECTION – B2

COMMERCIAL TERMS AND CONDITIONS

SECTION – B2-V : (a) MODULE: M5 Sub-Module S1

**BASIS OF PRICE, STATUTORY LEVIES, DELIVERY SCHEDULE,
TERMS OF PAYMENT ETC.**

(Control Centre Instrumentation)



PURCHASE ORDER NO. CMM/FTP/09-30-1-1255/PO/0047

- 1.0** The contractor shall perform the tests as per latest codes and standards mentioned in the tender specification. Complete test reports shall be submitted to this effect. Unless otherwise agreed by the PURCHASER in writing, only type tests performed at NABL Accredited / NPCIL approved laboratories/ test facilities, on equipment identical to the equipment as per the BM/BOQ of this tender, in accordance with the latest approved standards shall be considered as valid. Contractor shall prove with adequate reasoning that identical material shall be used and identical manufacturing process shall be employed during production to support validity of Type test certificate. Type test reports shall clearly demonstrate that equipment have been subjected to test parameters at least equal to the specified ratings/limits and successfully met the requirements. The Contractor shall take into account the time required to carry out type tests of equipment in the overall delivery schedules accordingly. Non availability of test facilities for conducting type tests will not be accepted as reason for delay in supply and commissioning of equipment as per the schedule. If type test reports are found unacceptable during review by purchaser even after placement of purchase order (P.O.), Contractor shall arrange type test without any additional cost to the Purchaser.
- 2.0** Price for supply of items includes charges for all Routine Tests, charges for those Type Tests which are not separately brought out in the BOQ and any other test charges. No charges for these tests shall be claimed/ paid separately.
- 3.0** The type tests which are not specifically listed in the contract, if forming part of the specification, shall be carried out by the contractor as per specification without any additional cost to the purchaser.
- 4.0** **PRICE ADJUSTMENT COMPONENT FOR SUPPLY PORTION OF MODULE M5:**

Fixed, Material and Labour indices involved in Supply item under Module M5 S1 are as follows:

Component	Symbol	Value of Co-efficient	Source of Indices used
Fixed Portion	F	0.15	----
<u>Material Portion</u> M: Manufacture of Basic Metals	a	0.30	Wholesale price index with Base 2011-12=100 as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
<u>Material Portion</u> N: Manufacture of Electronic Components	b	0.15	
<u>Material Portion</u>	c	0.10	



PURCHASE ORDER NO. CMM/FTP/09-30-1-1255/PO/0047

O: Manufacture of other electronic and electric wires and cables (O)			
<u>Labour Portion</u> L: Labour Index (All India Average)	lb	0.30	All India Average" Consumer Price Index Numbers for Industrial workers (CPI-IW) with Base 2016=100 Published by Labour Bureau of Shimla

Description	Value
M₀ Material Indices Value of Manufacture of Basic Metals for the month of September, 2023	M₀ = 143
N₀ Material Indices Value of Manufacture of Electronic Components for the month of September, 2023	N₀ = 116.7
O₀ Material Indices Value Manufacture of other electronic and electric wires and cables for the month of September, 2023	O₀ = 146.8
L₀ All India Average CPI-IW Labour Indices Value for the month of September, 2023	L₀ = 137.5

5.0 TERMS OF PAYMENT:

Commissioning spares to be supplied as listed in Section E3 and as described in Section C-2-1 of the tender.

After system transfer / handing over to O&M group of KAIGA-5&6, these commissioning spares in functional condition for customized items and leftover of bought out items shall be handed over to the purchaser at Site. Payment of commissioning spares shall be made after receipt, acceptance and against certification by Engineer in Charge (EIC).

6.0 The Bill of Quantity (BOQ) as per Purchaser's detailed engineering, issued along with the Tender is complete and the same shall be followed for procurement.

However, Purchaser shall issue the following detailed engineering/construction drawings as per the schedule given below:

Detailed engineering drawings (other than Internal Wiring Diagram) for manufacturing will be issued later.

GERBER file will be issued to the contractor. Final Design and testing of the CBS Boards are in progress, hence, Bill of Material (BM) GA)/Bill of material (BM), the quantity given in the GA/BM (issued with the Tender) are final and Contractor shall procure the item accordingly.



Prototype General Arrangement (GA) will be issued to the contractor.

Internal wiring diagrams for the panels will be released by purchaser progressively as per the mutually agreed delivery schedule. It will be made available 03 months prior to start of wiring of individual panel.

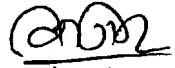
Construction drawings (Terminal List) will be issued to the contractor 60 days prior to start of construction activity of respective item/system as per the mutually agreed erection schedule.

Any delay in submission of drawings for completion of activity shall be recorded in hindrance register for delay analysis. However, it will be the responsibility of contractor to raise the demand for required drawings well in advance preferably 60 days and a reminder 30 days before the scheduled date of issue by the purchaser.

- 7.0 B O Q item no 1.21 under Section E-1-M5-S1 Supply and prototype modules as specified in Clause 2.3.9 point (17) of C-2-1) shall be delivered to NPCIL TV Stores Trombay, Mumbai.

Note: Consignee for BOQ item no 1.21 shall be **Manager (Materials), NPCIL TVS, Trombay**. The payment for these items shall be released based on the acceptance and certification by Associate Director (R&D-ES) or his authorized representative against physical verification of items as per packing list/delivery Challan and completion of all documentation regarding material receipt. The payment Terms for these items shall be as per Sr. No. 13.0 of Section – B1 of Purchase Order

- 8.0 GI conduit/SS tubes/Copper tubes of various sizes-of length less than 1 meter shall be treated as scrap.
- 9.0 Control cables of various type & sizes having diameter less than 25mm and length less than 10 meters shall be treated as scrap.


23/04/2025

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For and on behalf of Nuclear Power Corporation of India Limited
(The Purchaser)



SECTION – B2

COMMERCIAL TERMS AND CONDITIONS (Module wise)

SECTION – B2-V : (b) MODULE: M5 Sub-Module S2

**BASIS OF PRICE, STATUTORY LEVIES, DELIVERY SCHEDULE,
TERMS OF PAYMENT ETC.**

(Field Instrumentation)



- 1.0** The Contractor shall perform the above tests as per latest codes and standards mentioned in the tender specification. Complete test reports shall be submitted to this effect. Unless otherwise agreed by the PURCHASER in writing, only type tests performed at NABL Accredited / NPCIL approved laboratories/ test facilities, on equipment identical to the equipment as per the BM/BOQ of this tender, in accordance with the latest approved standards shall be considered as valid. Contractor shall prove with adequate reasoning that identical material shall be used and identical manufacturing process shall be employed during production to support validity of Type test certificate. Type test reports shall clearly demonstrate that equipment have been subjected to test parameters at least equal to the specified ratings/limits and successfully met the requirements. The Contractor shall take into account the time required to carry out type tests of equipment in the overall delivery schedules accordingly. Non availability of test facilities for conducting type tests will not be accepted as reason for delay in supply and commissioning of equipment as per the schedule. If type test reports are found unacceptable during review by purchaser even after placement of purchase order (P.O.), Contractor shall arrange type test without any additional cost to the Purchaser.
- 2.0** Price for supply of items includes charges for all Routine Tests, charges for those Type Tests which are not separately brought out in the BOQ; and any other test charges. No charges for these tests shall be claimed/ paid separately.
- 3.0** The type tests which are not specifically listed in the contract, if forming part of the specification, shall be carried out by the contractor as per specification without any additional cost to the purchaser.
- 4.0** **PRICE ADJUSTMENT COMPONENT FOR SUPPLY PORTION OF MODULE M5:**

Fixed, Material and Labour indices involved in Supply item under Module M5 S2 are as follows:

Component	Symbol	Value of Co-efficient	Source of Indices used
Fixed Portion	F	0.15	----
<u>Material Portion</u> M: Manufacture of Basic Metals	a	0.35	Wholesale price index with Base 2011-12=100 as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
<u>Material Portion</u> N: Manufacture of Electronic Components	b	0.20	
<u>Material Portion</u>	c	0.05	



O: Manufacture of other electronic and electric wires and cables (O)			
<u>Labour Portion</u> L: Labour Index (All India Average)	I_b	0.25	All India Average" Consumer Price Index Numbers for Industrial workers (CPI-IW) with Base 2016=100 Published by Labour Bureau of Shimla

Description	Value
M₀ Material Indices Value of Manufacture of Basic Metals for the month of September, 2023	M₀ = 143
N₀ Material Indices Value of Manufacture of Electronic Components for the month of September, 2023	N₀ = 116.7
O₀ Material Indices Value Manufacture of other electronic and electric wires and cables for the month of September, 2023	O₀ = 146.8
L₀ All India Average CPI-IW Labour Indices Value for the month of September, 2023	L₀ = 137.5

5.0 THE BILL OF QUANTITY:

The Bill of Quantity (BOQ) as per Purchaser's detailed engineering, issued along with the Tender is complete and same is to be used for procurement.

However, Purchaser shall issue the following detailed engineering/ construction drawings as per the schedule given below:

Engineering inputs for PLC and other systems, if applicable, will be released by the purchaser 6-8 months (progressively) prior to the mutually agreed delivery schedule to the Contractor.

Construction drawings (Cable Schedule, Terminal List, Wiring Diagram, Elementary (wiring) Diagram, GA, DD) will be issued to the contractor 60 days prior to start of construction activity of respective item/system as per the mutually agreed erection schedule.

Any delay in submission of drawings for completion of activity shall be recorded in hindrance register for delay analysis. However, it will be the responsibility of contractor to raise the demand for required drawings well in advance preferably 60 days and a reminder 30 days before the scheduled date of submission by the purchaser.



6.0 GI conduit/SS tubes/Copper tubes of various sizes-of length less than 1 meter shall be treated as scrap.

7.0 Control cables of various type & sizes having diameter less than 25mm and length less than 10 meters shall be treated as scrap.

+5% variation of the ordered quantity of each type & size of cable is acceptable, as per standard practice due to limitations in manufacturing process.



23/04/2025

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**For and on behalf of Nuclear Power Corporation of India Limited
(The Purchaser)**



SECTION – B2

COMMERCIAL TERMS AND CONDITIONS

SECTION – B2-VI : MODULE: M6

**BASIS OF PRICE, STATUTORY LEVIES, DELIVERY SCHEDULE,
TERMS OF PAYMENT ETC.**

(Laboratory, Workshop and other O&M Facilities)



1.0 PRICE ADJUSTMENT COMPONENT FOR SUPPLY PORTION OF MODULE M6:

Fixed, Material and Labour indices involved in Supply item under Module M6 are as follows:

Component	Symbol	Value of Co-efficient	Source of Indices used
Fixed Portion	F	0.15	----
<u>Material Portion</u> M: Manufacture of Machinery and Equipment	a	0.17	Wholesale price index with Base 2011-12=100 as published by Economic Advisor to Government of India, Ministry of Commerce & Industry.
<u>Material Portion</u> N: Manufacture of Basic Metals	b	0.10	
<u>Material Portion</u> O: Manufacture of Furniture	c	0.03	
<u>Material Portion</u> P: Manufacture of Electrical Equipment	d	0.08	
<u>Material Portion</u> Q: Manufacture of Chemicals and Chemical Products	e	0.04	
<u>Material Portion</u> R: All Commodities	f	0.10	
<u>Material Portion</u> S: Manufacture of Computer, Electronic and Optical Products	g	0.03	
<u>Labour Portion</u> L: Labour Index (All India Average)	l _b	0.30	All India Average Consumer Price Index Numbers for Industrial workers (CPI-IW) with Base 2016=100 Published by Labour Bureau of Shimla



Description	Value
M₀ Material Indices Value of Manufacture of Machinery and Equipment for the month of September, 2023	M₀ = 129.2
N₀ Material Indices Value of Manufacture of Basic Metals for the month of September, 2023	N₀ = 143
O₀ Material Indices Value Manufacture of Furniture for the month of September, 2023	O₀ = 160.1
P₀ Material Indices Value of Manufacture of Electrical Equipment for the month of September, 2023	P₀ = 131.3
Q₀ Material Indices Value of Manufacture of Chemicals and Chemical Products for the month of September, 2023	Q₀ = 136.3
R₀ Material Indices Value of All Commodities for the month of September, 2023	R₀ = 151.8
S₀ Material Indices Value of Manufacture of Computer, Electronic and Optical Products for the month of September, 2023	S₀ = 119.8
L₀ All India Average CPI-IW Labour Indices Value for the month of September, 2023	L₀ = 137.5

Source for a, b, c, d, e, f and g coefficient: Wholesale price index with Base 2011-12=100 as published by Economic Advisor to Government of India, Ministry of Industry & Commerce.

Source for l: Consumer Price Index Numbers for Industrial workers with Base 2016=100 Published by Labour Bureau of Shimla ("All India Average").

2.0 GENERAL PROVISIONS:

After placement of the sub-order(s), Contractor shall submit copy of un-priced sub-order along with copies of detailed drawings/datasheet including bill of materials and quality assurance plan (where ever applicable) for Nodal officer's (Maintenance Superintendent (MS) of Kaiga-5&6 or his authorized representative) approval. Fabrication/manufacturing shall start based on approved drawings and documents. Approval to be obtained from Nodal officer (MS of Kaiga-5&6 or his authorized representative) at site.

3.0 THE BILL OF QUANTITY:

The Bill of Quantity (BOQ) as per Purchaser's detailed engineering, issued along with the Tender is to be used for procurement.

However, Erection related drawing/Layout documents will be provided by the Nodal Officer (MS of Kaiga-5&6) or his authorized representative before two months of commencement of erection.



Any delay in submission of drawings/layout for completion of activity shall be recorded in hindrance register for delay analysis. However, it will be the responsibility of contractor to raise the demand for required drawings well in advance preferably before 60 days and a reminder before 30 days of the actual date of requirement of the drawings.

4.0 INSPECTION, TESTING AND REJECTION:

After placement of the sub-order(s), Contractor shall submit copy of un-priced sub-order along with copies of detailed drawings/datasheets including bill of materials and quality assurance plan (where ever applicable) for Nodal officer's (MS of Kaiga-5&6 or his authorized representative) approval.

Fabrication/manufacturing shall be done based on approved drawings (approval to be obtained by Nodal officer's (MS of Kaiga-5&6) or his authorized representative at site).

Final Inspection of items will be done at site through Nodal officer (MS of Kaiga-5&6) or his authorized representative. For all stage inspection/pre-dispatch inspections QS requisition shall be raised by Nodal officer (MS of Kaiga-5&6) or his authorized representative at site.



23/04/2025

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For and on behalf of Nuclear Power Corporation of India Limited
(The Purchaser)



APPENDIX-1 : REFERENCE PARTICULARS

Purchaser's References:

- 1) Tender No. CMM/FTP/09-30-1-1255 dated 02/05/2023.
- 2) Pre-bid Meeting dated 16/05/2023 & 15/06/2023.
- 3) Corrigendum-I dated 30/05/2023.
- 4) Corrigendum-II dated 30/05/2023.
- 5) Corrigendum-III dated 19/06/2023.
- 6) Corrigendum-IV dated 10/07/2023.
- 7) Corrigendum-V dated 28/07/2023.
- 8) Corrigendum-VI dated 08/08/2023.
- 9) Corrigendum-VII dated 08/08/2023.
- 10) Corrigendum-VIII dated 08/08/2023.
- 11) Corrigendum-IX dated 08/08/2023.
- 12) Corrigendum-X dated 08/08/2023.
- 13) Corrigendum-XI dated 08/08/2023.
- 14) Corrigendum-XII dated 08/08/2023.
- 15) Corrigendum-XIII dated 08/08/2023.
- 16) Corrigendum-XIV dated 08/08/2023.
- 17) Corrigendum-XV dated 08/08/2023.
- 18) Corrigendum-XVI dated 08/08/2023.
- 19) Corrigendum-XVII dated 08/08/2023.
- 20) Corrigendum-XVIII dated 08/08/2023.
- 21) Corrigendum-XIX dated 08/08/2023.
- 22) Corrigendum-XX dated 08/08/2023.
- 23) Corrigendum-XXI dated 08/08/2023.
- 24) Corrigendum-XXII dated 14/08/2023.
- 25) Corrigendum-XXIII dated 24/08/2023.
- 26) Corrigendum-XXIV dated 25/08/2023.
- 27) Corrigendum-XXV dated 08/09/2023.
- 28) Corrigendum-XXVI dated 13/09/2023.
- 29) Corrigendum-XXVII dated 27/09/2023.
- 30) Minutes of Meeting (price negotiation) dated 23/07/2024.

Contractor's References:

1. MEIL Offer No. MEIL/NPCIL/Kaiga-5&6/01 dated 03/10/2023.



PURCHASE ORDER NO. CMM/FTP/09-30-1-1255/PO/0047

Various communications vide emails and Letters including following but not limited to:

Sr. No.	NPCIL Letter/email Nos.	Sr. No.	MEIL Letter/email Nos.
1	CMM/FTP/1255 dated 15/01/2025.	1	MEIL/TENDERS/NPCIL/Kaiga-5&6/2024-25/15 dated 15/01/2025.
2	CMM/FTP/1255 dated 29/10/2024.	2	MEIL/TENDERS/NPCIL/Kaiga-5&6/2024-25/14 dated 11/11/2024.
3	CMM/FTP/1255 dated 21/08/2024.	3	MEIL/TENDERS/NPCIL/KAIGA-5&6/2024-25/12 dated 24/08/2024.
4	CMM/FTP/1255 dated 17/07/2024.	4	MEIL/TENDERS/NPCIL/KAIGA-5&6/2024-25/11 dated 25/07/2024.
5	CMM/FTP/1255 dated 24/06/2024.	5	MEIL/TENDERS/NPCIL/KAIGA-5&6/2024-25/10 dated 18/07/2024.
6	CMM/FTP/1255/Round-5 dated 26/02/2024.	6	MEIL/NPCIL/KAIGA-5&6/Replies/2023-24/01 dated 07/11/2023.
7	CMM/FTP/1255 dated 24/02/2024.	7	MEIL/NPCIL/KAIGA-5&6/Post Bid Replies/2023-24/09 dated 27/02/2024.
8	Email dated 21/02/2024	8	MEIL/NPCIL/KAIGA-5&6/Post Bid Replies/2023-24/08 dated 23/02/2024.
9	CMM/FTP/1255/Round-4/Extn. dated 01/02/2024.	9	MEIL/NPCIL/KAIGA-5&6/Post Bid Replies/2023-24/07 dated 12/02/2024.
10	CMM/FTP/1255/Round-1 dated 18/01/2024.	10	MEIL/NPCIL/KAIGA-5&6/Post Bid Replies/2023-24/06 dated 03/02/2024.
11	Email dated 21/02/2024	11	MEIL/NPCIL/KAIGA-5&6/Post Bid Replies/2023-24/05 dated 24/01/2024.
12	CMM/FTP/1255 dated 08/12/2023.	12	Email dated 25/09/2023.
13	CMM/FTP/1255 dated 21/11/2023.	13	MEIL/TENDERS/NPCIL/NIMEP KAIGA-5&6/2023-24/09 dated 08/09/2023.
14	CMM/FTP/1255 dated 10/11/2023.	14	MEIL/TENDERS/NPCIL/NIMEP KAIGA-5&6/2023-24/08 dated 06/09/2023.
15	CMM/FTP/1255 dated 16/04/2025.	15	MEIL/TENDERS/NPCIL/NIMEP KAIGA-5&6/2023-24/07 dated 16/08/2023.
		16	MEIL/TENDERS/NPCIL/NIMEP KAIGA-5&6/2023-24/06 dated 11/08/2023.
		17	MEIL/TENDERS/NPCIL/NIMEP KAIGA-5&6/2023-24/05 dated 11/08/2023.
		18	Email dated 11/08/2023.
		19	Email dated 11/07/2023.
		20	Email dated 10/07/2023.
		21	Email dated 07/07/2023.
		22	MEIL/TENDERS/NPCIL/NIMEP KAIGA-5&6/2023-24/04 dated 03/07/2023.
		23	MEIL/TENDERS/NPCIL/NIMEP KAIGA-5&6/2023-24/03 dated 09/06/2023.
		24	MEIL/TENDERS/NPCIL/NIMEP KAIGA-5&6/2023-24/02 dated 06/06/2023.
		25	MEIL/TENDERS/NPCIL/NIMEP KAIGA-5&6/2023-24/01 dated 03/06/2023.



PURCHASE ORDER NO. CMM/FTP/09-30-1-1255/PO/0047

- 26 MEIL/NPCIL/2023-24/01 dated 15/05/2023.
- 27 MEIL/NPCIL/KAIGA-5&6/Post Bid Replies/2023-24/04 dated 09/12/2023.
- 28 MEIL/NPCIL/KAIGA-5&6/Post Bid Replies/2023-24/03 dated 08/12/2023.
- 29 MEIL/TENDERS/NPCIL/NIMEP/KAIGA-5&6/2023-24/09 dated 08/09/2023.
- 30 MEIL/TENDERS/NPCIL/NIMEP/KAIGA-5&6/2023-24/07 dated 16/08/2023.
- 31 MEIL/TENDERS/NPCIL/NIMEP/KAIGA-5&6/2023-24/06 dated 11/08/2023.
- 32 MEIL/TENDERS/NPCIL/KAIGA-5&6/2024-25/16 dated 16/04/2025.



ADVANCE PAYMENT

NUCLEAR POWER CORPORATION OF INDIA LIMITED
(Acting through) Executive Director,
Directorate Of Contracts & Materials Management
NUB, Anushaktinagar, Mumbai-400094.

1. WHEREAS on or about the _____ day of 201_
M/s. _____ a Company registered
under the Companies Act 1956 and having its registered office at

(hereinafter referred to as 'The Contractor') entered into an agreement bearing
No. _____ (hereinafter referred to as 'The Contract'),
with Nuclear Power Corporation of India Limited (A Government of India
Enterprise) acting through Executive Director, Contracts & Material
Management (hereinafter referred to as (Purchaser) for _____
_____ (hereinafter referred to as 'The Equipment').
2. AND WHEREAS under the terms & conditions of the contract an amount of Rs.
_____ (Rupees _____ only) representing
_____ per cent advance payment out of a contract value of Rs. _____ (Rupees
_____ only) is to be paid by the Purchaser to the
contractor.
3. AND WHEREAS the Purchaser has agreed in pursuance of the said terms and
conditions of the contract to make an advance payment of Rs. _____ (Rupees
_____ only) to the Contractor on the Contractor furnishing a
Bank Guarantee in the manner herein contained.



4. NOW WE, the _____ (Bank) in consideration of the purchaser having agreed to pay to the contractor an advance payment of Rs. _____ (Rupees _____ only) do hereby agree and undertake to indemnify the Purchaser and keep the Purchaser indemnified to the extent of a sum not exceeding the said sum of Rs. _____ (Rupees _____ only) against any damage or loss that may be suffered by the Purchaser by reason of non-fulfilment of any of the terms and conditions of the contract by the contractor.
5. WE, _____ (Bank) do hereby undertake to pay the amount due and payable under this guarantee without any demur merely on a demand from on behalf of Messrs NUCLEAR POWER CORPORATION OF INDIA LTD stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Purchaser by reason of breach by the said Contractor (s) of any of the terms and conditions contained in the said agreement or by reason of the Contractor(s) 's failure to perform the said agreement. Any such demand made on the bank shall be conclusive as regards the amount due and payable by Bank under this guarantee. However, our liability under this guarantee, shall be restricted to an amount not exceeding Rs. _____ (Rupees _____ only).
6. We undertake to pay to the Purchaser any money so demanded notwithstanding any dispute or disputes raised by the Contractor (s) in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be valid discharge of our liability for payment thereunder and the Contractor (s) shall have no claim against us for making such payment.



7. AND WE _____ (Bank) hereby further agree that the decision of the said NUCLEAR POWER CORPORATION OF INDIA LTD., as to whether the Contractor has committed breach of any such terms and conditions of the contract or not and as to the amount of damages or loss assessed by the said NUCLEAR POWER CORPORATION OF INDIA LTD., as damage or loss suffered by the Purchaser on account of such breach would be final and binding on us.
8. AND WE _____ (Bank) further agree with the Purchaser that the Purchaser shall have the fullest liberty without our consent and without affection in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extent time of performance by the said Contractor (s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Purchaser against the said Contractor (s) and to forbear or enforce any of the terms and conditions relating the said agreement and we shall not be relieved form our liability by reason of any such variation or extension being granted to the said contractor (s) or for any forbearance, act or omission on the part of the Purchaser or any indulgence by the Purchaser to the said contractor (s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of relieving us.
9. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor (s).



10. Our guarantee shall remain in force until _____ and unless a claim under the guarantee is lodged with us within three months from that date all rights of the Purchaser under the guarantee shall be forfeited and we shall be relieved and discharged from all liabilities, thereunder.
11. Notwithstanding anything contrary contained in any law for the time being in force or banking practice, this guarantee shall not be assignable or transferable by the beneficiary. Notice or invocation by any person such as assignee, transferee or agent of beneficiary shall not be entertained by the bank. Any invocation of the guarantee can be made only by the beneficiary directly.

Dated the _____ day of _____ 201_

For _____
(Indicate the name of the bank)



Annexure-B

PERFORMANCE SECURITY BOND

NUCLEAR POWER CORPORATION OF INDIA LIMITED

(Acting through) Executive Director,
Directorate Of Contracts & Materials Management
NUB, Anushaktinagar, Mumbai-400094.

1. WHEREAS on or about the (Date of the Purchase Order) M/s. _____ a Company incorporated under the Companies Act 1956 and having its registered office at _____ (hereinafter referred to as 'The Contractor') entered into an agreement bearing No. _____ (hereinafter referred to as 'The Contract'), with Nuclear Power Corporation of India Limited (A Government of India Enterprise) acting through Executive Director, Contracts & Materials Management (hereinafter referred to as (Purchaser) for supply of _____ (hereinafter referred to as 'The Equipment').

2. AND WHEREAS under the terms & conditions of the contract, the Contractor shall furnish Performance Security Bond for an amount of Rs. _____ (Rupees _____ only) representing 10% of the total basic value of the contract in the form of a bank guarantee, in a manner herein contained duly executed by a scheduled/nationalised bank towards satisfactory performance of the contract and performance of the equipment and against any loss or damage caused to or suffered or would be caused to or suffered by the Purchaser by reason of any breach by the said Contractor(s) of any terms and conditions contained in the said agreement. The Performance Security Bond shall be valid till satisfactory completion of Defect Liability Period covering the Warranty/Guarantee period of the equipment as per the terms & conditions of the said agreement.

3. NOW WE, the _____ (Bank) in consideration of the promises do hereby agree and undertake to pay to the Nuclear Power Corporation of India Limited, (the Purchaser) on behalf of the Contractor, the said sum of Rs. _____ (Rupees _____ Only), the amount due and payable under the guarantee without any demur, merely on a demand from the Nuclear Power Corporation of India Limited stating that the amount claimed is due by way of loss or damage caused to, or suffered by, the Purchaser by reason of any breach by the said Contractor of any of the terms and conditions contained in the said agreement or by reason of the contractors failure to perform the said agreement or by reason of unsatisfactory performance of the equipment during the Warranty period. Any such demand, made on the bank, shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____ (Rupees _____ only).

4. WE undertake to pay to the Purchaser the said sum of Rs. _____ (Rupees _____ Only), demanded notwithstanding any dispute or disputes raised by the Contractor(s), in any suit on proceedings pending before any Court or Tribunal relating thereto, our liability under this presents being absolute irrevocable and unequivocal. The payment so made by us under



PURCHASE ORDER №: CMM/FTP/09-30-1-1255/PO/0047

this bond shall be a valid discharge of our liability for payment there under and the Contractor shall have to no claim against us for making such payment.

5. WE HEREBY further agree that the decision of the Nuclear Power Corporation of India Limited as to the amount of damages suffered by the Purchaser by reasons(s) of any breach by the said Contractor or whether the said equipment is giving satisfactory performance or not during the Warranty Period as per the terms and conditions of the said agreement, shall be final and binding on us.

6. AND WE, the _____ (Bank) do hereby further agree that our liability hereinunder shall not be discharged by virtue of any agreement between the Purchaser and the Contractor whether with or without our knowledge and/or consent and shall remain in full force and effect during the period that would be taken for the performance of the said agreement or by reason of the Purchaser showing any indulgence or forbearance to the Contractor whether as to payment, time for performance, or any other matter whatsoever relating to the contract, which but for this provision, would amount to discharge of the surety under the law.

7. THIS guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor.

8. OUR Guarantee shall remain in force until _____ and unless a claim under the guarantee is lodged with us within three months from the said date, all rights of the Purchaser under the guarantee shall be forfeited and we shall be relieved and discharged from all our liabilities hereunder.

9. Notwithstanding anything contrary contained in any law for the time being in force or banking practice, this guarantee shall not be assignable or transferable by the beneficiary. Notice or invocation by any person such as assignee, transferee or agent of beneficiary shall not be entertained by the bank. Any invocation of the guarantee can be made only by the beneficiary directly.

Dated the _____ day of _____ 201_

For _____
(indicate the Name of bank)



NUCLEAR POWER CORPORATION OF INDIA LIMITED
(Acting through) Executive Director,
Contracts & Materials Management
Nabhikiya Urja Bhavan,
Anushaktinagar,
Mumbai - 400 094.

-

5. We undertake to pay to the Purchaser any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s), in any suit or proceedings pending before any court or tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Contractor(s) shall have no claim against us for making such payment.
6. AND WE, the (Bank) _____, hereby further agree that the decision of the said EXECUTIVE DIRECTOR, CONTRACTS AND MATERIALS MANAGEMENT GROUP, NUCLEAR POWER CORPORATION OF INDIA LIMITED as to whether the Contractor has committed breach of any such terms and conditions of the contract or not and as to the amount of damages or loss assessed by the said EXECUTIVE DIRECTOR, CONTRACTS AND MATERIALS MANAGEMENT GROUP, NUCLEAR POWER CORPORATION OF INDIA LIMITED as damage or loss suffered by the Purchaser on account of such breach would be final and binding on us.
7. WE, the (Bank) _____, further agree with the Purchaser that the Purchaser shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor from time to time or to postpone for any time or from time to time any of the powers exercisable by the Purchaser against the said Contractor and to forebear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variations or extensions being granted to the said Contractor or for any forbearance, act or omission on the part of the Purchaser or any indulgence by the Purchaser to the said Contractor or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision have effect of relieving us.
8. THIS GUARANTEE will not be discharged due to the change in the constitution of the Bank of the Contractor(s)/Supplier(s).
9. Notwithstanding anything contrary contained in any law for the time being in force or banking practice, this guarantee shall not be assignable or transferable by the beneficiary. Notice or invocation by any person such as assignee, transferee or agent of beneficiary shall not be entertained by the bank. Any invocation of the guarantee can be made only by the beneficiary directly.

NOTWITHSTANDING ANYTHING CONTAINED herein above, our liability under this guarantee is restricted to Rs. _____ (Rupees

_____ only). Our guarantee shall remain in force for a period of three months from the date of the bank guarantee i.e. up to _____ and unless a claim under the guarantee is lodged within the above date, all rights of the Purchaser under the guarantee shall be forfeited and we shall be relieved and discharged from all liabilities under this guarantee there under.

Dated the _____ day of _____ 201__

For _____

(Indicate the name of the Bank)

* * *



Annexure-DP: Contractual Milestones

Table No. M1 Contractual Milestones for Module M1				
Sr. No.	Sub Module	Contractual milestones	Duration from the date of PO for Kaiga -5	Duration from the date of PO for Kaiga -6
1.	M1-S1	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M1 Sub Module S1	58 Months	64 Months
2.	M1-S2	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M1 Sub Module S2	48 Months	54 Months
3.	M1-S3	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M1 Sub Module S3	48 Months	54 Months
4.	M1-S4	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M1 Sub Module S4	30 Months	NA

Table No. M2 Contractual Milestones for Module M2				
Sr. No.	Sub Module	Contractual milestones	Duration from the date of PO for Kaiga -5	Duration from the date of PO for Kaiga -6
1.	M2-S1	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M2 Sub Module S1	60 Months	60 Months
2.	M2-S2	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M2 Sub Module S2	61 Months	67 Months
3.	M2-S3	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M2 Sub Module S3	61 Months	67 Months
4.	M2-S4	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M2 Sub Module S4	60 Months	60 Months



Table No. M3 Contractual Milestones for Module M3

Sr. No.	Sub Module	Contractual milestones	Duration from the date of PO for Kaiga -5	Duration from the date of PO for Kaiga -6
1.	M3-S1	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M3 Sub Module S1	51 months	57 months
2.	M3-S2	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M3 Sub Module S2	45 Months	45 Months
3.	M3S3	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M3 Sub Module S3	39 Months	NA
4.	M3-S4	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M3 Sub Module S4	45 Months	NA
5.	M3-S5	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M3 Sub Module S5	39 Months	NA

Table No. M4 Contractual Milestones for Module M4 (Electrical systems)

Sr. No.	Sub Module	Contractual milestones	Duration from the date of PO for Kaiga -5	Duration from the date of PO for Kaiga -6
1.	M4-S1	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M4 Sub Module S1(Main Plant Electrical System)	66 months	72 months
2.	M4-S2	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M4 Sub Module S2(220 & 400 KV Switchyard)	66 Months	NA
3.	M4-S3	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M4 Sub Module S3(Power Transformers and Shunt reactors)	60 Months	66 Months
4.	M4-S4	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M4 Sub Module S4(Diesel Generators)	54 Months	60 months



Table No. M5 Contractual Milestones for Module M5				
Sr. No.	Sub Module	Contractual milestones	Duration from the date of PO for Kaiga -5	Duration from the date of PO for Kaiga -6
1.	M5-S1	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M5 Sub Module S1	60 months	66 months
2.	M5-S2	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M5 Sub Module S2	60 months	66 months

Table No. M6 Contractual Milestones for Module M6				
Sr. No.	Sub Module	Contractual milestones	Duration from the date of PO for Kaiga -5	Duration from the date of PO for Kaiga -6
1.	M6	Handing over of sub module and issue and acceptance of Operational Acceptance certificate for Module M6	54 months	NA

Note: Common items shall be considered as a Part of Kaiga 5.


23/04/2025

विपिन कुमार त्रिवेदी, (Vipin Kumar Trivedi)

सह निदेशक (सीएमएम) Associate Director, C&MM

**For and on behalf of Nuclear Power Corporation of India Limited
(The Purchaser)**



Annexure - E

**FORMAT OF INDEMNITY BOND
AGAINST FREE ISSUE MATERIALS
(FIM) TO BE EXECUTED ON A NON-
JUDICIAL STAMP PAPER VALUED AT
RS.**

INDEMNITY BOND

This Indemnity Bond made this _____ day of _____ between M/s _____ having its registered office at _____ hereinafter referred to as "The Contractor" which expression shall include its successors and assigns on one part and Nuclear Power Corporation of India Limited (A Govt. of India Enterprise), acting through Executive Director, CMM or other Officers) _____ hereinafter referred to as "The Purchaser", which expression shall include its successors and assigns, on other part.

Whereas the Nuclear Power Corporation of India Limited has placed a Purchase Order/Contract No. _____ dated _____ hereinafter referred to as "Purchase Order" on the Contractor and the Contractor has accepted to execute the Purchase Order.

And whereas, the Purchaser has agreed to supply the Free Issue Materials referred to in the Contract/Purchase Order for the purpose of fabrication, machining and supply of the equipment and stores as referred to in the Contract/Purchase Order.

And whereas, the Contractor has agreed to furnish an Indemnity Bond for a sum of Rs. _____ (Rupees _____) being amount equivalent to the value of the free issue materials to be supplied by the Purchaser.

Whereas it is explicitly understood that the materials to be supplied is held by the Contractor for and on behalf of Nuclear Power Corporation of India Limited and that ownership of the materials used for fabrication/machining etc. rests with Nuclear Power Corporation of India Limited, till the fabricated/machined equipment/components are delivered to the Purchaser and balance and left over materials as per free issue material account as approved by the Purchaser's engineer is/are returned to the Purchaser.



NOW THIS DEED WITNESSETH THAT IN CONSIDERATION OF THE FREE
ISSUE MATERIALS SUPPLIED BY THE NUCLEAR POWER CORPORATION OF
INDIA LIMITED.

1. The Contractor hereby undertake to pay to the Nuclear Power Corporation of India Limited on demand the said sum of Rs. _____ (Rupees _____) in the event of any breach of the conditions of the Purchase Order, loss and damage of the material and balance material not being returned on or before _____ or any other date mutually agreed.
2. The Contractor shall be totally responsible for safety of the material during which it remains in their custody/control and adequate care for preservation of the item.
3. The Contractor shall undertake to preserve the material with due and proper care and to keep it insured for the period during which it remains in their custody/control.
4. The Contractor shall be responsible for safe return of the balance materials off cuts, scraps to the final destination.
5. This bond shall remain in force and effect so long as the full account of free issue materials is settled to the satisfaction of the Purchaser and balance material is returned to the Purchaser.
6. The Contractor shall not stand discharged or released from the Indemnity Bond given by them under this bond on account of any alteration in the obligation of the parties to the Contract or on account of any indulgence or forbearance as to the payment, time, performance, or otherwise granted by Nuclear Power Corporation of India Limited to the Contractor in relation to the Purchase Order.

It witness whereof the parties hereto have caused the bond to be duly executed on the day and the year first above written.

For (Contractor's Name)

* * *



ANNEXURE – F

Declaration Form for GST

The Supplier/Contractor while submitting their bill to the Paying Authority shall furnish the following certificates:

Certified that: (Please Tick all appropriate boxes)

- ☐ (a) Additional Input Tax Credit under GST availed against invoices submitted here under is Rs. _____.
- ☐ (b) Certified that the goods and services on which GST has been charged are not exempted under the GST Act or the rules made there under and the amount charged on account of GST on these goods and services are not more than what is payable under the relevant act or the rules there under.
- ☐ (c) Certified that we have taken into account all input tax credits available under GST and have not loaded the same in the basic price while furnishing their bids.
- ☐ (d) Certified that in respect of amount of taxes claimed in the bill no claim is pending for refund/or is admissible for refund from any other agency and /or no other tax credit is available in respect of the same. In the event of getting refund in whole or in part of the element of GST claimed from Government, the same shall be passed on the benefit to the Purchaser by remitting the amount equivalent to the amount of refund obtained.
- ☐ (e) Certified that the GST charged herein the invoices has been/ shall be deposited within the due date and the Invoice details have been / shall be populated in GSTR1/ANX-1 of the GSTN portal facilitating Input Tax Credit to the Purchaser.
- ☐ (f) Certified that we have complied with the Anti-profiteering measure provisions under CGST/SGST/UTGST Acts and passed on commensurate reduction of price to the purchaser.
- ☐ (g) Certified that a quarterly statement shall be submitted to NPCIL confirming the payment of GST invoiced on NPCIL along with copy of GST paid Challan.
- ☐ (h) Certified that in case of any change in the Invoice which has been accepted by the Purchaser in the IMS Portal, the corresponding amendment in the Original Invoice shall be made by the Supplier/Contractor, by raising Debit Note/Credit Note or any other document, as applicable, within the timelines stipulated under the GST Act.

Declaration Form for TDS

The Supplier/Contractor while submitting their bill to the Paying Authority shall furnish the following certificates:

Certified that: (Please Tick all appropriate boxes):

- ☐ (a) Whether Provisions of Section 194Q are applicable (For Supply of Goods worth 50 Lakhs p.a): YES/NO
- ☐ (b) We have filed the return of income for the previous year (AY _____) preceding the year in which tax is liable to be deducted, within the prescribed time limit and hence, confirm that applicable rate of TDS is at Normal Rate.
- ☐ (c) We have linked the PAN to Aadhar and the PAN is not inoperative (applicable in case of Individuals)

Incomplete information against point (a), (b) & (c) above under Declaration form for TDS, shall be subject to deduction of tax at higher rate as applicable.

Signature of Contractor or their Authorised Representative with company seal



Annexure-I**Erection Completion Certificate**

No.: NPCIL/.....

Date :

To,

.....

.....

The Erection Completion Certificate is hereby issued for the System or Subsystem or Major component or Facilities as per the details given below;

Sr. No.	Item Description	References / Details
1.	Ref. P.O. No. and Date of issue	
2.	Name of Package	
3.	Name of Contractor	
4.	Ref. contract clauses in respect of issue of Erection Completion Certificate to the contractor;	
5.	Description of the System or Subsystem or Major components or Facilities for which Erection Completion is identified:	
6.	Date of Submission of CCC/STD of the systems / subsystems described in Sr. No. 5.	
7.	Date of Erection Completion of the systems / subsystems described in Sl. No. 5.	
8.	Remarks, if any	

This certificate does not relieve the contractor of its obligation of construction, erection, inspection, commissioning, testing and performance obligations for works under the contract including obligations during the Warranty Period / Performance Guarantee Period, as mentioned in the contract and purchase order, as amended from time to time.

This Erection Completion Certificate is issued to M/s for satisfactory completion of the systems/ sub systems described under Sl. No. 5 in totality.

(.....)

Chief Construction Engineer

For and on behalf of the Purchaser

Nuclear Power Corporation of India Limited

CC: Site- PD/
HQ- C&MM; PROC



Annexure – J

Nuclear Power Corporation of India Limited**Kaiga Atomic Power Project-5&6**

Ref. No.:

Date:

To,

M/s _____

The Operational Acceptance Certificate is hereby issued for Nuclear Island Mega EPC Package as per the details given below:

Sl. No.	Item Description	References / Details
1.	Ref. PO No. and Date of issue:	
2.	Name of Package:	
3.	Name of Contractor:	
4.	Ref. contract clauses in respect of issue of Operational Acceptance Certificate to the contractor:	
5.	Description of the System or Subsystem or Major component or Facilities for which Operational Acceptance is identified:	
6.	Date of Submission of CCC/STD/History Docket of the systems/ subsystems described in Sl. No. 5	
7.	Date of Operational Acceptance of the systems described in Sl. No. 5	
8.	Remarks, if any.	

This certificate does not relieve the contractor of its obligation of construction, erection, commissioning, testing and performance obligations for works under the contract including obligations during the Warranty Period / Performance Guarantee Period as mentioned in the contract and purchase order, as amended time to time.

This Operational Acceptance Certificate is issued to M/s. _____ for satisfactory completion of the systems/sub systems described under Sl. No. 5 in totality.

(Chief Construction Engineer)
For and on behalf of the Purchaser
Nuclear Power Corporation of India Limited

CC: Site-PD/---

HQ-C&MM (Procurement)



Annexure – K

Nuclear Power Corporation of India Limited

Kaiga Atomic Power Project-5&6

Ref. No.:

Date:

Operational Acceptance Certificate for Sub Module/Module of Nuclear Island Mega EPC Package

To,

M/s _____

Sl. No.	Item Description	References / Details
1.	Ref. PO No. and Date of issue:	
2.	Name of Package:	
3.	Name of Contractor:	
4.	Name of Module	
5.	Name of Sub Module	
6.	Ref. contract clauses in respect of issue of Acceptance Certificate to the contractor:	
7.	Description of the System or Subsystem or Major component or Facilities for which Acceptance is identified:	
8.	Date of Submission of CCC/STD of the systems described in Sl. No. 5	
9.	Date of Acceptance of the systems described in Sl. No. 5	

This certificate does not relieve the contractor of its obligation of construction, erection, commissioning, testing and performance obligations for works under the contract or of their obligations during the Warranty Period / Performance Guarantee Period as mentioned in the original contract and purchase order.

This Acceptance Certificate is issued to M/s _____ for satisfactory completion of the systems described under Sl. No. 5 in totality.

Engineer In-charge

For and on behalf of the Purchaser
Nuclear Power Corporation of India Limited



ANNEXURE – L

FORMAT OF CERTIFICATE TO BE FURNISHED BY THE SUPPLIER TOWARDS ACCOUNTING OF RETURNABLE MATERIALS:

Summary of Account to be furnished by the contractor to the purchaser's Engineer on satisfactory completion of purchase order no. _____ dated _____
For _____

- a. Total quantity of Returnable Materials :
received by the contractor/fabricator
- b. Quantity utilized for finished goods :
- c. Quantity returned as left-over material :
material
- d. Waste allowance :
- e. Returnable Materials :

Signature of Fabricator/Contractor

It is certified that the Returnable Materials issued to M/s. _____ against purchase order no. _____ dated _____ have been used in the work and that the balance materials returned by the contractors / fabricator after fabrication are reasonable. **The Returnable Materials issued to the Contractor have been received back at NPCIL Stores.**

Signature of the Purchaser's Engineer



Annexure-2

List of Activities required to be completed for release of 10% advance payment for supply portion to contractor:

Table No. M2S1 Activities to be completed for releasing 10 % advance for Supply PO for Module M2 Submodule S1		
Sr. No.	Item Description	Activity
1.	End Fittings & Associated Components	Placement of Sub PO and acceptance of the same by Sub Vendor
2.	C. V. Top Hatch Beams & Deck Plate Assembly	
3.	Doors, Doorframes & Accessories for MAL & AAL	
4.	Reactor Building Doors	
5.	Drive Mechanisms and Mandatory Spares for SR, CR & AR systems	
6.	Stand Pipe Thimble Package	
7.	End Fitting Seal Bellows Assemblies, Carbon Steel Bellows End Pieces, Stainless Steel Bellows End Pieces, Bellows Assemblies for various Reactivity devices & Terminal Block Bellows	
8.	Main Air Locks (MAL) & Auxillary Air Locks (AAL) Bellows Assemblies	
9.	Lifting Tables	

Table No. M2S2 Activities to be completed for releasing 10 % advance for Module M2 Submodule S2		
Sr. No.	Item Description	Activity
1.0	Crane Package	Placement of Sub PO and acceptance of the same by Sub Vendor
2.0	Manual Hoists	Placement of Sub PO and acceptance of the same by Sub Vendor
3.0	Electrical Hoists	Placement of Sub PO and acceptance of the same by Sub Vendor
4.0	250T Mobile Crane	Placement of Sub PO and acceptance of the same by Sub Vendor
5.0	Crawler Crane	Placement of Sub PO and acceptance of the same by Sub Vendor

Table No. M2-S4 Activities to be completed for releasing 10 % advance for Supply PO for Module M2 Submodule S4		
Sr. No.	Item Description	Activity
M2-S4-1	FM Head (FM) Heads, Associated Equipment, Additional Assemblies and Components	Placement of Sub PO and acceptance of the same by Sub Vendor
M2-S4-2	Fuel Transfer Equipment	
M2-S4-3	Sealing Plug Assemblies, Seal Discs and Accessories, Shielding Plug Assemblies and Fuel Locator Assemblies	
M2-S4-4	Roll-on-Shield and Sealing & Shielding Door Assemblies and Spares	
M2-S4-5	Radiation Shielding Window Assemblies and Spares	
M2-S4-6	FM Service Cart, Support Structure and Spares	
M2-S4-7	Auxiliary Sealing cum Shielding Door Assemblies and Spares	



Table No. M3 S1 Activities to be completed for releasing 10 % advance for Supply PO for Module M3 Submodule S1

Sr. No.	Activity
	PLACEMENT OF SUB PO AND ACCEPTANCE OF THE SAME BY SUB VENDOR FOR THE FOLLOWING LIST OF ITEMS:
1	Moderator Heat Exchanger (SOR No: ECB-100, 3211-HX-1,2)
2	ECCS Air Accumulator (SOR No: ECA-90, 3335-TK-1C,2C)
3	Moderator D2O Storage Tank (SOR No: ECB-112, 3200-TK2)
4	Shutdown Cooling Heat Exchanger (SOR No: ECA-95, 3341-HX1 to 4)
5	Snubbers (SOR No: E-C-A-78)
6	Custom Bend (SOR No: 4.1.1 to 4.1.16)
7	Feeder Pipes (SOR No:1.1.1, 1.1.2, 1.1.3 & 1.1.4)
8	Feeder Fittings Feeder Reducer (SOR No: 11.1.1, 11.1.2 & 11.1.3) Feeder Elbow (SOR No: 12.1.1 to 12.1.4) Feeder Orifice (SOR No: 10.1.1 & 10.1.2)
9	High Pressure Pipe Coupling Hubs (SOR No: 7.1.1 to 7.1.6) Clamps (SOR No: 6.1.1) Seal Rings (SOR No: 8.1.1) Blind Seal Rings (SOR No: 9.1.1)
10	Venturimeter (SOR No: 12.1 to 12.21)
11	ECCS Recirculating Pump (SOR No: ECA-87, 3335-PM-1 to 4)
12	F/M Supply Pump (SOR No: ECA-94, 3337-PM-1 & 2)
13	Moderator Main Circulation Pumps (SOR No: ECB-101, 3211-P-1 to P-6)

Table No. M3S2 Activities to be completed for releasing 10 % advance for Supply PO for Module M3 Submodule S2

Sr. No.	Activity
1	Sub-Order PO placement for critical isolation dampers (SOR No-1.1.1 to 1.1.9 of SECTION-E-J)
2	Sub-Order PO placement for Air cooling units of Pump room & FM Vault coolers (SOR No-1.5.1, 1.5.2 or 1.5.16 and 1.5.17 of SECTION-E-M)

Table No. M3S3 Activities to be completed for releasing 10 % advance for Supply PO for Module M3 Sub module S3

Sr. No.	Activity
1.	Sub-order copy to be submitted for EOT crane [BOQ Sr. No- M3-S3-E4-E-WMP- G(44)] of WMP
2.	Sub-order copy to be submitted for VAM chillers and VCM Chillers [BOQ Sr. No- M3-S3-E1-B-(A)]

Table No. M3S4 Activities to be completed for releasing 10 % advance for Supply PO for Module M3 Submodule S4

Sr. No.	Activity
1	Placement of sub-order for DM Plant.
2	Placement of sub -order for CLO2 Plant
3	Placement of sub -order for VT Pumps



Table No. M3S5 Activities to be completed for releasing 10 % advance for Supply PO for Module M3 Sub module S5

Sr. No.	Activity
1	Placement of Sub PO for chillers and pumps and acceptance of the same by Sub Vendor

Table No. M4 S1 Activities to be completed for releasing 10 % advance for Supply PO for Module M4 Submodule S1 (Main Plant Electrical System)

Sr. No.	Activity
1	Placement of Sub-PO and submission of Un-priced Sub order copies for Main Items of following sub-sub-modules (i) Sub-sub module -1 (6.6kV SWITCHGEAR AND 6.6kV BUS DUCTS) - 100% of the quantity given in price schedule for Kaiga-5 and Kaiga-6 (ii) Sub-sub module -2 (AUXILIARY TRANSFORMERS)- 100% of the quantity given in price schedule for Kaiga-5 and Kaiga-6 (iii) Sub-sub module -11 (HV POWER CABLES)- minimum 75% of the quantity given in price schedule for Kaiga-5 and Kaiga-6 (iv) Sub-sub module -12 (415V POWER CABLES)- minimum 75% of the quantity given in price schedule for Kaiga-5 and Kaiga-6 (v) Sub-sub module -13 (ELECTRICAL CONTROL CABLES)- minimum 75% of the quantity given in price schedule for Kaiga-5 and Kaiga-6 (vi) Sub-sub module -26 (PROTECTION PANELS FOR GENERATOR, GENERATOR TRANSFORMER, UNIT TRANSFORMER AND START UP TRANSFORMER)- 100% of the quantity given in price schedule for Kaiga-5 and Kaiga-6

Table No. M4S2 Activities to be completed for releasing 10 % advance for Supply PO for Module M4 Submodule S2 (Switchyard)

Sr. No.	Activity
1	Placement of Sub-PO and submission of Un-priced Sub order copies for 245 kV & 420 kV Circuit Breaker
2	Placement of Sub-PO and submission of Un-priced Sub order copies for 245 kV & 420 kV Isolator
3	Placement of Sub-PO and submission of Un-priced Sub order copies for 245 kV & 420 kV Current Transformer
4	Placement of Sub-PO and submission of Un-priced Sub order copies for 245 kV & 420 kV class Surge Arrestor
5	Placement of Sub-PO and submission of Un-priced Sub order copies for 245 kV & 420 kV Post Insulator



Table No. M4 S3 Activities to be completed for releasing 10 % advance for Supply PO for Module M4 Submodule S3 (Power Transformers and Shunt reactors)

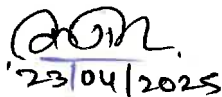
Sr. No.	Activity
1	Placement of Sub-PO and submission of Un-priced Sub order copies for SUT
2	Placement of Sub-PO and submission of Un-priced Sub order copies for GT
3	Placement of Sub-PO and submission of Un-priced Sub order copies for UT

Table No. M4S4 Activities to be completed for releasing 10 % advance for Supply PO for Module M4 Submodule S4 (Diesel Generators)

Sr. No.	Activity
1	Placement of Sub-PO and submission of Un-priced Sub order copies for 4200 KW DG sets

Table No. M-5&M-6 Activities to be completed for releasing 10 % advance for Supply PO for Module M5 and M6

Sr. No.	Activity
1	No Specific activities needs to be completed for these modules


23/04/2025

विपिन कुमार त्रिवेदी, (Vipin Kumar Trivedi)

सह निदेशक (सीएमएम) Associate Director, C&MM

For and on behalf of Nuclear Power Corporation of India Limited
(The Purchaser)



Annexure-3 (Details of Free issue Material)

Consist of Following:

- I] Annexure-3 (a) (Details of Free issue Material to be issued from Kaiga-5&6 Site)**
- II] Annexure-3 (b) (Details of Free issue Material to be issued from TVS, Mumbai)**

WILL BE ISSUED LATER



ANNEXURE 4 : Activities for releasing Advance for Civil Work

TABLE No. M1S1: Activities to be completed for releasing 10 % advance for Civil Works for Module M1 Submodule S1

Sr. No.	Stage	Release of advance payment as % age of contract value of this sub module (M1S1)
1.	On commencement of the work and provision by the contractor of the unconditional BG in respect of the advance.	5 %
2.	On certification by the engineer of the contractor's having achieved a financial progress of 10 (ten) per cent of the contract price of this submodule i.e. M1S1, as also provision of a BG by the contractor for this part of the advance.	5 %
3.	Total	10.0%

TABLE No. M1S2: Activities to be completed for releasing 10 % advance for Civil Works for Module M1 Submodule S2

Sr. No.	Stage	Release of advance payment as % age of contract value of this sub module (M1S2)
1.	On commencement of the work and provision by the contractor of the unconditional BG in respect of the advance.	5 %
2.	On certification by the engineer of the contractor's having achieved a financial progress of 10 (ten) per cent of the contract price of this submodule i.e. M1S2, as also provision of a BG by the contractor for this part of the advance.	5 %
3.	Total	10.0%

TABLE No. M1S3: Activities to be completed for releasing 10 % advance for Civil Works for Module M1 Submodule S3

Sr. No.	Stage	Release of advance payment as % age of contract value of this sub module (M1S3)
1.	On commencement of the work and provision by the contractor of the unconditional BG in respect of the advance.	5 %
2.	On certification by the engineer of the contractor's having achieved a financial progress of 10 (ten) per cent of the contract price of this sub-module i.e. M1S3, as also provision of a BG by the contractor for this part of the advance.	5 %
3.	Total	10.0%

TABLE No. M1S4: Activities to be completed for releasing 10 % advance for Civil Works for Module M1 Submodule S4

Sr. No.	Stage	Release of advance payment as % age of contract value of this sub module (M1S4)
1.	On commencement of the work and provision by the contractor of the unconditional BG in respect of the advance	5 %
2.	On certification by the engineer of the contractor's having achieved a financial progress of 10 (ten) per cent of the contract price of this sub-module i.e. M1S4, as also provision of a BG by the contractor for this part of the advance.	5 %
3.	Total	10.0%

Table No. M Activities to be completed for releasing 10 % advance for Civil Works of other than Module M1

Sr. No.	Activity
1	No Specific activities needs to be completed for these modules.

(Signature)
23/04/2025

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सह निदेशक (सीएमएम) Associate Director, C&MM

For and on behalf of Nuclear Power Corporation of India Limited
(The Purchaser)



Annexure 6: Penalty for Contractors

Responsible contracting company shall be imposed with penalty as per detailed below:

Sl No	Type of Violation/Injury	Number of Violations	Charge for person(s)	Fine (Rs) for the Contractor Company
1	Unsafe act/ Unsafe Condition	1st Violation	Explanation Letter	Nil
		2nd Violation	Explanation Letter +6 working day trg	5,000
		3rd Violation	Explanation Letter +15 working day Suspension	10,000
		4th Violation	Explanation Letter +Termination	20,000
2	Non-Reportable Injury	1st Violation	Explanation Letter	Nil
		2nd Violation	Explanation Letter +6 working day trg	1,00,000
		3rd Violation	Explanation Letter +15 working day Suspension	2,00,000
		4th Violation	Explanation Letter +Termination	4,00,000
3	Reportable injury not escalated to Accident of serious nature/Dangerous occurrence/Fatality	1st Violation	Explanation Letter	Nil
		2nd Violation	Explanation Letter +6 working day trg	5,00,000
		3rd Violation	Explanation Letter +15 working day Suspension	7,00,000
		4th Violation	Explanation Letter +Termination	9,00,000
4	Accident of serious Nature or Dangerous Occurrence	1st Violation	Explanation Letter+6 working day Training	10,00,000
		2nd Violation	Explanation Letter +12 working day Training	12,00,000
		3rd Violation	Explanation Letter +15 working day Suspension	15,00,000
		4th Violation	Explanation Letter+Termination	18,00,000
5	Fatality	First & Subsequent	Explanation Letter+Termination	25,00,000
6	Concealing an Injury	First & subsequent	Explanation Letter	50,00,000

Note: The penalty mentioned above shall be applicable to road traffic accident happed at plant premises also.


23/04/2025

विपिन कुमार त्रिवेदी, (Vipin Kumar Trivedi)

सह निदेशक (सीएमएम) Associate Director, C&MM

For and on behalf of Nuclear Power Corporation of India Limited
(The Purchaser)

Signature Not Verified

Digitally signed by RAJESH KUMAR
Date: 2025.04.23 17:40:41 IST
Location: eProcurement System for Central PSUs