

BHARAT HEAVY ELECTRICALS LIMITED
PROJECT ENGINEERING & SYSTEMS DIVISION
PURCHASE DEPARTMENT



REF: T7B1V42291 (NIT_63298)/**BID EXTENSION**

DATE: 14.06.22

Organisation Chain : Bharat Heavy Electricals Limited||BHEL-Project
Engineering and Systems Division, Hyderabad||MM

Tender ID : 2022_BHEL_648294_2

Tender Reference Number : T7B1V42291 (NIT_63298). THIS TENDER IN BHEL
PORTAL IS LISTED UNDER NIT_63299.

Tender Title : PreBid Tieup for Supply of GAS ENGINEERS for NVVN LTD
GAS POWER PROJECT 50MWAT ANDADAMN and NICOBAR
ISLANDS

Corrigendum Type : Date, NVVN CLARIFICATIONS, ERRATA

**TENDER DUE DATE SUBMISSION IS EXTENDED TILL 15.06.2022. THIS TENDER IN
BHEL PORTAL IS LISTED UNDER NIT_63299.**

SL. NO.	ENQUIRY SPECIFICATION				SPECIFICATION REQUIREMENT	COMMENTS / CLARIFICATIONS	Owner's Reply
	SEC/ PAR T	SUB SEC.	PAGE NO.	CLAUS E NO.			
1.	VI/B	Volume II E2	520/1178	3.00.00	47.5 Hz to 51.5 Hz.	Generator Characteristics shall be generator manufacture standard. For a standard generator following frequency limits apply for continuous operation: Min: 49Hz Max: 51Hz For short time operation: Min:47,5Hz Max: 51,5Hz operation for 30 min cumulatively, at 6 hours intervals A note is also attached on operation's plan	Noted
2.	VI/B	Volume I, M1	433/1178	5.00.00	Acceptance Test (FAT) Factory Acceptance Test of all the Engines and Alternators shall be attended by the owner/Client	OEM standard practice is one FAT for one project. more FAT for engine and alternator does not provide any extra benefits for customer. In addition, it will make the delivery time schedule longer and cost more.	Bidder to comply specification requirement

3.	VI/B	Volume I, M1	421/1178	1.02.00 vii	Designed for continuous operation at any load between 30 -100% of power output for the fuel specified.	Bidder understands that 30-100% output variation shall be applicable for complete plant installed capacity against each gas engine output. Please confirm.	Refer Amendment in this regard
4.	VI/B	Volume II E2	522/1178	5.04.01	The excitation system shall have two (2x100%) AVR channels including complete independent power supplies and controls. Each channel shall be equipped for 'Auto Operation' with the facility for selecting either channel in 'Auto' or 'Manual' mode.	The project allows modular configuration with 4 to 11 units. Redundant AVR is not a standard feature of these engines & providing redundancy will involve special engineering. Our standard AVR system has proven reliability even in utility size power plants of upto 110 MW capacity with over 94% availability. We strongly recommend to allow standard engineered AVR system.	Refer Amendment in this regard
5.	VI/B	Volume II E4	534/1178	3.01.00	Continuous duty LT motors upto 200 KW Output rating (at 50 deg.C ambient temperature), shall be Premium Efficiency class-IE3, conforming to IS 12615, or IEC:60034-30.	Since, Some motors are integral part of Gas engine & it's skid. Hence, Such motors efficiency shall be as per Gas engine OEM proven standard practice. Bidder request NTPC to accept the same.	Noted and it shall be limited to integral part of Gas engine & it's skid.

6.	VI/B	Volume II E4	534/1178	4.00.00	(b) Whenever the basis for motor or driven equipment ratings are not specified in the corresponding mechanical specification sub-sections, maximum continuous motor ratings shall be at least 10% above the maximum load demand of the driven equipment under entire operating range including voltage and frequency variations.	As per Gas engine OEM proven practice, Electric motors in Gas engine & it's skid will be of safety margin of 5% over and above the necessary shaft power.	Noted and it shall be limited to integral part of Gas engine & it's skid.
7.	VI/B	Volume II E4	534/1178	5.00.00	Air cooled motors 70 deg. C by resistance method for both thermal class 130(B) & 155(F) insulation.	As per Gas engine OEM proven practice, the following Insulation material class with respect to Motor capacity for Gas engine & it's skid shall be provided: 1. Less than 5.5 kW : E 2. 5kW to 30 kW : B 3. More than 30 kW : F	Noted and it shall be limited to integral part of Gas engine & it's skid.
8.	VI/B	Volume II E4	535/1178	7.01.00	Suitable single phase space heaters shall be provided on motors rated 30KW and above to maintain windings in dry condition when motor is standstill. Separate terminal box for space heaters & RTDs shall be provided. However for flame proof motors, space heater terminals inside the main terminal box may be acceptable.	As per Gas engine OEM proven practice, for Gas engine & it's skid ,space heaters are not provided for some motors. Please conf	Noted and it shall be limited to integral part of Gas engine & it's skid

9.	VI/B	Volume IIC	699/1178	2.01.04	IEC-62443 [Standard for Cyber security].	OEM is matching the tender specifications as far as possible, at same time maintaining the high standard quality and functionality of the power plant. Siemens S7 400H redundant PLC is considered in generator control panels. IEC 62443 standard on that PLC is not complied yet.	For Gas engine & auxiliaries, OEM standard and proven practice is acceptable as proposed by the Bidder. For all other instrumentation and control system requirements, bidder to meet specification requirement.
10.	VI/B	Volume IIC	699/1178	2.02.03	All Electronic modules of PLC shall have conformal protective coating as per G3 / GX classification in accordance with ISA S-71.04 standard. The conformal coating version shall be a standard product from the manufacturer's factory. The hardware that is being conformal coated locally shall not be acceptable.	As per our Gas Engine OEM, Siemens PLC with supplier standard coating according to EN 60721-3-3, Class 3C4 incl. salt spray in accordance with EN60068-2-52 (degree of severity 3) are considered instead of ISA standard. Pls confirm.	For Gas engine & auxiliaries, OEM standard and proven practice is acceptable as proposed by the Bidder. For all other instrumentation and control system requirements, bidder to meet specification requirement.
11.	VI/B	Volume IIC	699/1178	2.02.05 (a)	Processor Two (2) numbers, one as primary and another as hot standby. It shall be based on dual core multi-function microprocessor technology as a minimum and shall carry the latest error correction (ECC) technology.	Bidder request NTPC to accept 1 no. of processor as per Gas Engine OEM standard proven practice.	For Gas engine & auxiliaries, OEM standard and proven practice is acceptable as proposed by the Bidder. For all other instrumentation and control system requirements, bidder to meet specification requirement.

12.	VI/B	Volume IIC	699/1178	2.02.05 (b)	Controller Redundancy Controllers shall be fully redundant operating in Hot-standby mode. The hot standby configuration hardware shall be based on two separate identical hardware configuration set. Either controller can serve as primary or backup. The Hot-standby function shall be the inherent property of the controllers. Engineered solutions developed for implementing redundancy functionality, for example switch over function shall not be acceptable. Wherever multiple functional groups have been specified / are required, the above requirements are applicable for each functional group.	Bidder request NTPC to accept No redundant for Controller as per Gas Engine OEM standard proven practice.	For Gas engine & auxiliaries, OEM standard and proven practice is acceptable as proposed by the Bidder. For all other instrumentation and control system requirements, bidder to meet specification requirement.
-----	------	------------	----------	-------------	--	--	---

13.	VI/B	Volume IIC	701/1178	2.02.05 (n)	Power supply 2 nos. 230V AC UPS input feeders (primary & secondary) shall be provided for each PLC / RIO panel. Redundant power supply system for CPU, I/O system, interposing relays shall be provided. Power distribution shall be performed in such a way that any single power supply failure shall not cause loss of operation of any module. A suitable power supply scheme for extending power through PLC to solenoids shall be devised and finalized during detailed engineering 230V AC power supply for PC / monitor & printer units shall be derived from dedicated feeders of the UPS ACDB. Surge protected power sockets shall be considered for powering the PC, monitor and printer units.	Bidder request NTPC to accept control panel power supply is DC100V as per Gas Engine OEM standard proven practice.	For Gas engine & auxiliaries, OEM standard and proven practice is acceptable as proposed by the Bidder. For all other instrumentation and control system requirements, bidder to meet specification requirement.
-----	------	------------	----------	-------------	---	---	---

ERRATA 01 to Bid Document Ref. NVVN/C&M/RE-123/2021-22 for ANDAMAN NICOBAR GAS POWER PROJECT (50 MW)

S. No.	Section / Clause No.	Existing Provision	To be read as (Rectified errors are highlighted in Bold)
01	P-18 of 1178 ITB Clause 8.1.1.1 (e)	ATTACHMENT- 3I- Letter of Undertaking from Gas Engine manufacturer as per clause 6.1.2.2 of IFB, if applicable	ATTACHMENT- 3I- Letter of Undertaking from Gas Engine manufacturer as per clause 6.2.0 (ii) of IFB, if applicable
02	P-18 of 1178 ITB Clause 8.1.1.1 (f)	Attachment 21: Integrity Pact The "Integrity Pact" shall be furnished duly signed in accordance with the provision of Integrity Pact specified at ITB clause 36.	Attachment 19: Integrity Pact The "Integrity Pact" shall be furnished duly signed in accordance with the provision of Integrity Pact specified at ITB clause 36.
03	P-28 of 1178 ITB Clause 10.6.2	In addition, Bidder may also like to ascertain the availability of Custom Duty Benefits available for import of construction Equipment, if any, as per the extant Customs Acts & Notification of Govt. of India. Where the Bidder has quoted taking into account the Custom Duty benefits available for import of Construction Equipment, he must give all information required for issue of relevant Certificate by Employer in attachment 9A . The relevant Certificate will be issued on this basis only and no subsequent change will be permitted.	In addition, Bidder may also like to ascertain the availability of Custom Duty Benefits available for import of construction Equipment, if any, as per the extant Customs Acts & Notification of Govt. of India. Where the Bidder has quoted taking into account the Custom Duty benefits available for import of Construction Equipment, he must give all information required for issue of relevant Certificate by Employer in attachment 7A . The relevant Certificate will be issued on this basis only and no subsequent change will be permitted.
04	P-29 of 1178 ITB Clause 10.7	Price Basis Prices quoted by the Bidder shall be subject to adjustment during performance of the Contract to reflect changes in the cost of labour, material, etc. in accordance with the procedures specified in Appendix-2 to the Form of Contract Agreement. A bid submitted with a fixed price quotation will not be rejected, but the price adjustment will be treated as zero. The price adjustment provision will not be taken into consideration in bid evaluation. Bidders must indicate the name, source and origin of labour and material indices along with their base values and corresponding coefficients in Attachment 17 to bid.	Price Basis Prices quoted by the Bidder shall be subject to adjustment during performance of the Contract to reflect changes in the cost of labour, material, etc. in accordance with the procedures specified in Appendix-2 to the Form of Contract Agreement. A bid submitted with a fixed price quotation will not be rejected, but the price adjustment will be treated as zero. The price adjustment provision will not be taken into consideration in bid evaluation. Bidders must indicate the name, source and origin of labour and material indices along with their base values and corresponding coefficients in Attachment 15 to bid.

05	P-37 of 1178 ITB Clause 21.8 (j)	Patent Indemnity (Clause	Patent Indemnity (Clause 29 of GCC, Section IV)
06	P-37 of 1178 ITB Clause 22.1 (a)	(a) overall completeness and compliance with the Technical Specifications and Drawings; deviations from the Technical Specifications as identified in Attachment 6 to the bid ; suitability of the facilities offered in relation to the environmental and climatic conditions prevailing at the site; and quality, function and operation of any process control concept included in the bid. The bid that does not meet minimum acceptable standards of completeness, consistency and detail will be rejected for non-responsiveness.	(a) overall completeness and compliance with the Technical Specifications and Drawings; suitability of the facilities offered in relation to the environmental and climatic conditions prevailing at the site; and quality, function and operation of any process control concept included in the bid. The bid that does not meet minimum acceptable standards of completeness, consistency and detail will be rejected for non-responsiveness.
07	P-76 of 1178 GCC Clause 6.3.4	6.3.4 In case the Indian Contractor is a Central Government Department/Enterprise/organisation or a State Level Public Enterprise (SLPE), the dispute arising between the Employer and the Contractor shall be referred for resolution to the Permanent Machinery of Arbitrators (PMA) of the Department of Public Enterprises, Government of India as per Office Memorandum No. 4(1) 2011-DPE(PMA)-GL dated 12.06.2013 issued by Government of India, Ministry of Heavy Industries and Public Enterprises, Department of Public Enterprises and its further modifications and amendments.	6.3.4 In case the Indian Contractor is a Central Government Department/Enterprise/organisation or a State Level Public Enterprise (SLPE), the dispute arising between the Employer and the Contractor shall be referred for resolution to the Permanent Machinery of Arbitrators (PMA) of the Department of Public Enterprises, Government of India as per Office Memorandum No. 4(1) 2011-DPE(PMA)-GL dated 12.06.2013 issued by Government of India, Ministry of Heavy Industries and Public Enterprises, Department of Public Enterprises and its further modifications and amendments.
08	P-77 of 1178 GCC Clause 7.3	In addition to the supply of Mandatory Spare Parts included in the Contract, the Contractor agrees to supply spare parts required for the operation and maintenance of the Facilities. However, the identity, specifications and quantities of such spare parts and the terms and conditions relating to the supply thereof are to be agreed between the Employer and the Contractor, and the price of such spare parts shall be that given in Price Schedule No. 5 , which shall	In addition to the supply of Mandatory Spare Parts included in the Contract, the Contractor agrees to supply spare parts required for the operation and maintenance of the Facilities. However, the identity, specifications and quantities of such spare parts and the terms and conditions relating to the supply thereof are to be agreed between the Employer and the Contractor, and the price of such spare parts shall be that given in Price Schedule No. 6 , which shall be added to the

		be added to the Contract Price. The price of such spare parts shall include the purchase price therefor and other costs and expenses (including the Contractor's fees) relating to the supply of spare parts. Prices of recommended spares covered under price Schedule No. 5 shall be kept valid for a period of six (6) months after placement of Notification of Award for Main Equipment and Mandatory Spares. 7.3.1 The Contractor agrees that the spare parts recommended by him for 3 years operation and quoted in Schedule No. 5 shall be supplied by him at the same terms and conditions as are otherwise applicable to this Contract. Further, the Contractor also agrees to supply spare parts required for the operation and maintenance of the Facilities as per provision of subsequent paragraphs of this Sub-Clause.	Contract Price. The price of such spare parts shall include the purchase price therefor and other costs and expenses (including the Contractor's fees) relating to the supply of spare parts. Prices of recommended spares covered under price Schedule No. 6 shall be kept valid for a period of six (6) months after placement of Notification of Award for Main Equipment and Mandatory Spares. 7.3.1 The Contractor agrees that the spare parts recommended by him for 3 years operation and quoted in Schedule No. 6 shall be supplied by him at the same terms and conditions as are otherwise applicable to this Contract. Further, the Contractor also agrees to supply spare parts required for the operation and maintenance of the Facilities as per provision of subsequent paragraphs of this Sub-Clause.
09	P-86 of 1178 GCC Clause 14.2	Notwithstanding GCC Sub-Clauses 14.1 above, the Employer shall bear and pay/reimburse to the Contractor Goods and Services Tax (GST) applicable on: (a) Plant and Equipment (including Type Test Charges) and Mandatory Spares to be supplied from within the Employer's country specified in Price Schedule No. 1 (and also on locally supplied Recommended Spare Parts quoted in Price Schedule No. 4, when awarded) to be incorporated in the Facilities, by the law of country where the site is located, (b) local transportation & insurance, other local costs incidental to delivery of plant & equipment including mandatory spares specified in Price Schedule No. 2 (and also of locally supplied Recommended Spare Parts quoted in Price Schedule No. 4, when awarded) and (c) Installation Services including Erection, Civil & Allied Works and O&M Services and other services specified in Price Schedule No.	Notwithstanding GCC Sub-Clauses 14.1 above, the Employer shall bear and promptly pay/reimburse all custom and Import duties, if imposed on the Plant and Equipment including Mandatory Spares supplied abroad and specified in Price Schedule No 01 (and on recommended spare parts to be supplied from abroad and specified in Price Schedule No. 6, when awarded) and that are to be incorporated into facilities, by the law of the country where the site is located. However if plant and equipment are shipped in Shipper's container, then custom duty levied on the cost of empty containers shall be borne and paid/reimbursed by the contractor. Further anti-dumping duty, countervailing duty on subsidised articles, Safeguard duty etc. and any other tax including GST levies, cess etc. applicable on such additional duties, if imposed on Plant and equipment including type test and

	3. However, all other taxes, duties & levies as may be applicable on goods and services specified in Price Schedules Nos. 1, 2 & 3 and on the materials used for civil construction works and erection & commissioning shall be to the contractor's account and no separate claim in this regard will be entertained by the Employer. Notwithstanding anything to contrary contained in the Contract, the Contractor's right to payment under the Contract is subject to issuance of valid tax invoice, payment of applicable GST to the credit of appropriate Government and submission of valid particulars of tax invoice under GST returns in accordance with GST Law. The Contractor shall issue tax invoices, file appropriate returns, and deposit the applicable GST to the account of appropriate government within the time limit prescribed under the GST Law. In the event of any default, Contractor shall be liable to pay any penalty/demand raised on NTPC due to default by Contractor, and the same shall be recovered/Contractor shall make good the loss. The Contractor shall be responsible for the issuance of e-way bill and other compliances relating to e-way bill as per GST law. The Employer will deduct GST at source at the applicable rates in case transactions under the contract are liable to GST deduction at source as per the prevailing provisions of GST Law.	Mandatory Spares/Recommended Spares, Shall be Borne by the contractor. The Employer shall also bear and pay/reimburse to the Contractor Goods and Services Tax (GST) applicable on: (a) Plant and Equipment (including Type Test Charges) and Mandatory Spares to be supplied from within the Employer's country specified in Price Schedule No. 2 (and also on locally supplied Recommended Spare Parts quoted in Price Schedule No. 6, when awarded) to be incorporated in the Facilities, by the law of country where the site is located, (b) local transportation & insurance, other local costs incidental to delivery of plant & equipment including mandatory spares specified in Price Schedule No. 3 (and also of locally supplied Recommended Spare Parts quoted in Price Schedule No. 6, when awarded) and (c) Installation Services including Erection, Civil & Allied Works and other services specified in Price Schedule No. 4. However, all other taxes, duties & levies as may be applicable on goods and services specified in Price Schedules Nos. 2, 3 & 4 and on the materials used for civil construction works and erection & commissioning shall be to the contractor's account and no separate claim in this regard will be entertained by the Employer. Notwithstanding anything to contrary contained in the Contract, the Contractor's right to payment under the Contract is subject to issuance of valid tax invoice, payment of applicable GST to the credit of appropriate Government and submission of valid particulars of tax invoice under GST returns in accordance with GST Law. The Contractor shall issue tax invoices, file appropriate returns, and deposit the applicable GST to the account of appropriate government within the time limit prescribed under the GST Law. In the event of any default, Contractor shall
--	--	---

			be liable to pay any penalty/demand raised on employer due to default by Contractor, and the same shall be recovered/Contractor shall make good the loss. The Contractor shall be responsible for the issuance of e-way bill and other compliances relating to e-way bill as per GST law. The Employer will deduct GST at source at the applicable rates in case transactions under the contract are liable to GST deduction at source as per the prevailing provisions of GST Law.
10	P-87 of 1178 GCC Clause 14.8	Contractor/Supplier shall issue tax invoices, file appropriate returns, and deposit the applicable GST to the account of appropriate government within the time limit prescribed under the GST Law. In the event of any default, Contractor/Supplier shall be liable to pay the amount which may be imposed on NTPC due to such default	Contractor/Supplier shall issue tax invoices, file appropriate returns, and deposit the applicable GST to the account of appropriate government within the time limit prescribed under the GST Law. In the event of any default, Contractor/Supplier shall be liable to pay the amount which may be imposed on employer due to such default.
11	P-142 of 1178 SCC Clause 2	Prices of recommended spares covered under price Schedule No. 5 shall be kept valid for a period of six (6) months after placement of Notification of Award for Main Equipment and Mandatory Spares.	Prices of recommended spares covered under price Schedule No. 6 shall be kept valid for a period of six (6) months after placement of Notification of Award for Main Equipment and Mandatory Spares.
12	P-1007 of 1178 Attachment 08, Section VII Part 1 of 3 Clause 01	1. Net Heat Rate To be filled and submitted in attachment-10A of Price Bid Form with Price bid	1. Net Heat Rate To be filled and submitted in attachment-8A of Price Bid Form with Price bid
13	P-1015 of 1178 Attachment 10, Section VII Part 1 of 3	Attachment 10 is as per TECHNICAL SPECIFICATION, SECTION-VI. Bidder is required to fill in the Technical Data as per the Clause 7.00.00 of Chapter-M1, Volume-I, Part-B of TECHNICAL SPECIFICATION, SECTION-VI and submit the same along with bid.	Attachment 10 is as per TECHNICAL SPECIFICATION, SECTION-VI. Bidder is required to fill in the Technical Data as per the Clause 8.00.00 of Chapter-M1, Volume-I, Part-B of TECHNICAL SPECIFICATION, SECTION-VI and submit the same along with bid.

14	P-1022 & 1023 of 1178 Attachment 16 & 16 A, Section VII Part 1 of 3	We confirm that we are seeking qualification on the basis of association/collaboration with the manufacturer(s) of particular equipment(s). We further confirm that such equipment and mandatory spares, which shall be imported from the associate's/collaborator's country by the manufacturer or by us have been listed in this Attachment-18 and the price of such equipment including type tests and mandatory spares have been included in the total price to be quoted by us in Schedule-1.	We confirm that we are seeking qualification on the basis of association/collaboration with the manufacturer(s) of particular equipment(s). We further confirm that such equipment and mandatory spares, which shall be imported from the associate's/collaborator's country by the manufacturer or by us have been listed in this Attachment-16 and the price of such equipment including type tests and mandatory spares have been included in the total price to be quoted by us in Schedule-1.
15	P-1027 of 1178 Attachment 18 Section VII Part 1 of 3	We have read the contents of the Fraud Prevention Policy of NVVN displayed on website http://www.ntpctender.com and http://www.nvvn.com and undertake that we along with our associate/collaborator/subcontractors/subvendors/consultants/service providers shall strictly abide by the provisions of the Fraud Prevention Policy of NVVN.	We have read the contents of the Fraud Prevention Policy of NVVN displayed on website www.ntpctender.com and http://www.nvvn.co.in and undertake that we along with our associate/collaborator/subcontractors/subvendors/consultants/service providers shall strictly abide by the provisions of the Fraud Prevention Policy of NVVN.
16	P-1044 of 1178 BID FORM ENVELOPE-II (PRICE BID)	BID FORM ENVELOPE-II (PRICE BID)	REVISED BID FORM ENVELOPE-II (PRICE BID) is attached as Annexure I to Errata -01.
17	P-1055 of 1178 Attachment 15, Price Adjustment Data	Attachment 15, Price Adjustment Data	Bidder to submit Revised Attachment 15, Price Adjustment Data along with the Price Bid. Revised Attachment -15, Price Adjustment Data is attached as Annexure II to Errata-01
18	BOQ-Revised Schedule 1: Item A1, Schedule 2: Item A1 & Schedule 04: Item (I)	Main Equipment including Factory Fabricated Steel Structures for Andaman and Nicobar Gas Power Project (50 MW) as per Technical Specification, Part A section VI.	Main Equipment including Supporting Structures for Andaman and Nicobar Gas Power Project (50 MW) as per Technical Specification, Section VI.

19	AMENDMENT No.02 (Commercial) Revised Appendix 2A Price Adjustment	(viii) <i>(b) Foreign Currency portion of the Installation Price</i> (ix) <i>Price adjustment for civil works component of the Contract Price (including construction materials)</i> (x) <i>Structural Works Price Component</i>	Revised Appendix 2A, Price Adjustment clauses: (viii) <i>(b) Foreign Currency portion of the Installation Price</i> (ix) <i>Price adjustment for civil works component of the Contract Price (including construction materials)</i> (x) <i>Structural Works Price Component</i> are not applicable.
----	--	---	--

ANNEXURE I
REVISED BID FORM
ENVELOPE-II (PRICE BID)

Ref No.:

Date:

IFB No. : NVVN/C&M/RE-123/2021-22

Name of Package : ANDAMAN & NICOBAR GAS ENGINE POWER PROJECT (50 MW)
DOCUMENT NO. NVVN/C&M/RE-123/2021-22

To
NTPC VIDYUT VYAPAR NIGAM LIMITED,
1st Floor, Core 5, Scope
Complex, 7, Institutional Area,
Lodhi Road, New Delhi –
110003, India

Gentlemen and/or Ladies,

1.0 Having examined the Bidding Documents No. **NVVN/C&M/RE-123/2021-22**, including subsequent amendments and clarifications, if any, the receipt of which is hereby acknowledged, we the undersigned, offer to design, manufacture, test, deliver, install and commission (including carrying out Guarantee Test) the facilities under the above-named Package in full conformity with the said Bidding Documents for the sum (**excluding all taxes & duties indicated by us in Schedule-7**) or such other sums as may be determined in accordance with the terms and conditions of the Contract..

2.0 Attachments to the Bid form (Price Bid):
In line with the requirement of the Bidding Documents we enclose herewith the following Attachments to the Bid Form Envelope-II (Price) Bid:

- (a) **Attachment 7:** Declaration regarding Import Content.
- (b) **Attachment-7A:** Custom Duty Benefits for Import for Construction Equipment.
- (c) **Attachment 8A:** Functional Guarantees
- (d) **Attachment-11:** Details of Bought-out Items to be directly dispatched by the sub-vendor(s) along with its value /price as per Employer's format
- (e) **Attachment 15:** Details regarding Price Adjustment as per the Employer's format.
- (f) **Attachment 16A: Equipment and Mandatory Spares to be imported from Associate / Collaborator**
- (g) **Attachment 24A:** Checklist of documents to be submitted in price bid.

3.0 PRICE SCHEDULE:

3.1 In line with the requirements of the Bidding Documents, we enclose herewith the following Price Schedules, duly filled-in as per your proforma:

Schedule No. 1: Plant and Equipment (including Type Tests charges) and Mandatory Spares to be supplied from abroad.

Schedule No. 2: Plant and Equipment (including Type Tests charges) and Mandatory Spares to be supplied/manufactured within the Employer's country.

Schedule No. 3: Local Transportation including port handling, port clearance, port charges, Inland transit insurance and other local costs incidental to delivery of Plant & Equipment and Mandatory Spares.

Schedule No. 4: Installation Services including Erection Works, Insurance covers other than inland transit insurance, Safety Aspects/Compliance to Safety Rules and other services as specified in the Bidding Documents

Schedule No. 5: Refer Item Data

Schedule No. 6: Recommended Spare Parts

Schedule No. 7: Goods and Services Tax (GST) applicable on Schedules - 2, 3 & 4, not included in bid price.

Schedule No. 8A: Break-up of Type Tests charges quoted in Schedule-1 – If applicable

Schedule No. 8B: Break-up of Type Tests charges quoted in Schedule-2 – If applicable

Schedule No. 9: Schedule of Unit Rates

- 3.2 We are aware that the Price Schedules do not generally give a full description of the work to be performed under each item and we shall be deemed to have read the Technical Specifications, Drawings and other Sections of the Bidding Documents to ascertain the full scope of work included in each item while filling in the rates and prices. We agree that the entered rates and prices shall be deemed to include the full scope as aforesaid, including overheads and profit.
- 3.2.1 Pursuant to ITB clause 10.4(a), 10.4(b) & 10.4(c), and 27.5, we confirm that the price for mandatory spares quoted by us are in compliance with the requirements as per the list of mandatory spares specified in the Technical Specification and in Price Schedule-1 of the Bidding Documents and in case, any deviations, variations and additional conditions are found in the Price Schedule-1 of the Envelope-II Price Bid in respect of mandatory spares, which are contrary to the requirements of the Bidding Documents, the same shall not be given effect to in the evaluation and it should be considered that the bids are in compliance with the requirements of the Bidding Documents. In such cases, it is binding on us to supply such mandatory spares, as per detailed engineering without any extra cost implication to you.
- 3.3 We declare that as specified in the General Conditions of Contract (Clause 11.2) prices quoted by us in the Price Schedule shall be subject to adjustment in accordance with Appendix-2 (Price Adjustment) to the Contract Agreement.
- 3.4 We understand that in the price schedule, where there are discrepancy between the unit price and the total price, which is obtained by multiplying the unit price and quantity, or between sub totals and the total price, (even in case of carry forward of prices) the unit or subtotal price shall prevail and the total price shall be corrected accordingly. We further understand that where there is discrepancy between amounts stated in figures and amounts stated in words, the amount stated in words shall prevail. Similarly, in case of any discrepancies between the total bid price and the summation of Schedule prices (price indicated in a Schedule indicating the total of that Schedule), the total bid price shall be corrected to reflect the actual summation of the Schedule prices.
- 3.5 We declare that prices left blank in the Schedules will be deemed to have been included in the prices of other items and deemed to be the total price for executing the Facilities in complete accordance with the Contract, whether or not each individual item has been priced.
- 4.0 We confirm that except as otherwise specifically provided, our Bid Prices include all taxes, duties, levies and charges including **GST**, assessed on us, our Sub-Contractor / Sub-Vendor, our assignee and our assignee's sub-contractor/sub-vendor (if applicable, in case of foreign bidders) or their

employees by all Municipal, State or National Government authorities in connection with the Facilities, in and outside of India.

We understand that notwithstanding 4.0 above, you shall bear and promptly pay / reimburse Goods and Service Tax (GST) applicable on: (a) Plant and Equipment (including Type Test Charges) and Mandatory Spares to be supplied from within the Employer's country specified in Price Schedule No. 2 (and also on locally supplied Recommended Spare Parts quoted in Price Schedule No. 6, when awarded) to be incorporated in the Facilities, by the law of country where the site is located, (b) local transportation & insurance, other local costs incidental to delivery of plant & equipment including mandatory spares specified in Price Schedule No. 3 (and also of locally supplied Recommended Spare Parts quoted in Price Schedule No. 6, when awarded) and (c) Installation Services including Erection, Civil & Allied Works, Safety Aspects/Compliance to Safety Rules and other services specified in Price Schedule No. 4.

4.1 We further understand that notwithstanding 4.0 above, you shall also bear and pay / reimburse to us GST applicable on:

- (a) Plant and Equipment (including Type Test Charges) and Mandatory Spares to be supplied from within the Employer's country specified in Price Schedule No. 2 (and also on locally supplied Recommended Spare Parts quoted in Price Schedule No. 6, when awarded) to be incorporated in the Facilities, by Indian law,
- (b) Local transportation & insurance, other local costs incidental to delivery of plant & equipment including mandatory spares specified in Price Schedule No. 3 (and also of locally supplied Recommended Spare Parts quoted in Price Schedule No. 6, when awarded) and
- (c) Installation Services including Erection, Civil & Allied Works, Safety Aspects/ Compliance to Safety Rules and other services specified in Price Schedule No. 4. However, all other taxes, duties & levies as may be applicable on goods and services specified in Price Schedules Nos. 2, 3, & 4 and on the materials used for civil construction works and erection & commissioning shall be to the contractor's account and no separate claim in this regard will be entertained by the Employer.

We confirm that all other taxes, duties & levies as may be applicable on goods and services specified in Price Schedules Nos. 1, 2, 3 & 4 and on the materials used for civil construction works and erection & commissioning shall be to our account and no separate claim in this regard will be entertained by you.

Further, GST as applicable on Advance payment shall be paid to us along with the Advance payment. We undertake that the amount of this GST shall be adjusted pro rata against Tax Invoices due upon supply of Goods / Services, based on the value of the respective Goods/Services.

We further understand that 100% of applicable Taxes and Duties which are payable by you under the Contract shall be paid / reimbursed to the us upon receipt of equipment / spares / services and on production of satisfactory documentary evidence by us.

4.2 We confirm that we shall get registered as per relevant GST laws. Further, we hereby declare that if any Indian Income Tax, surcharge on Income Tax and any other tax is attracted under the law, we agree to pay the same to the concerned authorities and you shall have no additional tax liabilities whatsoever irrespective of the mode of contracting.

We agree to furnish any other information as a proof of the above to your satisfaction as and when required.

4.3 We confirm that GST and all other taxes, duties, levies & cess as may be applicable on materials used for such civil, structural & allied works and erection & commissioning shall be to our account and no separate claim in this regard will be entertained by the Employer.

4.4 **Income Tax**

We hereby declare that if any Indian Income Tax, surcharge on Income Tax and any other tax is attracted under the law, we agree to pay the same to the concerned authorities and you shall have no additional tax liabilities whatsoever irrespective of the mode of contracting.

- 5.0 Compliance to the provisions of the Bidding Documents
- 5.1 We have read all the provisions of the Bidding Documents and confirm that notwithstanding anything stated elsewhere in our bid to the contrary, the provisions of the Bidding Documents are acceptable to us and we further confirm that we have not taken any deviation to the provisions of the Bidding Documents anywhere in our bid.
- 5.2 We further declare that additional conditions, variations, deviations, if any, found in the Price Bid, save those pertaining to any rebates offered, shall not be given effect to.
- 6.0 We undertake, if our bid is accepted, to commence work on the facilities immediately upon your Notification of Award to us and to achieve Completion of Facilities and Conduct Guarantee Tests within the time specified in the Bidding Documents.
- 7.0 If our bid is accepted, we undertake to provide an Advance Payment Security and Contract Performance Securities in the form and amounts and within the times specified in the Bidding Documents.
- 8.0 We hereby confirm that the rates/prices quoted by us in **Schedule-9** (Schedule of Unit Rates) are consistent with the lumpsum bid price and that we shall furnish all necessary justification to establish the reasonableness of these rates/prices, if required by you. However, we clearly understand that the acceptance of our proposal for the subject package shall not mean automatic acceptance of these rates/prices and that these rates/prices shall be adopted only if their reasonableness has been established by us and accepted by you.
- 9.0 We agree to abide by this Bid (both Techno Commercial bid & Price Bid) for a period of 180 days from the date of opening of bids as stipulated in the Bidding Documents and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period. Techno - Commercial Bid including this Price Bid shall remain valid and open for acceptance for One Hundred Eighty (180) days from date of Bid Opening of Techno commercial Bid. Further, the prices of recommended spares contained in our Bid shall remain valid for a period of 6 months after placement of Notification of Award for main equipment and mandatory spares.
- 10.0 Until a formal Contract is prepared and executed between us, both bids (Envelope-I & Envelope- II), together with your written acceptance thereof in the form of your Notification of Award shall constitute a binding contract between us.
- 11.0 We understand that you are not bound to accept the lowest or any other bid you may receive.
- 12.0 We confirm that the cost of Special Tools & Tackles furnished by us in Attachment-4 of our Techno-Commercial Bid is included in the lump sum price quoted in this Price Bid.
- 13.0 We confirm that we shall submit a certificate from the statutory auditor or cost auditor giving the percentage of local content during execution of contract prior to submission of last bill for payment. In case, aforesaid Certificate is not in line with the declaration in respect of Local content submitted in our bid, the same shall be treated as false declaration and will be dealt in line with the Fraud Prevention Policy of NTPC.
- 14.0 We, hereby, declare that only the persons or firms interested in this proposal as principals are named here and that no other persons or firms other than those mentioned herein have any interest in this proposal or in the Contract to be entered into, if the award is made on us, that

this proposal is made without any connection with any other person, firm or party likewise submitting a proposal, is in all respects for and in good faith, without collusion or fraud.

Dated this..____.day of.____.20____

Thanking you, we remain,

Yours faithfully,

Date: _____

Place: _____

(authorized signatory Name).

(Designation)

Business Address:_____

Country of Incorporation (Province also to be indicated):

Fax No.:_____

Phone No.:_____

Email:

ANDAMAN & NICOBAR GAS POWER PROJECT (50 MW) BIDDING

DOCUMENT NO. NVVN/C&M/RE-123/2020-21

(Price Adjustment Data)

Bidder's Name and Address:

To
 NTPC VIDYUT VYAPAR NIGAM LIMITED,
 1st Floor, Core 5, Scope Complex,
 Institutional Area, Lodhi Road,
 New Delhi – 110003, India

Dear Sir(s),

We hereby furnish the relevant details pertaining to the price adjustment provisions in your specifications and documents.

A. Ex-Works Equipment price component (excluding Spares and Type Test Charges):

Sl. No.	Item	Value of Co-efficient	Name of Published Index and Its origin	Value of Indices as on 30 days prior to date set for Opening of Bid**
---------	------	-----------------------	--	---

Material

1. * a=

2. * b=

3. * c=

Labour I=

Fixed Complement F =0.15

* To be specified by the Bidder / @ Use Separate Sheets for FOB/Ex-Works Price Components

- i) Sum of all material coefficients a+b+c indicated above shall be between 0.60 to 0.65.
- ii) The labour coefficient "I" shall be between 0.20 to 0.25.
- iii) Sum of all material coefficients and labour coefficients shall be 0.85.
- iv) Sum of F, a, b, c & I should be equal to 1.0.

** The above information shall be updated (as per 30 days prior to date of Price Bid Opening) at the time of Contract Agreement signing based on price adjustment data offered by the successful bidder in **Revised Attachment-15** to Bid Form of Price (Stage-II) Bid.

B. Erection Price Component

The indices used for Indian Field Labour are (i) All India Consumer Price Index for Industrial Workers (All India Monthly Average) published by Labour Bureau, Simla, Government of India and (ii) Arithmetical average of Minimum Wages for Unskilled, Skilled, Semi-skilled and Highly skilled workers notified by the Central Government for the particular classified Area in which the project site is located or notified by the State Government of the state in which the project site is located, whichever is higher.

- (i) The value of the All India Consumer Price Index for Industrial Workers (All India Monthly Average) published by Labour Bureau, as on 30 days prior to the date set for opening of price bids is.....
- (ii) The value of the Arithmetical average of Minimum Wages for Unskilled, Skilled, Semi-skilled and Highly skilled workers notified by the Central Government for the particular classified Area in which the project site is located or notified by the State Government of the state in which the project site is located, whichever is higher, as on 30 days prior to the date set for opening of price bids is.....

The value of the above index as on 30 days prior to the date set for Submission of Envelope- II (Price) Bids is

* Continuation sheets of like size &format shall be used, if required.

We agree to provide you with a complete break-up of our Bid Price to enable operation of Price adjustment Clause for aforesaid all price components.

Note : Bidder shall note that it is mandatory to furnish the values of various coefficients and name, source & origin of the published indices and its base values in this Revised Attachment-15 to Bid. Bidder is also required to mention whether the indices are monthly average, weekly average or as applicable.

ERRATA 02 to Bid Document Ref. NVVN/C&M/RE-123/2021-22 for ANDAMAN NICOBAR GAS POWER PROJECT (50 MW)

S. No.	Section / Clause No.	Existing Provision	To be read as (Rectified errors are highlighted in Bold)
17	P-1055 of 1178 Attachment 15, Price Adjustment Data	Attachment 15, Price Adjustment Data	Bidder to submit Revised Attachment 15, Price Adjustment Data along with the Price Bid. Revised Attachment -15, Price Adjustment Data is attached as Annexure to Errata-02

ANDAMAN & NICOBAR GAS POWER PROJECT (50 MW) BIDDING

DOCUMENT NO. NVVN/C&M/RE-123/2020-21

(Price Adjustment Data)

Bidder's Name and Address:

To

NTPC VIDYUT VYAPAR NIGAM LIMITED,
1st Floor, Core 5, Scope Complex,
Institutional Area, Lodhi Road,
New Delhi – 110003, India

Dear Sir(s),

We hereby furnish the relevant details pertaining to the price adjustment provisions in your specifications and documents.

A. Ex-Works/FOB Equipment price component including Spares (Excluding Type Test Charges):

Sl. No.	Item	Value of Co-efficient	Name of Published Index and Its origin	Value of Indices as on 30 days prior to date set for Opening of Bid**
---------	------	-----------------------	--	---

Material

1. * a=

2. * b=

3. * c=

Labour I=

Fixed Complement F =0.15

* To be specified by the Bidder

@ Use Separate Sheets for FOB/Ex-Works Price Components

- i) Sum of all material coefficients a+b+c indicated above shall be between 0.60 to 0.65.
- ii) The labour coefficient "I" shall be between 0.20 to 0.25.
- iii) Sum of all material coefficients and labour coefficients shall be 0.85.
- iv) Sum of F, a, b, c & I should be equal to 1.0.

B. Erection Price Component

The indices used for Indian Field Labour are (i) All India Consumer Price Index for Industrial Workers (All India Monthly Average) published by Labour Bureau, Simla, Government of India and (ii) Arithmetical average of Minimum Wages for Unskilled, Skilled, Semi-skilled and Highly skilled workers notified by the Central Government for the particular classified Area in which the project site is located or notified by the State Government of the state in which the project site is located, whichever is higher.

- (i) The value of the All India Consumer Price Index for Industrial Workers (All India Monthly Average) published by Labour Bureau, as on 30 days prior to the date set for opening of price bids is.....
- (ii) The value of the Arithmetical average of Minimum Wages for Unskilled, Skilled, Semi-skilled and Highly skilled workers notified by the Central Government for the particular classified Area in which the project site is located or notified by the State Government of the state in which the project site is located, whichever is higher, as on 30 days prior to the date set for opening of price bids is.....

The value of the above index as on 30 days prior to the date set for Submission of Envelope- II (Price) Bids is

* Continuation sheets of like size &format shall be used, if required.

We agree to provide you with a complete break-up of our Bid Price to enable operation of Price adjustment Clause for aforesaid all price components.

Note : Bidder shall note that it is mandatory to furnish the values of various coefficients and name, source & origin of the published indices and its base values in this Revised Attachment-15 to Bid. Bidder is also required to mention whether the indices are monthly average, weekly average or as applicable.

PRE-BID QUERIES

IFB DOCUMENT NO. : 'NVVN/C&M/RE-123/2021-22'

Project : 50 MW GAS POWER PROJECT AT HOPE TOWN, PORT BLAIR, ANDAMAN AND NICOBAR

Technical

SL NO.	SEC/ PART	PAGE NO.	CLAUSE NO.	SPECIFICATION REQUIREMENT OF TENDER	BIDDERS COMMENTS / QUERY	NTPC Reply
1	Amendment No.1 to Technical Specification	2	3	(a) Noise from gensets shall be controlled by providing an acoustic enclosure or by treating the room acoustically, at the users end. (b) The acoustic enclosure shall be designed for minimum 25 dB(A) insertion loss or for complying with the ambient noise standards, whichever is on the higher side (if the actual ambient noise is on the higher side, it may not be possible to check the performance of the acoustic enclosure or acoustic treatment. Under such circumstances, the performance may be checked for noise reduction upto actual ambient noise level, preferably, in the night time between 10.00 PM-6.00 AM). The measurement for insertion loss may be done at different points at 0.5 m from the acoustic enclosure or room, and then averaged.	Kindly note for such big sized machines of rating 4+ MW and above acoustic enclosure is not possible. These machines can only be placed inside the acoustically treated civil building. The measurement of Noise level will be done at 0.5 m from the acoustic room and then averaged. The civil building with acoustic treatment will be in employers scope. Bidder will provide the required details/drawings for designing the acoustic treatment of the civil building.	Main building of power plant shall be structural steel frame shed with metal sheet cladding. The acoustic treatment is in Bidder's scope as per specification requirement.
2	Technical Clarification 1	7	27	Main building of power plant shall be structural steel frame shed with metal sheet cladding and roofing efficient operation of the plant addressing the erection, commissioning, operation and maintenance aspects of the plant.	Considering the best engineering practices for such large power plants, it is not recommended to place the gensets in structural steel frame shed. For longer life of the machines considering the coastal area of installation, it is recommended to place the machine inside civil building which could be acoustically treated. Also considering multiple machines along with it's auxiliaries to be accommodated in the limited space, we plan to place the remote radiators on roof of the civil building. Hence employer to consider civil building in their scope.	In order to maintain the time frame of the project and better quality management in structural steel construction, it is NTPC standard practice to use structural steel as construction material for industrial building of high importance.
3		9	34	Design, Redundancy, Plant layout and Maintenance Practices in respect of all the components of the plant shall be such as to achieve good Reliability, Availability and Maintainability throughout the Plant Life.	Engine Jacket Water cooling pump (HT & LT Circuit) shall not be redundant as per OEM standard design.	Specification requirement in case of redundancy is clear. Individual redundancy of equipment shall be finalised during detail engineering.
4		13	44	FAT : Both the test of engine and alternator has to be offered for witness by Employer (either separately or combined).	The FAT shall be conducted for the Genset (Engine + Job Alternator) at Engine OEM works. Testing of Alternator as per QAP will be conducted at Alternator OEM works. Hence the Testing of Alternator and Genset will be done in Multiple stages as per Testing schedule at 2 Different works. The details shall be provided during Post Order Execution.	The clarification given in this regard is clear. Schedule of the testing shall be finalised later
5		18	61	This purification system is for lube oil external to engine. Bidder to comply specification requirement	Noted. This means Bidder to provide One common Oil purification system between Storage and Service Tank (Capacity of Purification system to be designed as per 20% of the Total Lube oil charged in all the Engine) The Type and Design of the Oil Purification System will be as per Engine Manufacturer standards. Please confirm if our understanding is correct	The capacity of purification system is 20% of total oil charge in system ie all engines combined. The type and design of purification system shall meet the technical specification requirement.

6		27	94	Gas Detection system shall be designed to meet NEMA-7 requirement and suitable for class-1 Division-II, Group D area	NEMA 7 requirement is applicable only to field mounted Detector Instrument Enclosure of Gas Detection System. Panels for the Gas Detection System which will be installed in the Control Room which will be a safe area need not be designed as per NEMA-7 requirement. Kindly confirm if our understanding is correct.	Bidder understanding is correct in this regard.
7		32	107	The main machine hall shall be ventilated by a combination of roof extractor fans and supply air fans fitted with pre filter & fine filter.	For our proposed engine room ventilation and combustion air supply system we are considering the heat load suitable for our Genset and auxiliaries as installed in the engine room . The proposed ventilation system is the forced ventilation system which consists of supply air fans for supplying the fresh air in the Engine room and there will be motorized exhaust air fans as to remove the balance hot air from the Room. The Supply air and exhaust air is balanced to maintain positive pressure inside the room. Hence in our design the Roof top extractors becomes not applicable and should not be installed. Moreover to accommodate our gensets and auxiliaries we are proposing Civil building with RCC Roof. Hence Roof extractor would not be possible to be installed in RCC roof.	In view of huge ventilation air requirements and space constraints, roof extactor fans have been envisaged instead of wall mounted exhaust fans. Bidder to comply with specification requirements.

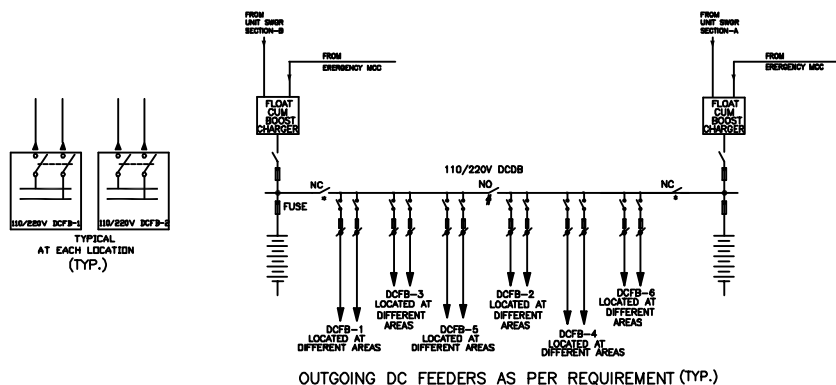
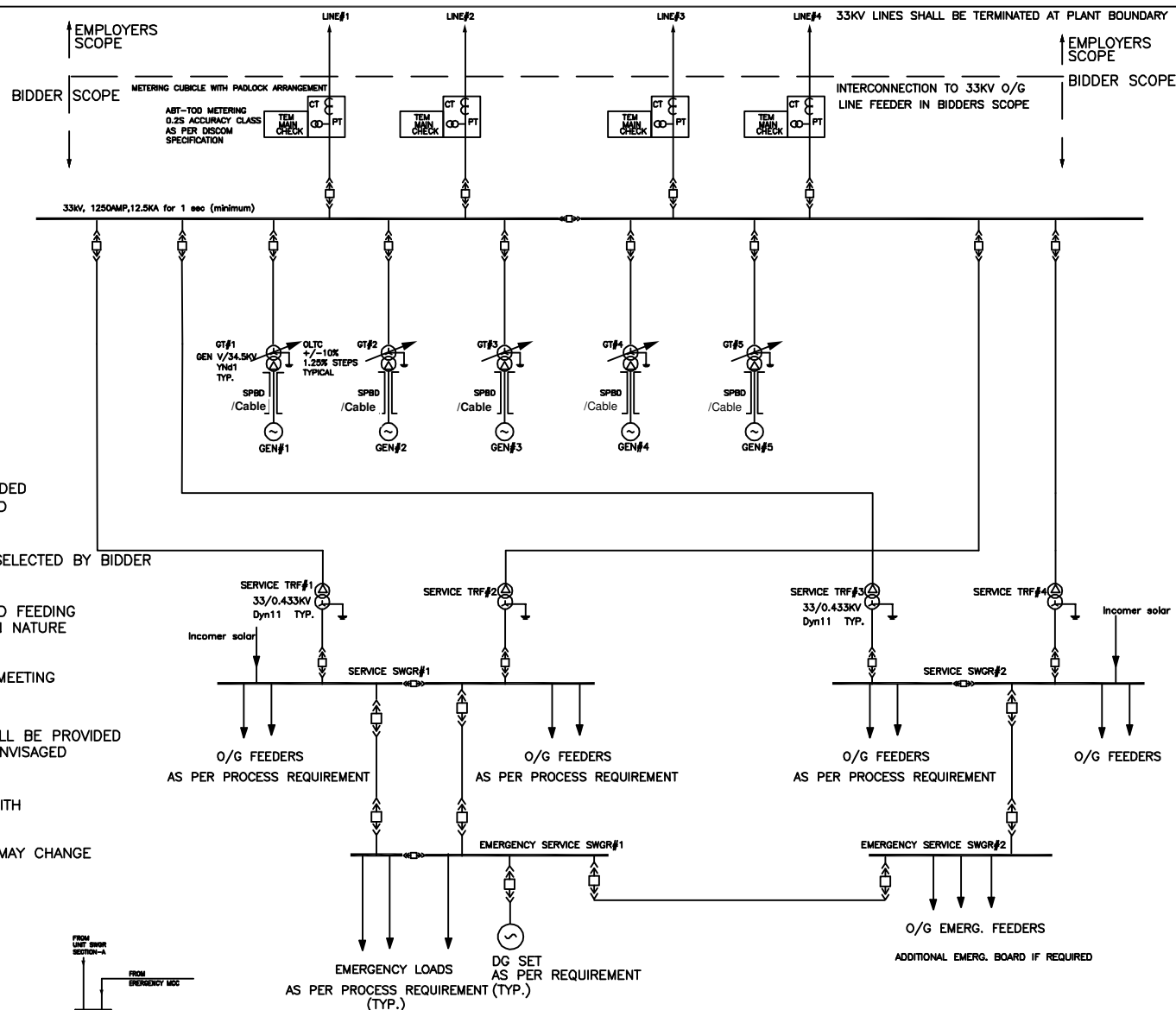
NTPC VIDYUT VYAPAR NIGAM LIMITED 50 MW GAS POWER PROJECT - ANDAMAN & NICOBAR
Bidding Document No. NVVN/C&M/RE-123/2020-21
ADDITIONAL PRE BID QUERIES

SL. NO.	ENQUIRY SPECIFICATION				SPECIFICATION REQUIREMENT	COMMENTS / CLARIFICATIONS	Owner's Reply
	SEC/PART	SUB SEC.	PAGE NO.	CLAUSE NO.			
1.	VI/A	VOLUME III	199/1178	17.02.00	MV busducts shall be provided for Interconnection between Generators, transformers and switchgears as per provisions in relevant portion of technical Specifications.	As per Gas Engine Generator OEM proven practice, Generator to Generator transformer cable shall be provided instead of busduct. Please confirm.	Please refer revised SLD. The connection between Generator and Generator Transformer shall be Busduct/Cable.
					SLD (6400-999-POE-J-001)		
2.	VI/B	II-E2	522/1178	05.04.01	The excitation system shall have two (2x100%) AVR channels including complete independent power supplies and controls. Each channel shall be equipped for 'Auto Operation' with the facility for selecting either channel in 'Auto' or 'Manual' mode.	As per Gas Engine Generator OEM proven practice, Excitation system shall be provided with only one (1x100%) AVR channel instead of 2x100% AVR channel. Please confirm.	Please refer Amendment
3.	VI/B	II-E2	521/1178	04.00.00	Rotor earth fault monitoring shall be provided.	As per Gas Engine Generator OEM proven practice, Rotor earth fault monitoring shall not be provided. Please confirm.	Bidder proposal is not acceptable. Bidder to comply technical specification.
4.	VI/B	II-E2	522/1178	06.00.00	All equipment to be supplied shall be of type tested design. The Contractor shall submit for Owner's approval the reports of all the type tests (as listed out in relevant clauses) carried out within last ten years from the date of bid opening. These reports should be for the tests conducted on the equipment similar to those proposed to be supplied under this contract and the test(s) should have been either conducted at an independent laboratory or should have been witnessed by a client.	As per Gas Engine Generator OEM proven practice, the items covered under gas engine skid including excitation system, only type test report of generator shall be furnished. For other equipment FAT report shall be furnished. Please confirm.	The type test report of generator and associated system including excitation shall be furnished in line with technical specification.

This drawing and the design it covers are the property of NTPC Limited and must not be copied, loaned or exhibited either in part or in whole without written permission. Any contravention is liable for prosecution.

4. WHEREVER NO RATING HAS BEEN INDICATED, SIZING SHALL BE CARRIED OUT AS PER SYSTEM REQUIREMENT AND FINAL DRIVE LIST. FINAL FEEDING ARRANGEMENT TO BE DECIDED DURING DETAILED ENGINEERING AS PER SIZING CRITERIA SPECIFIED IN THE TECHNICAL SPECIFICATION.
5. NUMBER AND MW/MVA RATING OF GEN-GT(SUT) SETS SHALL BE SELECTED BY BIDDER AS PER REQUIREMENTS OF TECHNICAL SPECIFICATIONS.
6. NUMBER OF MOTORS/FEEDERS SHOWN IN THE SLD IS TYPICAL AND FEEDING ARRANGEMENT SHOWN AT VARIOUS LOAD CENTERS IS INDICATIVE IN NATURE SHOWING THE FUNCTIONAL REQUIREMENTS.
7. BIDDER SHALL PROVIDE DC SYSTEM OF ADEQUATE CAPACITY FOR MEETING DC LOADS FOR THE PLANT.
8. MINIMUM ONE NUMBER DG SET COMMON FOR ENTIRE PLANT SHALL BE PROVIDED BY THE BIDDER FOR MEETING THE EMERGENCY PROCESS LOADS ENVISAGED FOR PLANT.
9. ALL BATTERY CHARGERS SHALL HAVE 2 INPUT SUPPLIES ALONG WITH SUITABLE AUTOMATIC CHANGEOVER BETWEEN THE SOURCES.
10. LOCATION OF TARIFF ENERGY METERS SHOWN IS TENTATIVE AND MAY CHANGE AS PER THE DISCOM REGULATION.

SL NO.	TRF RATING
1.	2.0 MVA
2.	1.6 MVA
3.	1.0 MVA
4.	0.63 MVA



										एन टी पी सी लिमिटेड NTPC Limited (A GOVERNMENT OF INDIA ENTERPRISE) ENGINEERING DIVISION	
FOR TENDER PURPOSE ONLY										PROJECT ANDAMAN & NICOBAR GAS POWER PROJECT (50MW)	
										TITLE SINGLE LINE DIAGRAM	
A	23.01.20	FOR TENDER PURPOSE	AK	AK	ST	W					
REV. NO.	DATE	DESCRIPTION	DRAWN	DESIGN	CHKD	APPD	SIZE A3	SCALE NTS	DRAWING NO. 6400-999-POE-J-001		REV. NO. C