

SL. NO.	ENQUIRY SPECIFICATION				SPECIFICATION REQUIREMENT	COMMENTS / CLARIFICATIONS	Owner's Reply
	SEC/ PART	SUB SEC.	PAGE NO.	CLAUSE NO.			
1.	IV/ITB		23/1178	Attachment 16A	Details of Equipment (including type tests) and Mandatory Spares to be imported from Associate	Type tests not applicable for Gas Engine. Routine tests as per standard OEM practice will be performed. Please confirm your acceptance.	Type test of oil purifier is applicable as per clause no. 1.02.02.00 (5) of Vol I/Part B, Chapter M1. For engines, Factory acceptance test of engine and alternator is applicable in presence of customer.
2.	VI/A	Volume I	171/1178	1.01.00 (vi)	Complete structural and Architectural works, providing construction offices, field laboratory, construction equipment, construction power and construction water.	Bidder requests Employer to exclude civil structural and architectural works from Bidder's scope of supply. Bidder shall provide equipment layout with load details. Please confirm your acceptance.	Bidder is requested to refer scope of work and exclusion in Part A, Volume III of Technical specification in this regard. Also refer Amendment in this regard.
3.	VI/A	Volume II	174/1178	1.04.00	The Site having elevation varying from 4m to 12m above MSL is flanked between Sea on front side	Please provide level to be considered for equipment design mainly head of various pumps. OR Please provide levelled land.	The Finished ground level of Plant shall be RL(+) 6.5M above AMSL. Please refer General layout Plan (GLP) drawing of A&N Gas Power project

4.	VI/A	Volume II	176/1178	Annexure IA	Fuel Gas Pressure: 8 to 10 bar g	<p>Bidder requires fuel gas at pressure 6 to 8 bar g.</p> <p>Request to check and confirm if employer can provide fuel gas at reduced pressure of 6 to 8 bar g.</p>	Bidder has to make their own arrangement for required gas pressure for their engines. Please refer Clause 10.00.01 of Volume III, Part A.
5.	VI/A	Volume II	176/1178	Annexure IA	However, the engine shall also be designed to run on gas fuel with methane no. lowest up to 65.	<p>Noted, Engine shall be designed to run on fuel gas having Methane No. 65 but may be at reduced output.</p> <p>As engine will be designed to deliver site rated output at Methane No. of typical fuel gas analysis provided in the tender.</p> <p>Please confirm your acceptance.</p>	Typical composition is given for guarantee performance. Engine shall be able to perform at full load with given range. However, output with respect to reduced methane number will be discussed during detail engineering.
6.	VI/A	Volume II	178/1178	Annexure III	Climatological Data	Request Employer to provide a readable table for bidder's reference.	Please find the clear table attached.
7.	VI/A	Volume III	184/1178	2.02.00 (v)	Foundation Bolts, Base Plate and Support Structures	Engine genset shall be mounted on anti-vibration pads (Sylomer Pads) and not on foundation bolts as per OEM standard design.	All material related to erection and fixing of equipment with foundation shall be supplied by bidder.
8.	VI/A	Volume III	185/1178	2.03.00 (i)	Lube Oil System complete with Pumps, Filters, Coolers, oil purifying system , Valves and Piping	Purification of oil is not applicable and will not be provided.	Oil purification system external to Gensets is in scope of supply and shall be provided by bidder.
9.	VI/A	Volume III	185/1178	2.03.00 (viii)	Turning Gear system	Manual lever type system will be provided as per OEM standard design	Please refer 1.06.00 of Volume I, Chapter M1, Part B in this regard.

10.	VI/A	Volume III	185/1178	3.01.00	Provision of blind flange with proper sealing to be kept in the Exhaust lines of Engines to facilitate installation of future Heat Recovery system.	Provision for blind flanges is not possible due to space constraint. Exhaust gas system shall be provided without provision of Heat Recovery Unit.	Provision to be furnished as per specification requirement.
11.	VI/A	Volume III	187/1178	10.00.00	RLNG shall be made available by the owner/client within the plant premises.	Please provide exact termination point on the layout as area is big. It will help to work out BOQ of fuel gas pipeline to exact requirement.	Shall be finalized during detail engineering.
12.	VI/A	Volume III	187/1178	11.02.00 (a)	2X100% of capacity Intake Pumps based on pumping requirements along with associated pipelines (2x100%), hypochlorite /electro-chlorinator dosing system, fittings, valves, proper piping supports, process instruments etc. from the source/intake well to the desalination plant.	<ol style="list-style-type: none"> 1. Please clarify on the running distance between source /intake well to desalination plant. 2. Please confirm that intake Well shall be provided by Employer. 3. Sea Water will be made available at intake well by Employer. 	<ol style="list-style-type: none"> 1. Approximate distance of Intake well from Plant boundary may be considered as 150 Mtrs. However, exact distance will be finalized during detailed engineering. 2. Civil scope of Intake well is covered in employer scope & further interface details will be finalized during detailed engineering. 3. Bidder to design & install sea water intake pumps in intake well-constructed by employer & further exact details will be finalized during detailed engineering.

13.	VI/A	Volume III	188/1178	11.02.00 (b)(8(iii)))	Reject water from the reject well shall further be carried to the outfall location by gravity through HDPE pipeline to be supplied by contractor.	<ol style="list-style-type: none"> 1. Please clarify on the running distance of any such piping. 2. Please confirm that reject well shall be provided by Employer 	<ol style="list-style-type: none"> 1. Approximate distance of reject outfall point from Plant boundary may be considered as 220 Mtrs. However, exact distance will be finalised during detailed engineering. 2. Civil scope of reject well covered in employer scope & further exact details will be finalised during detailed engineering.
14.	VI/A	Volume III	190/1178	11.02.01	All the fasteners like Nuts, Bolts etc. shall be of Duplex material.	Fasteners that is part of imported scope shall be as per OEM standard material.	Bidder to comply to technical specification requirements
15.	VI/A	Volume III	191/1178	12.02.00 (e)	Automatic gaseous fire extinguishing system using inert gas agent as per NFPA-2001 for control room, control.	Please specify which inert gas is acceptable to the employer.	Inert Gas shall be as specified in NFPA-2001.
16.	VI/A	Volume III	193/1178	12.02.00 (h)	Fire station building shall be equipped with all the equipment as required for efficient operation of the fire squad.	Civil works including for fire station building to be excluded from CEIPL's scope.	Civil Works is not in the scope of the Bidder. Further, Bidder to refer Clause 27.00.00 (Exclusions), Volume-III, Part-A of Technical specification

17.	VI/A	Volume III	195/1178	14.00.00 (a)	Complete ventilation system consisting of supply air fans, roof extractors, exhaust air fans, louvers, filters, etc., for all the buildings /areas which are in the scope of the bidder, as detailed out in Part-B of technical specification.	Roof extractor not possible, as horizontal flow ventilation system is to be provided with flat roof top.	Bidder to comply with the specification requirements.
18.	VI/A	Volume III	195/1178	14.00.00 (b)	The main machine hall shall be ventilated by a combination of roof extractor fans and supply air fans fitted with pre filter & fine filter	Dry type ventilation is considered. Please confirm	Bidder's understanding is correct
19.	VI/A	Volume III	197/1178	16.00.00 (C)All instruments/ equipment etc. shall be suitable for highly corrosive environment prevalent in the coastal area. For coastal areas, all instruments/ equipment shall be provided with durable epoxy/ polyurethane coating for housings and all exposed surfaces of all instruments / equipment.	This shall not be applicable for imported scope of supply.	Bidder to meet specification requirement.

20.	VI/A	Volume III	197/1178	16.00.00 (e)	All other special instruments/ equipment for which specifications are not provided in Part-B, of technical specifications shall be provided as on required basis as per OEM Standard & Proven practice. Contractor's offering as per his "standard and proven practice" shall be accepted based on the documentary evidence.	Entire instrumentation and control system specification and design of the Gensets shall be as per OEM standard design and specifications.	For Genset, 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.
21.	VI/A	Volume III	198/1178	16.03.00	Automatic Start-up and Shutdown Sequencing System shall be provided including all required interlocks, sequence logic and modulating control loops for safe and efficient start-up/ shutdown of the Gas Engine.	Request to provide likely engine loading sequence and load details.	Machine shall be capable of load variation from 30% to 100%. Please refer Cl. 1.02.01 (vii) of Part B, Volume I, Chapter M1.
22.	VI/A	Volume III	198/1178	16.03.00	two OWS shall also be provided with capabilities of programming station	OWS for programming excludes programming of GENSET as programming is proprietary item of OEM and will not be shared and for programming of Genset control system, separate work station is not required	Bidder to meet specification requirement.

23.	VI/A	Volume III	198/1178	16.04.00	Other Systems like CEMS, AAQMS, UPS power supply, PCP, Instrumentation cables	Please clarify on PCP.	PCP is process connection piping, for which detailed specification are mentioned at Section VI, Part B subsection IIIC Control & Instrumentation, Clause 7.00.00.
24.	VI/A	Volume III	202/1178	17.10.00	Station lighting system for the plant, buildings and equipment in the bidder's	Please clarify whether both indoor and outdoor lighting is to be considered in bidder's scope.	Bidder to comply with spec, both indoor and Outdoor lighting to be considered.
25.	VI/A	Volume III	202/1178	17.14.00	To meet the construction power requirement of the project, DG sets shall be employed.	Please confirm if the same DG be supplied against scope requirement to employer.	Separate DGs to be brought to meet construction Power requirements. DG to meet construction power requirements may be taken back after commissioning of the project.
26.	VI/A	Volume III	206/1178	21.09.02	Contractor shall provide permanent arrangements in various equipment/systems for conductance of Performance and Guarantee tests by the Owner periodically.	Stable load required for such tests to be provided by Employer.	As mentioned in 21.09.02, owner's responsibility shall be limited to ensure power evacuation and arranging fuel.
27.	VI/A	Volume III	211/1178	27.00.00	Further civil & structural works shall be executed by employer in other package based on all input data provided by equipment package vendor.	Main building of power plant shall be by the employer. Please clarify if this shall be structural shed type or civil building.	Main building of power plant shall be structural steel frame shed with metal sheet cladding and roofing.

28.	VI/A	Volume III	216/1178	Mandatory spared WS	Energy Recovery (ERU) Units	Requirement is not clear. Please clarify on the requirement.	It will be part of Desalination System & its purpose will be to reduce power by harnessing the energy in the concentrate (or brine) waste stream and transferring it to the feed side via various methods
29.	VI/A	Volume IV	249/1178	1.00.00 (b)	Engine - Medium Speed Type for 50 Hz Electric Power Generation Applications	Bidder is proposing 1500 rpm genset. Please confirm your acceptance.	Errata: Please refer amendment in this regard
30.	VI/A	Volume IV	249/1178	1.00.00 (f)	Operating Capability - Base Load, Cyclic Loading and Daily start/stop	<ol style="list-style-type: none"> 1. The proposed Gas Engine for the project is lean burn gas engine designed for base load and continuous operation, daily start and stop is not recommended. 2. Please provide loading detail of cyclic load and based load during these cyclic loads for our review 	Bidder to comply specification requirement. Machine shall be capable of load variation from 30% to 100%. Please refer Cl. 1.02.01 (vii) of Part B, Volume I, Chapter M1.
31.	VI/A	Volume IV	251/1178	3.04.00	<p>During evaluation of Performance Guarantee Test results, corrections shall be applicable only for following:</p> <ol style="list-style-type: none"> a. Methane Number RLNG fuel b. Power Factor c. Frequency 	Bidder requests employer to add corrections for ambient conditions at site	Bidder to comply specification requirement

32.	VI/A	Volume IV	252/1178	4.01.00	However, capability to meet the requirements and withstand stresses of cyclic load variations and partial/ full load rejections shall be built in the plant.	Considering design basis of the engine that is lean burn and for continuous operation at full load, it may not be possible to reject 100 % load in one step.	The query is not clear. Bidder to comply specification requirement
33.	VI/A	Volume IV	253/1178	4.02.00	The Contractor shall ensure presence of Genset OEM's experts during all scheduled and unscheduled inspections, without prejudice to the contractor's liabilities in terms of other provisions under the Contract including guarantees and post-commissioning services	OEM certified commissioning engineers shall be made available.	Bidder to comply specification requirement.
34.	VI/A	Volume IV	254/1178	4.04.00	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 shall not be redundant as per OEM standard design.	Specification requirement is clear about maintaining reliability, availability and maintainability throughout the plant life. This shall be finalized during detail engineering.

35.	VI/A	Volume IV	255/1178	5.02.00	Further, the complete system of the power plant shall be designed to withstand local climate conditions (plant located close vicinity of sea) and other climatic conditions specific to the site	Bidder requests the employer to provide exact location/distance of plant from sea in meters	Please refer the coordinates of plant mentioned in project information chapter
36.	VI/A	Volume IV	257/1178	9.00.00	The fire protection system shall consist of fire water storage tanks , fire water pumping system, fire water hydrant and spray system serving the whole station including plant/ facilities/ buildings.	Bidder request employer to provide Fire water storage tank in civil construction.	Bidder to comply with the specification requirements
37.	VI/A	Volume IV	264/1178	10.02.00	Air changes per hour in evaporative / mechanically ventilated areas shall be as follows:	If wet / evaporative ventilation system is provided for ventilation of main power plant, please note that air changes may be less in that case.	Wet/evaporative ventilation system has not been envisaged. Bidder to comply with the specification requirements
38.	VI/A	Volume IV	267/1178	15.01.00	The offered Gas engine should have logged a minimum of 4000 fired hours since commissioning and should have been in successful operation for a period of at least one (01) year prior to the date of techno-commercial bid opening.	Kindly confirm if reference Installations outside India are acceptable for the employer.	Bidder understanding is correct in this regard. Bidder to comply specification requirement.

39.	VI/A	Volume IV	267/1178	15.02.01	Gas Engine Auxiliaries and Support Systems - Engine Cooling system	Bidder proposes a reference installation for the proposed Gas Gensets from outside India and Procurement of Engine cooling system (Radiator etc) for this project will be from within India and thus this shall not be possible	Irrespective of manufacturing location, Bidder has to meet the provenness requirement. Manufacturing location shall be as QA approval.
40.	VI/A	Volume IV	267/1178	15.02.01	Exhaust gas system Gas silencer, Expansion bellows & rupture disc on exhaust ducting	Bidder proposes a reference installation for the proposed Gas Gensets from outside India. Procurement of Engine Exhaust system (silencer, expansion bellows etc.) for this project will be from within India and thus this shall not be possible.	Irrespective of manufacturing location, Bidder has to meet the provenness requirement. Manufacturing location shall be as QA approval.
41.	VI/A	Volume IV	271/1178	Annexure IA	Noise levels emanating from genset shall be so controlled such that the noise in the work zone shall be limited to 85 dB(A) 1m from source.	85 dBA at 1 meter from source not possible. Bidder can confirm 85 dB(A) at 1 m outside engine / genset room/hall, provided engine room acoustics to be in employers scope as part of civil work.	Please refer amendment in this regard.

42.	VI/A	Volume V	278/1178	1.02.03	<p>Net Output beyond (-) 2.5 % of the Guaranteed Net Power Output.</p> <p>: At it's discretion may either accept the equipment/ system after levying Liquidated Damages for the shortfall from the quoted Guaranteed Net Power Output, as per Clause No. 3.00.00 of this Volume or reject the equipment/ system and recover the payment already made.</p>	<p>Rejection of the equipment is not acceptable.</p> <p>Applicable Liquidated Damages shall be final resource in case of non-performance to the employer.</p> <p>Please confirm your acceptance.</p>	Bidder to comply specification requirement.
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43.	VI/A	Volume V	278/1178	1.02.03	<p>Net Genset heat rate at 100% of Genset base load beyond (+) 2 % of the Guaranteed Net Genset Heat Rate at 100% of the module base load.</p> <p>: At it's discretion may either accept the equipment/ system after levying Liquidated Damages for the shortfall from the quoted Guaranteed "Net Genset heat rate at 100% of Genset base load, as per Clause No.3.00.00 of this Volume or reject the equipment/ system and recover the payment already made.</p>	<p>Rejection of the equipment is not acceptable.</p> <p>Applicable Liquidated Damages shall be final resource in case of non-performance to the employer.</p> <p>Please confirm your acceptance.</p>	Bidder to comply specification requirement.
44.	VI/A	Volume V	281/1178	1.02.03	<p>Owner/Client shall attend the Factory Acceptance Tests of all the Engines and Alternators</p>	<p>Alternator along with engine at engine manufacturer's test bench as a complete genset will be offered for testing as per standard OEM practices.</p> <p>Witness test at alternator manufacturer is not provided. Test Certificate of alternator shall be provided.</p> <p>Please confirm your acceptance.</p>	Both the test of engine and alternator has to be offered for witness by Employer (either separately or combined).

45.	VI/A	Volume V	284/1178	3.00.00	<p>Net Heat Rate at 100% of Engine load:- ₹384503/ (INR/kCal/kwh/MW) x Δ HRg x Y/1000</p>	<p>Bidder proposes to link the applicable LD for Non-performance of Guaranteed Parameters to contract value as under.</p> <p>For each 1 % short fall in guaranteed Heat Rate, LD applicable shall be 1 % of contract value, limited to maximum 5 % of contract value.</p> <p>For each 1 % short fall in guaranteed net Output, LD applicable shall be 1 % of contract value, limited to maximum 5 % of contract value.</p>	Bidder to comply specification requirement.
46.	VI/A	Volume VI	290/1178	8.01.00	Each main and auxiliary equipment/item of the plant including instruments shall be assigned a unique tag number.	Tagging for imported supply shall not be followed. However, the same shall be followed for BOP equipment.	Bidder to comply specification requirement

47.	VI/A	Volume VI	290/1178	8.03.01	Operation Philosophy and the control philosophy of the Main Plant and Balance of Plant (BOP).	Bidder request the employer to provide expected operation philosophy of the plant and loading details.	Operation philosophy to be submitted by bidder and shall be finalized during detail engineering. Loading details shall be as per plant requirement. Machine shall be capable of load variation from 30% to 100%. Please refer Cl. 1.02.01 (vii) of Part B, Volume I, Chapter M1.
48.	VI/A	Volume VI	291/1178	8.03.01 (iii)	Technology scan for each system / sub-system & equipment.	Please clarify on the requirement for technology scan documentation	Technology to be described for each system. Further same shall be finalized during detail engineering.
49.	VI/A	Volume VI	293/1178	8.03.01 (B xxiv)	Civil and Structural works drawings and documents for all structures, facilities, architectural works, foundations underground and overground works and super-structural works as included in the scope of the bidder civil calculation sheets including structural analysis and design along with output results.	Please refer our comments Sr. No. 02 above. Only layout and loading details shall be provided by the bidder. Please confirm.	Please refer amendment in this regard.
50.	VI/A	Volume VI	293/1178	8.03.01 (B xxv)	Underground facilities, levelling, sanitary, landscaping drawings	It should be part of civil work and request to exclude the same from bidder's scope.	Please refer amendment in this regard.

51.	VI/A	Volume VI	293/1178	8.03.01 (B xxvi)	Geotechnical investigation and site survey reports (if and as applicable	It should be part of civil work and request to exclude the same from bidder's scope.	Please refer amendment in this regard.
52.	VI/A	Volume VI	293/1178	8.03.02	The Contractor shall submit to the Employer, draft Instruction Manuals for all the equipment covered under the Contract within nine (9) months from the date of his acceptance.	Bidder shall submit the same during commissioning	Bidder to comply specification requirement
53.	VI/A	Volume VI	294/1178	8.03.02 (B)	O&M Manual – Entire clause	O & M manual of genset shall be as per standard format of the OEM.	Specification requirement is clear. Same shall be finalized during detail engineering.
54.	VI/A	Volume VI	301/1178	8.03.05 (B)	Entire Clause – E-learning package	Kindly clarify on the requirement.	The clause is self-explanatory. Specification requirement is clear in this regard
55.	VI/A	Volume VI	313/1178	21.19.00	Employer reserves the right to carry out quality audit and quality surveillance of the systems and procedures of the Contractor's or their sub vendor's quality management and control activities. The contractor shall provide all necessary assistance to enable the Employer carry out such audit and surveillance.	Costs incurred for any such audit shall be at actuals to the client's scope. Technical assistance shall be provided by CEIPL.	Bidder understanding is noted.

56.	VI/A	Volume VI	314/1178	21.24.00	Entire Clause: Environmental Stress Screening	Kindly elaborate on the same.	Specification requirements are very clear. This requirement is to weed out the infant mortile component used in manufacturing of electronics modules in the specified systems
57.	VI/A	Volume VI	319/1178	26.04.00	The final tests as specified in Volume-V, Part-A and Part-B to prove the Functional Guarantees shall be conducted at Site by the Contractor in presence of the Employer/Client. The contractor's commissioning and start-up Engineer shall make the unit ready to conduct such test before start of initial operation. Such test shall be conducted along with the Initial Operations.	Bidder understands that the PG test shall form part of Initial operation of 7 days. Kindly confirm.	Bidder understanding is correct
58.	VI/A	Volume VI	352/1178	26.04.00	Vibration Monitoring System - Entire Clause	Please note that as per OEM standards, vibration monitoring will not be provided. However, the genset fulfils the limits for mechanical vibrations according to ISO 8528-9. Please confirm your acceptance.	Bidder standard & proven practice shall be acceptable.

59.	VI/B	Chapter M1	422/1178	1.02.02 (vii)	Oil Mist Eliminator	Bidder understands that it is a crank case breathing/ventilation system. Kindly confirm.	It is a system which ensures that there is no trace of oil in exhaust air. Bidder to supply necessary system/equipment to meet specification requirement.
60.	VI/B	Chapter M1	422/1178	1.02.02	All the piping, fittings, valves, Lube Oil Tanks, and complete strainers including body and element shall be of stainless steel . Further all the parts of lube oil coolers which are coming in contact of lube oil shall be of stainless steel.	MOC shall be as per standard OEM design.	Bidder to comply specification requirement
61.	VI/B	Chapter M1	422/1178	1.02.02.00	Purification System - Entire Clause	Not applicable for the propose GEG Sets and will not be provided	This purification system is for lube oil external to engine. Bidder to comply specification requirement.
62.	VI/B	Chapter M1	425/1178	1.02.04	Intake air silencers – Stainless Steel	Intake Air filter shall be Engine mounted, and silencer is not recommended by our OEM and will not be provided	Silencer to be provided to comply norms for noise control.
63.	VI/B	Chapter M1	425/1178	1.02.07 (i)	Engine cooling system - Maintenance water tank	Day water tank shall be provided. Engine is provided with closed loop cooling system as such Maintenance water tank is not required and shall not be provided.	Maintenance water tank is to be provided for maintenance work of expansion tanks/ day tank.
64.	VI/B	Chapter M1	428/1178	2.00.00 (i)	Last Chance filter	Please elaborate the requirement of the same	It is gas filter unit in fuel gas system skid

65.	VI/B	Chapter M1	428/1178	3.02.04	All Electricals and Instruments in the Fuel Gas System shall be of Flame Proof/ Explosion Proof Design.	As installation is in SAFE AREA, requirement of flame proof / explosion proof design is not applicable. Instrumentation of the gas pipeline and that of engine Gas Train shall be suitable for SAFE AREA. It is as per OEM standard design. Please confirm your acceptance.	There shall be no compromise on safety. Bidder to comply specification.
66.	VI/B	Chapter M2	440/1178	1.02.00	Number of Maintenance Bays - Minimum one (1) no. on one side of Engine Hall.	Maintenance bay is not possible due to space constraints.	Maintenance bay is required for maintenance works.
67.	VI/B	Chapter M2	440/1178	1.02.00	Minimum 2 tier Utility block to be provided	Utility G + 1 will be provided. Please confirm	2 tiers in addition to ground floor has to be provided.
68.	VI/B	Chapter M2	441/1178	1.02.10	Lift landing levels shall be provided for Control Room, Control Equipment Room, and each floor and up to the topmost floor of the Utility Building. Location of Lifts shall be fixed during detail engineering stage while finalizing Plant Layouts.	Please clarify if the scope of lift is in the bidder's or employer's scope. Ideally it should be part of civil work and in employer scope.	Elevator is in bidder's scope. Kindly refer scope chapter in this regard

69.	VI/B	Chapter M2	441/1178	1.02.10	Cable trenches/slits, if unavoidable, shall be provided with adequate cushioning of sand and the same shall be covered with PCC.	As it is part of the civil work, it is excluded from bidder's scope	Refer amendment in this regard
70.	VI/B	Chapter M2	442/1178	1.02.10	The Transformer fencing shall be at 1.0 M (minimum) distance from the pit wall. The Height of fencing shall be 2.5 M (minimum) and fencing shall have personal entry gate and removable type fencing/gate for transformer withdrawal	As it is part of the civil work, it is excluded from bidder's scope.	Refer amendment in this regard
71.	VI/B	Chapter M2	441/1178	1.04.00	Laydown area for maintenance and overhauling.	Not provided because of space constraints. Please confirm your acceptance.	Laydown area to be provided as per specification requirement.
72.	VI/B	Chapter IIE-1	512/1178	2.00.00	including owner's load (if applicable), at peak load conditions and the No Load Voltage Correction Factor.	Please confirm employer's load to work out transformer rating.	No owner's load to be envisaged.
73.	VI/B	Chapter IIE-1	512/1178	2.10.00	Generator Transformer - Entire Clause	Since synchronization is at 33 kV, bidder recommend to have off load tap changer instead of online tap changer	Bidder to comply with specifications
74.	VI/B	Chapter IIE-1	518/1178		SLD	Looking at distance between Generator and Generator transformer, we recommended to install a genset breaker near each generator.	Bidder to comply with specifications

75.	VI/B	Chapter IIE-2	520/1178	3.00.00	<p>Entire Clause</p> <p>1. Voltage Variation +/-5% continuously at rated power factor.</p> <p>2. Frequency Variation 47.5 Hz to 51.5 Hz.</p> <p>3. Combined voltage and 5% frequency variation.</p>	<p>Transient conditions shall be as per Isolated operation characteristics of the proposed Gas Genet (shall be provided with the Bid) and as per ISO 8528-5.</p> <p>It also depends on the rating of various loads and loading sequence of the GEG Set. Please provide load details and loading sequence for our study.</p>	<p>Bidder to comply with specifications.</p> <p>Machine shall be capable of load variation from 30% to 100%. Please refer Cl. 1.02.01 (vii) of Part B, Volume I, Chapter M1.</p>
76.	VI/B	Chapter IIE-2	521/1178	4.00.00	c) Interface - All the above temperature measurement devices shall be connected to DDCMIS.	DDCMIS is not possible as per OEM standards. These will be connected to the Genset Control Panel	Bidder to comply specification requirement.
77.	VI/B	Chapter IIE-2	522/1178	5.04.01	The excitation system shall have two (2x100%) AVR channels Including complete independent power supplies and controls	Single AVR (1x100%) per GEG Set will be provided as per OEM standard design	Bidder to comply with specifications.
78.	VI/B	Chapter IIE-4	532/1178		Entire Document – Motor - specification	Kindly confirm if this is applicable for motors below 10 HP rating.	Specifications applicable to all the motors.
79.	VI/B	Chapter IIE-4	542/1178	2.00.00	All cables (HT Power, LT power and control cables) shall be armoured type only	Not all cables shall be of armoured type. As per OEM standards, cabling from Generator terminals to the Cable junction box shall be flexible copper cables. Also, the control cable shall be copper flexible cables.	Bidder to comply with specifications.

80.	VI/B	Chapter IIE-7	568/1178	3.00.00	Earthing system shall be in strict accordance with IS: 3043 and Indian Electricity Rules/Acts. Scope of the Bidder shall also include supply and laying of 40mm dia. MS Rods as earthing mat, placed at a distance of 1.0M away and at depths between 0.60M and 1.00M,	Request to exclude from Bidder scope. Bidder requests to at least remove associated civil work from Bidder scope	Bidder to comply technical specification
81.	VI/B	Chapter IIE-12	630/1178	3.00.00	Entire clause of Battery Charger	Battery charger that of part of Imported scope shall be as per OEM standard design and specification	Bidder to comply technical specification
82.	VI/B	Chapter IIE-12	648/1178	1.03.01	GT shall be suitable for back charging	Back charging is not applicable and is not provided	Bidder to comply technical specification
83.	VI/B	Chapter IIIC	697/1178		Entire Document of Control and Instrumentation	Control and instrumentation of Gas Genset shall be as per OEM standard design and specification only	Noted
84.	VI/B	Chapter IIIC	699/1178	2.02.05 (b)	Controller Redundancy	Not possible and is not provided.	Bidder's query does not pertain to the referred sub section and page no and is not clear. However, for controller redundancy, bidder to meet the specification requirement.

85.	VI/A	Volume IV	252/1178	4.01.03	<p>All equipment, including Engine and Generators/Alternators shall be designed to withstand frequency variation in 47.5 – 51.5 Hz frequency range. Bidder shall indicate the period of operation of Gensets permitted during the life of the plant for operation beyond the frequency range of 47.5 - 51.5 Hz.</p>	<p>Technically it is not possible to indicate the period of operation beyond this frequency range of 47.5 - 51.5 Hz. However, for any momentary fluctuation/variation beyond this range is always workable.</p>	<p>Bidder to comply specification requirement.</p>
86.	VI/A	Volume VI	301/1178	8.03.05.01	<p>e-Learning Package: e-learning packages shall be supplied for the equipment / system for the following Engine-Generator/Alternator set & auxiliaries along with associated electrical and C&I system. These packages shall be installed on the Learning Management Server (LMS) of NVVN/Power Management Institute (PMI), NTPC located at Noida. The Engineer- In-Charge (EIC) for the e-learning modules shall be from PMI.</p>	<p>This project consist of many major & minor equipments which are tailor made as per the tender specs & site requirement. It is not possible to have individual App / e-learning system prepared for the project. Although possible to provide the soft copy (in the form of PDF) of the training documents and manuals. We understand NVVN understanding is to have e-learning material available for the team ad not to develop any specific App for the project.</p>	<p>The requirement of web based and mobile based app is clear in 8.03.05.01 (4a) of Volume VI.</p>

87.	VI/A	Volume VI	309/1178	18.00.00	All equipment/ piping/ pipe services are to be painted by the Contractor in accordance with Employer's standard colour coding scheme, which will be furnished to the Contractor during detailed engineering stage.	The gensets and the associated modules will be painted as per OEM standard only. Hope this will be accepted.	Bidder to comply specification requirement
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88.	VI/A	Volume VI	321/1178	28.04.00	<p>Total duration of the training shall be of 5 (five) man months. The break-up of the training period shall be as following</p> <p>i.1 (One) Man month – At Engine manufacturers works/factory</p> <p>ii. 4 (four) Man months - Comprehensive training program consisting of classroom and plant visit of similar running plant for Employer's personnel for safe and efficient operation of the plant addressing the erection, commissioning, operation and maintenance aspects of the plant. Accommodation with lodging and boarding and local conveyance at the place of training shall be provided to the Employer's personnel free of cost. Cost of journey to and from the place of training shall be borne by the Employer. Details of the training shall be finalized during detail engineering of the project.</p>	<ol style="list-style-type: none"> 1. We understand that the defined man months are for the trainees (i.e. Employers Personnel). 2. Please suggest min. or max. numbers of employers personnel (trainees) that are included in above man months. eg. If there are 5 nos. trainees/Employers personnel then 1 man month means 6 working day training for each employers personnel/trainee. Please confirm if our understanding is correct. 	<ol style="list-style-type: none"> 1. Bidder understanding is correct. 2. Bidder to inform about the training duration covering all modules as mentioned in specification. Number of trainees will be finalized during detail engineering.
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					Note : For training purposes, one (1) man month implies 30 working days (excluding all intervening holidays) per person		
89.	VI/B	Volume III C	697/1178		CONTROL & INSTRUMENTATION	We understand that the given specification of Control & Instrumentation in this Chapter will be followed for the overall power plant Control, Instrumentation and Automation. However, for Gas Engine & Genset, Control Instrumentation & Automation system shall be as per Engine OEM standard only. It is not possible to change the manufacturer standard. NVVN to please accept.	For Gas engine and Genset, 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.
90.	VI/B	Volume II E1	509/1178		GENERAL ELECTRICAL SPECIFICATION	Gas Genset OEM supplied Control Panel for their Control instrumentation & PLC requirement shall be as per OEM standard only. Request confirmation	Noted
91.	VI/B	Volume III C	722/1178	5.04.05	Data Communication System	We shall provide the data to the central DAS inside the plant room. Further connectivity & transmission of data to CPCB/SPCB office or customer DAS will be in owners scope. NVVN to confirm	As indicated in referred clause, Connectivity & transmission of data to CPCB/SPCB or customer DAS is in bidder's scope. Bidder to meet specification requirement.

92.	VI/B	Volume I M1	429/1178	3.02.02	(iii). Design, construction, installation and operation of the Flow Meter shall be in accordance with the relevant Recommendations/ Reports from AGA/ API.	(iii) As this is for safe area installation there is no requirement for AGA/API to be followed as they refer to Zone - 2	Bidder to meet specification requirement.
93.	VI/B	Volume I M1	429/1178	3.01.04	Sensors of Gas Detection System shall be catalytic diffusion type or any other proven design with flame proof NFPA approved construction. Sensor range shall be 0 – 100 % LEL	As this is for safe area installation. Flame proof detection system is not required.	Bidder to comply specification requirement
94.	VI/B	Volume I M1	429/1178	3.01.03	Gas Detection system shall be designed to meet NEMA-7 requirement and suitable for class-1 Division-II, Group D area	NEMA-7 compliance is applicable for inside enclosure equipment. As Gas Genset have to be provided in Civil Acoustic Room hence NEMA - 7 compliance Not applicable.	Bidder to comply specification requirement
95.	VI/B	Volume I M1	435/1178	7.02.01 (f)	Maximum Generator Capability - at 0.85 p.f., temperature rise limited to that applicable for class-B insulation as per IEC at 100% rated load condition.	Maximum Generator Capability - at 0.85 p.f., temperature rise limited to that applicable for class-B insulation as per IEC at 100% rated load condition demonstration is possible during Factory acceptance Trial for one typical machine. alternatively to demonstrate this test at site NVVN have to provide reactive load bank of suitable capacity.	Factory acceptance Tests are applicable as per clause 5.00.00 of Volume I, Chapter M1, Part B. However, demonstration of this test at site shall be decided during detail engineering.

96.	VI/B	Volume II E1	514/1178	2.09.00	PLC based control system wherever envisaged shall be provided with 100% redundancy i.e. hot standby.	Ok, however These required PLC & DCS as per tender specifications are designed , engineered and supplied by the authorized system houses of ABB, Schneider, Honeywell, Allen Bradley/ Siemens. We understand bidder can select required item from these system houses meeting the PTR requirement of tender . Please confirm your acceptance.	As per technical specification, the bidder to provide proven PLC and DCS based control system.
97.	VI/B	Volume II E8	580/1178	3.00.00 k)	Paint Shade Grey RAL9002	DG set Colour shade shall be as per OEM standard.	Bidder to comply with specifications
98.	VI/A	Volume III	189/1178	11.02.00 (h)	Supply of all Chemicals for complete water treatment facilities for Six months (6) months of Operation after PG test including first fill for all the systems as per system requirements & as specified.	We understand all chemical & consumable required up to PG test is part of bidders scope as O & M is not part of bidder's scope any chemicals and consumable beyond PG test is not bidder's responsibility.	Refer Amendment in this regard
99.	VI/A	Volume III	212/1178	Annexure IA	List of Mandatory Spares - Gas Engine and Auxiliaries	The nomenclature & type of spares listed in the mandatory spares list for Gas engine and auxiliary may vary for Different OEM Machines. We understand bidder is allow to quote equivalent mandatory spares applicable for the offered Gas engine & auxiliaries. Incase any spares is not applicable, bidder have option to mention "not applicable". kindly accept.	Bidder to refer Clause No. 23.02.00 (j) in case of non-applicability of spares.

100.	VI/A	Volume III	244/1178	Annexure II	LIST OF TOOLS & TACKLES	The nomenclature & type of tools listed in the Annexure II - List of Tools & Tackles for Gas Engine and auxiliary may vary from OEM to OEM. Bidder request to consider OEM recommended standard Tools list which help to ensure smooth operation of the plant	Shall be discussed and finalized during detail engineering stage. However, bidder shall ensure supply of all the tool & tackles for smooth operation and complete maintainability of the plant.
101.	VI/A	Volume III	256/1178	6.03.01	All liquid effluents emanating out of the power plant shall be treated (as required) to meet the Environmental Standards for Gas Naphtha-based Thermal Power Plants	As O & M is not in the scope of bidder we understand disposal off of liquid effluent shall be in scope of NVVN or contractor whom O & M job will be assigned and not in bidder's responsibility. Please confirm	Bidder to refer Clause No 11.02.00 of WS scope of supplies. Except civil works of reject well, all other related works of RO reject disposal & ETP are in bidder's scope of supplies.

102.	VI/B	Volume V RS	767/1178	1.6	<p>Bidder to provide Operation and Maintenance (O&M) of the plants for a period of one year from the date of trial run of all the rooftop locations. During trial run (minimum one day), bidder to demonstrate trouble free operation of all the rooftop locations. During O&M period, the bidder shall be responsible for supply of all spare parts as required from time to time for scheduled and preventive maintenance, major overhauling of the plant, replacement of all equipments in the plant including defective PV Modules, Inverters, Transformers etc and maintaining log sheets for operation detail, deployment of staff for continuous operations and qualified engineer for supervision of O&M work, complaint logging & its attending. All PV modules shall be cleaned regularly and water</p>	<p>As Plant O & M is not part of bidder's scope, we understand O & M of Roof top solar including scheduled and preventive maintenance, major overhauling of the plant, replacement of all equipments in the plant is not in bidder's scope. The same shall be responsibility of NVVN or the contractor to whom O & M job will be assigned. please confirm.</p>	Refer Amendment in this regard
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					washed at least once in a week.		
103.	VI/A	Volume III	196/1178	15.03.00	Passenger Elevators The Passenger elevators for Common control room/ Utility building	We understand elevator requirement is not mandatory and shall be supplied only if needed. Please confirm	Utility building is Ground +2 floor building adjacent to Power house as shown in GLP. Elevator to be provided as per specification.
104.		BDS	55/1178	ITB 22.1(d)	Bid evaluation factor: Net Heat Rate at 100% of Engine Load: 197849 (INR/(Kcal/Kwh)/MW) X ΔHR_{gb} X (Y/1000)	Given bid evaluation factor value is giving opportunity to one or two OEMs of 750 rpm machine for getting advantage of heat rate. As 1000 RPM machines are also eligible to offer and for wider participation and competitive bidding we request NVVN to amend the bid evaluation factor as per following : 80000 (INR/(Kcal/Kwh)/MW) X ΔHR_{gb} X (Y/1000).	Bidder to comply specification requirement
105.	VI/A	Volume I	171/1178	1.01.00 (vi)	field laboratory,	Please provide the list of lab equipment to be provided in field laboratory.	Bidder to consider testing laboratory set-up at site for the equipment testing as per requirement. Refer clause number 22.01.00 (iii) of part A, Volume III.
106.	VI/A	Volume III	184/1178	2.02.00 (v)	Each Engine-Generator set (Genset) shall necessarily include but not be limited to the following: Foundation Bolts, Base Plate and Support Structures.	The mounting of genset shall be as per OEM standard. Request NVVN confirmation	All material related to erection and fixing of equipment with foundation shall be supplied by bidder.

107.	VI/A	Volume III	195/1178	14.00.00	B) Main Plant building and associated areas The main machine hall shall be ventilated by a combination of roof extractor fans and supply air fans fitted with pre filter & fine filter.	The main machine hall shall be ventilated by a combination of roof extractor fans / Side Wall Mounted Exhaust Fans and supply air fans fitted with pre filter & fine filter. NVVN to confirm	Bidder's understanding is not correct. The main machine hall shall be ventilated by a combination of roof extractor fans and supply air fans fitted with pre filter & fine filter.
108.	VI/A	Volume III	196/1178	15.03.00	Passenger Elevators The Passenger elevators for Common control room/ Utility building	2 Storey (ground + 1st floor) building can be easily approachable with the stairs. Hence, Passenger elevators would not be required. Hope our understanding is correct	Utility building is Ground +2 floor building adjacent to Power house as shown in GLP. Elevator to be provided as per specification.
109.	VI/A	Volume IV	254/1178	4.04.02	Redundancy level in plant equipment and systems shall be such as to support operation of the plant in all specified modes of operation. Where redundant (standby) equipment is provided, the standby equipment shall be capable of automatic and immediate initiation in to operation upon failure of one or more of the running equipment....	Only motor driven pumps and Air compressors shall be provided with redundant (standby) equipment which shall be sufficient to support operation of the plant in all specified modes of operation. Please confirm our understanding is correct.	Redundancy of equipment shall be as specified in the specification

110.	VI/A	Volume IV	264/1178	10.02.00 2(a)	DESIGN PHILOSOPHY OF VENTILATION SYSTEM Inside Temperature shall be maximum 6 deg.C above the design ambient temperature during summer for mechanically ventilated Engine Hall.	We understand the inside temperature shall be 6 deg.C above the actual ambient temperature during summer for mechanically ventilated Engine Hall. Hope bidder understanding is correct.	Bidder's understanding is not correct. Bidder to refer note specified under referred clause and also refer clause 10.01.00, Page-15 of 27, Volume-IV, Part-A of Technical Specification.
111.	VI/A	Volume IV	264/1178	10.02.00 2(b)	DESIGN PHILOSOPHY OF VENTILATION SYSTEM Inside Temperature shall be maximum 3deg.C above the design ambient temperature during summer for mechanically ventilated other areas.	We understand Inside Temperature shall be 3deg.C above the actual ambient temperature during summer for mechanically ventilated other areas. Hope bidder understanding is correct.	
112.	VI/A	Volume IV	271/1178	83	PROJECT SPECIFIC CONDITION: Noise levels emanating from genset shall be so controlled such that the noise in the work zone shall be limited to 85 dB(A) 1m from source.	We understand all Gensets will be installed inside the accoustically treated civil building. The civil building and its acoustic treatment shall not be in Contractor's Scope. Hope our understanding is correct.	Please refer amendment in this regard
113.	VI/A	Volume IV	271/1178	83	PROJECT SPECIFIC CONDITION: Noise levels emanating from genset shall be so controlled such that the noise in the work zone shall be limited to 85 dB(A) 1m from source.	As Acoustically treated civil building for installation of gensets is not in Contractor's scope. We understand bidder to ensure Noise levels emanating from genset shall be so controlled that the noise in the work zone shall be limited to 85 dB(A) measured at 1m outside the engine hall.	Please refer amendment in this regard

114.	VI/A	Volume VI	307/1178	11.00.00	<p>EQUIPMENT BASES A cast iron or welded steel base plate shall be provided for all rotating equipment which is to be installed on a concrete base, unless otherwise specifically agreed to by the Employer. Each base plate shall support the unit and its drive assembly, shall be of a neat design with pads for anchoring the units, shall have a raised lip all around, and shall have threaded drain connections.</p>	Equipment Bases Shall be mounted as per OEM Standard. NVVN to confirm	Specification requirement is clear in this regard.
115.	VI/A	Volume VI	307/1178	18.00.00	<p>COLOUR CODE FOR ALL EQUIPMENTS/ PIPINGS/ PIPE SERVICES All equipment/ piping/ pipe services are to be painted by the Contractor in accordance with Employer's standard color coding scheme, which will be furnished to the Contractor during detailed engineering stage.</p>	The gensets and the associated modules will be painted as per OEM standard colour code. Request NVVN to accept the same	Bidder to comply specification. However special cases shall be finalized during detail engineering

116.	VI/A	Volume VII	398/1178	44.15.01	<p>Safety Organisation: In case of contractor deploying less than 250 workmen he should designate one of his Engr /supervisor or the contractor himself (if he is directly supervising the work) as safety officer in addition to his existing responsibilities. The Engr./ supervisor should get at least 2days safety training from any reputed organization or from NVVN before resuming the work.</p>	<p>We understand that if less than 250 workmen deputed at site then contractor can assign his Engineer/ supervisor as a safety officer after getting 2days safety training from any reputed organization or from NVVN before resuming the work. Hope our understanding is correct.</p>	Refer amendment in this regard
117.	VI/B	Volume I, M1	422/1178	1.02.02.00	<p>Purification System Provide permanently connected, Continuous Oil Purification system having following major equipment / features.</p>	<p>OIL purification system is not applicable for the offered genset. Hence, request to keep the requirement as optional.</p>	Oil purification system external to Gensets is in scope of supply and shall be provided by bidder.

118.	VI/B	Volume I, M1	425/1178	1.02.04	<p>Air Intake and Exhaust System</p> <p>The air intake and exhaust system shall be provided with:</p> <p>(a) Air intake system:</p> <p>The offered system shall have proven service record of operation in climatological conditions similar to plant site and shall be capable of operating under most adverse site conditions, without affecting continuous operation of Engine sets and the filtration process. System shall be complete, but not limited to the following:</p> <ul style="list-style-type: none"> i. Intake air Filters ii. Intake air silencers – Stainless Steel iii. Intake air ducting between Engine and Air filter 	<p>Intake filter shall be integral to the engine, hence Intake air silencers are not applicable as per OEM specification.</p>	<p>Bidder to comply specification requirement.</p>
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119.	VI/B	Volume I, M1	425/1178	1.02.03 (ii)	Ignition system: RLNG flow meter: Turbine type/ Coriolis type. Output data: Mass flow, Volume flow, Density, Temperature, Totalizer with local display and remote integration with DCS system.	We propose Orifice type Multivariable Gas flow meter which can display Volume flow, Temperature and mass flow in kg/hr on the basis of chemical composition already specified. NVVN to confirm the acceptance.	Bidder's standard and proven practice is also acceptable based on documentary evidence as already indicated in the referred clause.
120.	VI/B	Volume I, M1	425/1178	1.02.06	Exhaust stack The ducting shall comprise of necessary fittings, expansion joints, Reactive industrial type silencer, Rain Hoods etc.	Combined Reactive+Absorption type Industrial Silencer shall be most suitable for sound attenuation. Hence, request to accept Combined Reactive+Absorption type Silencer.	Shall be finalized during detail engineering.
121.	VI/B	Volume I, M1	425/1178	1.02.04	Air Intake and Exhaust System Exhaust gas silencer: Corten steel	Corten steel plates are available in market only from 5 mm to 16 mm thick. Hence, the plates of above 16 mm thick used for the manufacture of Silencer like Flanges, supports, Ribs etc. shall be steel conforming to IS:2062. NVVN is requested to accept this.	This is a part of detail engineering and shall be discussed and finalized during detail engineering.
22.	VI/B	Volume I, M1	426/1178	1.02.06 (iv a)	Exhaust stack Insulation shall be 75 mm thick Un-bonded rock wool mattress as per IS 3690 type-2 at an application density of 64 kg/m ³ . Cladding shall be aluminium sheet of 20 SWG.	Bidder intend to use Light Resin Bonded (LRB) Mattress as per IS:8183 in place of "Un-bonded rock wool mattress as per IS:3690 type-2". Kindly confirm	Refer amendment in this regard

122.	VI/B	Volume I, M1	428/1178	1.08.00	<p>Oily Water Handling System The Oily water handling system shall be complete, but not limited to the following:</p> <ul style="list-style-type: none"> i. Oily water collection pits – 2 nos. for collection of drains from Engine Hall ii. Vertical sump pumps - Min. 1W + 1S no./ per pit capable of emptying the pit in 15-20 min iii. Sludge Storage Tank - 1 no. of adequate capacity (finalized during detail engineering). iv. All piping, level switches, level indicators, heat tracers & insulation, if required v. Sludge unloading pump unit - 1W + 1S no. 	For the offered Gas gensets based Power Plant, Oily water handling system is not applicable as per OEM standard. Request NVVN to confirm	Bidder to comply to specification requirement.
123.	VI/B	Volume I, M1	428/1178	2.00.03	<p>Fuel Gas System Fuel gas piping downstream of the individual Absolute Filter Separator unit (not part of Gas Engine Integral System) of each gas engine shall be made of stainless steel of suitable grade.</p>	Gas filter is a part of our Individual Engine Gas Train system, hence no additional filter is required as per OEM standard. Kindly confirm.	Bidder to comply to specification requirement.

124.	VI/B	Volume I, M1	430/1178	3.02.04	FUEL GAS SUPPLY SYSTEM All Electricals and Instruments in the Fuel Gas System shall be of Flame Proof/ Explosion Proof Design.	Since the complete Power house falls under Safe Area category installation, Flame proof / Explosion proof detection system is not required. NVVN to confirm	Bidder to comply to specification requirement.
125.	VI/B	Volume I, M1	433/1178	5.00.00	Factory Acceptance Test (FAT) Factory Acceptance Test of all the Engines and Alternators shall be attended by the owner/client.	Witness of FAT of 11 nos. engines & alternator will not be feasible as it will require multiple to & Fro travel at different times. Hence, we request NVVNL perssonel to witness FAT of 1 or 2 engines and alternators only. For the rest test reports shall be provided prior to dispatch. Please confirm	Bidder to comply to specification requirement.
126.	VI/B	Volume I, M2	440/1178	1.02.01 (3)	Arrangement of Gensets: Transverse	Based on the available space and no. of gensets offered by the bidder, bidder shall decide the orientation of Gensets. NVVN to confirm	Bidder to comply specification requirement

127.	VI/B	Volume I, M4	454/1178	1.03.00	<p>Fire Water Source</p> <p>Water for the Fire Protection system shall be drawn from fire water storage tanks to be provided by the Bidder. Water for filling up the fire water storage tanks shall be drawn from the following two sources:</p> <p>a) From service water tank</p> <p>b) From rain water harvesting tank as second source.</p> <p>Fill in line from above two sources shall be in the scope of vendor. Bidder shall interconnect the same to each of the fire water tank through individual motorized isolation valve</p>	<p>Fire Water Storage Tank will be of what capacity. Will it be installed overground or underground. Please confirm.</p>	<p>Bidder to refer clause xii), 7.00.00 (xii), Chapter-M4, Volume-I, Part-B of Technical Specification.</p> <p>Fire water storage tanks shall be overground.</p>
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128.	VI/B	Volume I, M4	454/1178	1.03.00	<p>Fire Water Source Water for the Fire Protection system shall be drawn from fire water storage tanks to be provided by the Bidder. Water for filling up the fire water storage tanks shall be drawn from the following two sources:</p> <p>a) From service water tank b) From rain water harvesting tank as second source.</p> <p>Fill in line from above two sources shall be in the scope of vendor. Bidder shall interconnect the same to each of the fire water tank through individual motorized isolation valve</p>	<p>Service Water Tank and Rain water Harvesting Tank will be provided by NVVN. Please confirm.</p>	<p>Service Water Tanks are in the scope of the Bidder.</p> <p>Rain water Harvesting Tank is in the scope of NVVN.</p>
129.	VI/B	Volume II, E1	511/1178	1.12.00	<p>GENERAL REQUIREMENTS In fire hazardous areas like gas/ liquid fuel storage/ handling areas, lighting fixtures, switchgears shall be flame proof.</p>	<p>Since the complete Power house falls under Safe Area category installation, Flame proof / Explosion proof detection system is not required. NVVN to confirm.</p>	<p>Bidder to comply technical specification</p>
130.	VI/B	Volume II, E1	514/1178	2.09.00	<p>PLC based control system wherever envisaged shall be provided with 100% redundancy i.e. hot standby.</p>	<p>PLC based control system shall be provided as per OEM standard for the offered genset.</p>	<p>Refer amendment in this regard</p>

131.	VI/B	Volume II, E2	521/1178	3.00.00	<p>7. Short Circuit withstanding Capable of withstanding of 3 phase short circuit at capacity the generator terminals when operating at rated MVA and power factor with 5 % over voltage for a period of not less than 3 seconds.</p> <p>8. Impulse level & Surge To be suitable for test voltage of 4U+5 KV.</p>	Short Circuit withstand capability & Impulse level & surge is as per Alternator OEM Standard.	Bidder to comply technical specification
132.	VI/B	Volume II, E2	521/1178	4.00.00	<p>General</p> <p>a) All components of the generator to be designed to avoid resonance at any of the frequency in the operating range and their multiples.</p> <p>b) Earthing brushes shall be provided. It should be possible to increase the brush pressure while generator is working. In case any other arrangement for shaft earthing offered by Contractor, the same shall be accepted. Rotor earth fault monitoring shall be provided</p>	<p>Construction feature of Generator shall be as per OEM Standard.</p> <p>Request NVVN to accept the same</p>	Bidder to comply technical specification

133.	VI/B	Volume II, E2	522/1178	5.04.01	Redundancy: 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.	Equipment design & sizing criteria as per Generator OEM Standard. Request NVVN to accept	Please refer amendment
134.	VI/B	Volume II, E1	523/1178	6.01.00	LIST OF TYPE TESTS of Generator & Excitation system	Type Test shall be as per OEM Standard. Test report shall be provided. Request NVVN to accept	Bidder to comply technical specification
135.	VI/B	Volume II, E4	535/1178	7.02.00	DESIGN AND CONSTRUCTIONAL FEATURES Motors and EPB located in hazardous areas shall have flame proof enclosures conforming to IS: 2148	Since the complete Power house falls under Safe Area category installation, Flame proof / Explosion proof detection system is not required. NVVN to confirm	Bidder to comply technical specification
136.	VI/B	Volume II, E7	535/1178	6.00.00 (a 7)	The transformer firewall, pit sizing and clearances from adjacent building/structures etc. shall be as per IS 1646/CBIP manual on Transformer	As civil construction is excluded from the Contractor's scope, we understand Firewall is also not in Contractor's scope. NVVN to confirm	Noted

137.	VI/B	Volume II, E8	580/1178	4.03.00	<p>GENERAL DG set including stack height, acoustics, air emission and fuel oil installation shall meet the requirement given by gazette notifications of Ministry of Environment & Forest time to time , CPCB guidelines, all statutory requirement of Govt. of India and State Pollution Board Guidelines & as updated as on date of bid opening. Necessary lightening protection shall be provided by the bidder for the stack as per statutory and safety requirements. Bidder shall furnish the detailed break-up for arriving at the capacity of the DG set and also furnish overload capacity with a variation in ambient temperature.</p>	<p>Stack height of the emergency diesel Generating set shall be calculated based on formula : $H + 0.2 * (KVA^{1/2})$, where H is height of the acoustic enclosure . Kindly confirm</p>	Bidder to comply technical specification
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138.	VI/B	Volume II, E8	587/1178	10.00.0 (2,d)	<p>SOUND PROOFING SYSTEM</p> <p>Ventilation system of adequate capacity shall be provided. The construction of ventilation duct shall be from 1.6 mm thick CRCA perforated sheet The ventilation system shall be design to prevent leakage of sound and temperature shall not increase by more than 5 degree centigrade when DG is running continuously at specified rating</p>	Ventilation duct design & temperature rise inside the enclosure of emergency DG set shall be as per OEM standard on account of CPCB compliance requirement. Please confirm	Bidder to comply technical specification
139.	VI/B	Volume II, E8	587/1178	11.00.00	<p>TYPE TESTS</p> <p>Type test report of Alternator for the listed out parameters below</p>	Type test parameters for the Alternator shall be as per OEM standards only. Kindly confirm	Bidder to comply technical specification
140.	VI/B	Volume III C	709/1178	4.02.00	Analyzer Response time (up to 90% of full scale): < 5 secs	We understand response time < 5 secs is excluding the sample transportation time & gas displacement time. If these both needs to be included then the response time should be within 60 sec. kindly confirm	Specification requirement is for analyzer response time and is clear. Bidder to meet specification requirements.
141.	VI/B	Volume VI Q-02	788/1178		Pipes: Material Tests & all test as per relevant Std..	Correlated MTC shall be reviewed. In the event of non submission of MTC, Lab test report will be reviewed (To comply all test as per relevant Std).	Correlated MTC to be furnished for review.

142.	VI/B	Volume VI Q-28	890/1178		1) BHEL 2) Toshiba 3) L&T 4) Hitachi 5) GE	<p>As per the Vendor list, many vendors are presently not manufacturing Generator / Alternators and rest are OEM of smaller capacity Alternators as per the capacity mentioned in the proposed sub supplier list.</p> <p>Hence, request NVVNL to accept the make of Alternator for offered genset as per OEM offered make i.e. Marelli and Toyo Denki Power System suitable for offered genset capacity. However PTR as per tender requirement in support of offered Alternator shall be provided by the bidder</p>	Generator / Alternator pertains to Sub QR item as per specification requirement. Sub QR qualified manufacturer will be assessed for QA Ti-up and acceptance in line with CQA Vendor Assessment standard procedure during detailed Engineering.
143.	VI/B		898/1178		Kirloskar Electric - Bangalore Cummins Generator Technology (Stamford) - U.K. Leroy Somer - France Marathan - USA Cummins Generator Technology (Stamford) Toyo Denki Power System - Bangalore (11 KV, 1500 KVA)		

144.	VI/A	Volume III	190/1178	12.01.00	Two (2) numbers (2x100%) oil free, rotary screw type air cooled air compressors for instrument air and service air applications	We will proposed to tap air line and pressure reducing valve from compressed air line proposed for engine starting system. Hence no need to install additional Air compressor, dryer and receiver tank for different 8 kg/cm ² (g) pressure air.	Dedicated starting air system and dedicated instrument/service air system have been envisaged. Bidder to comply with specification requirements.
145.	VI/A	Volume III	203/1178	20.01.00	The Solar Photo Voltaic (PV) installation on Rooftop of various available buildings of the Power Plant shall be carried out preferably on shadow free area	We are planning to accommodate radiator on roof of building. Hence space for solar plant will not available. Can't provide	Specification requirement is clear in this regard.
146.	VI/A	Volume III	202/1178	17.14.00	To meet the construction power requirement of the project, DG sets shall be employed.	Does it mean, DG set employed by employer? Who will be responsible for supply of diesel required for DG and maintenance of DG during construction phase?	DG Set to be employed by bidder. Diesel to be supplied by bidder till takeover of the plant post successful completion of initial/trial operations & Performance guarantee tests including Demonstration tests (whichever occurs later).
147.	VI/B	Volume I M1	429/1178	3.02.01 vi	Gas flow meters (common to all Engines) as well as individual gas flow meter for each Gas Engine	Bypass circuit with required valves and piping to bypass the Gas flow meter?	Shall be finalized during detail engineering.
148.	VI/A	Volume III	211/1178	27.00.00 iii	Exclusion: All civil works other than grouting of the equipment and fixing supports in walls, floors and trenches etc.	Will employer construct cable trenches on floor and all civil works as per bidder's requirement?	All civil work of cable trenches other than fixing supports in trenches is in Employer scope.

149.	VI/B	Volume I M1	422/1178	1.02.02.00	Provide permanently connected, Continuous Oil Purification system	It is not required.	Bidder to comply specification requirement.
150.	VI/B	Volume I M1	423/1178	1.02.02.00 i(a)	The tank shall be provided with: 2 x 100% AC motor driven vapor extraction fans	Natural vent point has been provided to tank hence no need of this.	Bidder to comply specification requirement.
151.	VI/A	Volume III	189/1178	11.02.00 c	Potable water system	What would be the capacity?	These details to be finalized during detailed engineering based on downstream requirements of various systems & bidder's design.
152.	VI/A	Volume III	189/1178	11.02.00 d	Service water system:	What would be the capacity?	These details to be finalized during detailed engineering based on downstream requirements of various systems & bidder's design.
153.	VI/A	Volume III	189/1178	11.02.00 e	Effluent Treatment System	What would be the capacity of plant?	Minimum CMB capacity for wastewater collection is already specified. Other details to be finalized during detailed engineering based on effluents generated from various systems & bidder's design.
154.	VI/A	Volume III	205/1178	21.06.00 i	Training of Employer's Personnel Total duration of the training shall be of 5 (five) man months.	Along with man month, Pls suggest how many trainee will attend the training? Our understanding is Operation & Maintenance	Content of training is clear in referred clause. Number of trainees will be finalized during detail engineering.
155.	VI/A	Volume III	210/1178	25.00.00	Supervision of O&M/Inspection of Plant	Only 1 Maintenance expert & 1 operation expert will be available for 1 year from date of commissioning, required manpower to be provided by Owner.	Specification requirement is clear in this regard

156.	VI/A	Volume III	253/1178	4.02.02	Initial operation Period Contractor shall be responsible for all scheduled and un-scheduled inspections and maintenance activities of the complete plant	What is definition of Initial Operation period ?In case of nonavailability of gas or load, who will responsible for genset preservation?	Please refer 26.03.00 of Vol VI, Part A for definition of "Initial Operation".
157.	VI/A	Volume III	253/1178	4.02.02	Initial operation Period Contractor shall be responsible for all scheduled and un-scheduled inspections and maintenance activities of the complete plant. expenses towards services & material required	Bidder responsibility for 1year inspection and maintenance only, please clarify.	Please refer clause no. 4.02.03 for commencement of O&M Period.
158.	VI/A	Volume III	270/1178	Annexure-IA	Environmental Standards for Gas Naphtha-based Thermal Power Plants Less than 100 MW : 100 ppm for units burning natural gas	Annexure 1A indicate Nox level : 100 PPM Sec. 6.02.01 indicate Nox level : 80 PPM Kindly confirm either 100PPM or 80 PPM?	Clause 6.02.01 refers to the guarantee for NOx emission which is 80 ppm and same shall be demonstrated during Guarantee test.
159.	VI/A	Volume III	266/1178	Annexure-IA	Noise level shall not exceed 90 dBA to a reference level of 0.0002 microbar when measured at a distance of 1.5 meter above the floor. Required acoustic enclosures may be provided to meet the above condition.	Construction of acoustic building / civil building will be in scope of employer. Hence performance guarantee shall be depend on construction of building & employer's responsibility	Bidder to comply specification requirement.

160.	VI/A	Volume VII	382/1178	28.01.00	The Contractor shall establish a site office at the site.	All required civil work will be in scope of employer	Specification requirement is clear in this regard. It will be in bidder's scope.
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161.	VI/A	Volume VII	388/1178	36.05.00	<p>a. Bidder shall ensure that the plant site within the plant boundary is managed in a coordinated and professional way all through the construction phase till handing over of plant.</p> <p>b. Bidder shall prioritize the construction of approach roads, roads around the main plant block, roads to office & storage areas and the offsite areas from the start of project itself</p> <p>c. He shall ensure that the roads are promptly repaired and maintained against any damages due to movement of traffic/heavy trailers & cranes etc providing motorable access at all times.</p> <p>d. Adequate onsite stock of road materials shall be kept and maintained disturbed over the site for repairs especially before the monsoon period.</p> <p>e. Proper drainage of rain water, ground water from excavations, water flows</p>	<p>Civil work is in scope of employer. Hence bidder will not responsible for Road, Drainage system, Water Harvesting Plant or any other construction activity, repair. Employer need to confirm.</p>	<p>Civil work will be as per scope mentioned in technical specification. Further, Refer Amendment in this regard.</p>
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					from batching plant / construction sites etc.		
162.	VI/A	Volume VII	390/1178	36.05.00 (n)	Bidder shall plan to develop the landscape & green belt areas and rainwater harvesting from the start of the project itself	It is the part of civil activity will be in bidders scope. Location, dimension, capacity will be confirm by bidder	All Civil work will be as per scope mentioned in technical specification. Bidder to take care of all mentioned areas while developing layout.
163.	VI/B	Volume I M1	428/1178	1.08.00	Oily water collection pits – 2 nos.	It is part of civil job.	Provision to be indicated in layout.
164.	VI/B	Volume I M1	428/1178	3.02.01 i	Emergency Stop Valve at the inlet to isolate the station	Does employer considered 1 No. manually operated isolation valve at gas line connection point to plant?	Shall be discussed and finalized during detail engineering
165.	VI/A	Volume V	284/1178	3.01.00	Net Heat Rate at 100% of Engine load	Is the term INR/kCal/kwh/MW means unit of the calculation?	Specification is clear in this regard.
166.	VI/A	Volume VII	389/1178	36.05.00 (h)	Suitable treatment for toilet discharge, like bio digesters etc shall be planned and conventional septic tanks / soak pits etc shall be avoided	It is part of civil job. All the civil will be taken care by employer.	Refer amendment in this regard
167.	VI/A	Volume VII	389/1178	36.05.00 (b)	Proper drainage of rain water, ground water from excavations, water flows from batching plant / construction sites etc. He shall prioritize the construction of permanent drains from the start of the project itself	It is part of civil job. All the civil will be taken care by employer.	Refer amendment in this regard

168.	VI/A	Volume IV	251/1178	3.02.00	In case shop test power consumption for equipment/system mentioned above is not available, then rated power consumption of the equipment/system shall be taken into account while calculating Net Power Output.	All the common BoPs shall not operate all the time. Request employer to consider only genset running auxiliary for net power calculation.	Bidder to comply specification
169.					Water Facility Responsibility	<p>source of water for Fire safety Water and storage Tank capacity & location employer to confirm in layout. Civil work will be in employer's scope.</p> <p>Water harvesting Tank and infrastructure</p>	<p>Bidder to refer 1.03.00, Page-1 of 35, Chapter-M4, Volume-I, Part-B of Technical Specification for source of water to fire water storage tanks.</p> <p>Capacity of MS fire water storage tanks (2 Nos.) shall be as per the recommendation of TAC with a minimum effective capacity of each tank equal to 500 m3.</p> <p>Location of fire water storage tanks is already indicated in General Layout Plant (GLP) attached with the Chapter-M2, Volume-I, Part-B of Technical Specification.</p> <p>Civil Works is not in the scope of the Bidder. Further, Bidder to refer Clause 27.00.00 (Exclusions), Volume-III, Part-A of Technical specification.</p>

170.	VI/B	Volume I M1	848/1178	Q29	Indicative Vendor List	Is it mandatory for bidder to select vendor from the list provided in tender document?	Indicative Vendor List is suggestive only. Credentials to be furnished for New Vendor for review & acceptance by NTPC. Kindly refer disclaimer of Indicative Vendor List for details.
171.					Adjustments for Functional Guarantees (X)	What does this mean?	Intent of bidder's query is not clear. Bidder has not mentioned any reference clause.
172.	VI/A	Volume IV	211/1178	27.00.00	Exclusion : Civil works shall be executed by employer based on detailed dimensional drawings and loading data furnished by the equipment supplier .	Bidder understands that PEB / Civil building for following as per the design of bidder will be in scope of NVVNL's scope, a. Engine hall b. Switchgear room c. Control Room d. Foundation of all Equipment e. Road and drainage system f. CMB, Fire fighting Storage water tank, g. Office infrastructure h. Water Harvesting Plant i. Chimney foundation j. Water Facility Responsibility k. Other civil work	Following are in bidder's scope: f. CMB, Fire fighting Storage water tank g. Office infrastructure i. Water Facility Responsibility
173.	VI/A	Volume IV	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.	It will change as per revised SLD for 11 nos Gensets, Generator power connection will be done at 11kv switchgear panel as per revised SLD, Employer to confirm	Bidder to comply technical specifications.

174.	VI/A	Volume IV	199/1178	17.03.00	The preferred standard Transformers ratings shall be as indicated in a typical key single line diagrams Drg. No. 6400-999-POE-J-001 enclosed in Tender drawings.	In SLD Transformer rating is not mentioned, due to revised SLD outgoing transformer rating to be provided by employer	Bidder to comply technical specifications.
175.	VI/B	Volume II E2	521/1178	4.00.02 2) b) ii)	Atleast Two (2) detectors per bearing for measurement of temperature	Normally one detector at each bearing, employer to confirm	Bidder to comply technical specifications
176.	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	one AVR with each Genset. Employer to confirm. Needs to elaborate. Needs 2 AVR or Output 02 channels on one AVR ?	Please refer Amendment
177.	VI/B	Volume II E1	518/1178	SLD	SLD	we will bid with 11 nos Gensets so SLD with change in transformer location will be change as per attached SLD no. TEN/1.1/SLD/A&N/NV/VN, employer final requirement of 33KV with rated load capacity will be met.	Bidder to comply as per technical specifications.

178.				Attachment 3K	*manufactured/*got manufactured and supplied the Starting Air System as required for the offered RLNG fired Engine and which has been in successful operation for a period of at least one (1) year on or before Six (6) months after award date	Experience of PNG/NG fired to be considered along with of RLNG	Bidder to comply specification requirement
179.	VI/A	Volume IV	258/1178	9.03.00 ii)	Deluge valve assembly is mentioned as auto resetting type	Bidder understands that deluge valve are always reset manually to avoid any inadvertent closure. Please confirm the bidder understanding.	Bidder's understanding is not correct. Bidder to comply with specification requirements.
180.						Bidder understands that no safety studies like gas dispersion, radiation, qualitative risk analysis, etc. are being envisaged under fire fighting in the tender requirement. Please confirm the bidder understanding.	No safety studies like gas dispersion, radiation, qualitative risk analysis, etc. have been envisaged in chapter of fire detection & protection system.
181.						Kindly provide Area classification Drawing to Protect from Fire	Bidder's query is not clear
182.					33kV Switchboard (each section) shall have two (2) no. of feeder as spare.	We have attached SLD no.TEN/1.1/SLD/A&N/NVVN as per our genset nos. employer to confirm,	Bidder to comply technical specification's tender document.

183.		General Condition of Contract	14 Of 75	7.3.1.3	The Contractor will provide the Employer with the manufacturing drawings, catalogues, assembly drawings and any other document required by the Employer to enable the Employer to identify the recommended spares. Such details will be furnished to the Employer as soon as they are prepared but, in any case, not later than six months prior to commencement of manufacture of the corresponding main equipment.	Manufacturing drawings cannot be provided due to confidentiality and proprietary nature. However, catalogue/part catalogue or any other information for identifying the recommended spares can be provided.	Noted
184.	VI/A	VOLUME - III	190/1178	12.02.00 a	Complete fire water pumping system consisting of two (2) nos. fire water storage tank	storage tank for fire water tank shall be part of CIVIL work	Bidder to refer Clause 7.00.00 (xii) of Chapter- M4, Part-B of Section VI. Fire water tank is under Bidder Scope of Work. Bidder to comply with Specification requirement.
185.	VI/A	VOLUME - III	190/1178	17.01.02	Complete cooling systems as applicable including the necessary piping and pipe supports, valves, necessary tanks, pumps, motors, heat exchangers, strainers, measuring system along with the control panel.	We shall be supplying air cooled Alternator/Generator.	Noted

186.	VI/A	VOLUME - IV	190/1178	9.05.00	Total Flooding Inert Gas Extinguishing System	Will this be applicable for Gas genset in power house building.	Bidder to refer Clause 12.02.00 (e) of Volume-III, Part-A Section VI. Inert gas Extinguishing System Shall be provided in the location as specified. Bidder to comply with Specification requirement.
187.	VI/A	VOLUME - V	279/1178	1.03.00 (ii)	Noise level (near field and far field) of Engines, Generators/Alternators and including all the auxiliaries and their system at 100% and 80% of the base load of Gensets as per the applicable Norms.	Meeting the noise at outside genset hall and plant boundary is part of CIVIL (purchaser cope)	Bidder to refer amendment in this regard
188.	VI/A	VOLUME - VI	310/1178	19.06.00	Painting for Civil structures and equipment/system covered under this package shall be done as specified under technical requirements on civil works in relevant part of this specifications or as per standard approved practices for the location and climate condition of the plant.	Painting of civil structure in purchaser scope	As mentioned, painting of structure and equipment under this package is in bidder's scope.
189.	VI/A	VOLUME - VI	321/1178	30.00.00	The noise levels shall meet the MoEF&CC guidelines as enclosed at Annexure-IA of Volume IV, Part-A, Section-VI and requirements specified elsewhere.	Meeting the noise at outside genset hall and plant boundary is part of CIVIL (purchaser cope)	Bidder to refer amendment in this regard

190.	VI/B	VOLUME II E2	522/1178	5.01.00	The Generator excitation system shall be standalone system. All panels of excitation system shall be in single suite.	There is no standalone excitation system and panel in single suite as we are offering Self-excited, brushless excitation system. Our standard is to provide AVR inside the GCC (Generator control cabinet) panel. As dual AVR is required for this project, we offer to provide a separate wall mounted panel to house the 2 x 100% redundant AVR.	Bidder to comply technical specification.
191.	VI/B	VOLUME II E3	525/1178	5.01.00	MV Bus ducts shall be provided for interconnections between Generators, Transformers and Switchgears	Need clarification. Bus Duct between Generator and transformer can be avoided due to size of Power Plant and area constraint	Bus-duct to be provided between Generator and Generator Transformers.
192.	VI/B	VOLUME – V RS	766/1178	1.2	Complete design, engineering, manufacture, inspection, supply, transportation, storage, insurance, civil work, erection, testing, commissioning and O&M of the grid Solar PV plants including all auxiliaries. connected rooftop	We understood that O&M for Solar PV Plant is in Bidder Scop, kindly confirm.	As per Clause 1.6 Page No 767 of 1178 O&M for One Year is in the Bidders Scope Bidder's understanding is correct

193.	VI/A	Volume III	199/1178	17.04.01	MV Switchgear Voltage	33kV & 11kV is mentioned for MV Switchgear in Referred Clause. However in SLD (6400-999-POE-J-001) MV switchgear voltage is mentioned as 33kV. Base on these bidder understand that Only 33kV Switchboard required and 11kV iss not applicable. Owner may please confirm bidder understanding	Bidder's understanding is correct
194.	VI/A	Volume III	199/1178	17.02.00	MV Busduct	Referred Clause calls, only Busduct requirement between Generator to Transformer. However, Current between Generator to Generator transformer is less than 1000A. Hence please allow the Busduct or Cable option to Bidder between Generator to Generator transformer . Same will be finalized during detail engineering.	Bidder to comply specification requirements
195.	VI/A	Volume III	200/1178	17.05.00	DC System Voltage & Battery Type	DC System Voltage & Battery type is not mentioned. Please specify the Voltage & Battery Type.	please refer spec clause 2.07.00 of VOLUME-II CHAPTER-II-E1 GENERAL ELECTRIC SPECIFICATION
196.	VI/B	Volume II E5	545/1178	4.00.03 (b)	Conductor Material for Power cable	Bidder understand that LT Power cables 10.sq.mm & above shall be Aluminium and below 6.0sq.mm shall be copper. Owner may please confirm bidder understanding.	Bidder to comply Technical specifications. Above 10 sq mm Aluminium conductor shall be used.

197.	VI/B	Volume II E7	564/1178	2.01.00	Cable Tray Supports	Bidder is proposing Cable trays support shall be Epoxy painted instead of Hot dip Galvanized for installation convenience and availability & transport limitation at island. Owner may please accept.	Bidder to comply Technical specification
198.	VI/B	Volume II E1	510/1178	1.06.00	Voltage for Motor >200kW	<p>Following Voltage levels are proposed by Bidder</p> <p>For Motors 200kW, Voltage levels shall be 3.3kV or 6.6kV or 11kV exact Medium Voltage level for distribution will be selected during detailed engineering.</p>	Bidder to comply Technical specification
199.	VI/B	Volume II E9	593/1178	3.00.00 (b-2)	Temp. Rise allowed	<p>Temp. Rise allowed above 50 deg C ambient is 40 deg C for plain joints & 55 deg C for Silver-plated joints.</p> <p>(i.e. With ambient of 50 degC , the temperature allowed on plain joints is 90 deg C and for silver plated joints is 105 deg C</p> <p>Where as per cl.no 5.3.9 of IEC-62271-1 , maximum temperature allowed for silver plated joints is 115 deg (i.e. temperature rise is 65 deg c on ambient temperature of 50 degc).</p> <p>Please allow temperature rise for silver plated joints as IEC62271.</p>	Bidder to comply Technical specification

200.	VI/B	Volume II E9	595/1178	5.01.00	<p>DDCMIS architecture & Control Philosophy</p> <p>As per schemes and specifications of MV switchgear , All numerical relays in MV switchgear shall be interfaced with DDCMIS system on IEC61850 protocol. And breaker on/off commands from DDCMIS.</p> <p>We would like propose the following</p> <p>i) On/OFF commands, On/OFF/Trip Feed backs shall be hard wired. Balance all the signals will communicated through soft on IEC 61850 Protocol to DDCMIS.</p> <p>ii) Kindly share the proposed architecture to be followed for interfacing of Numerical relays with DDCMIS.</p> <p>iii) Detailed IO list for both hard wired and soft so that all the Bidders will be considered same and on par.</p> <p>iv) Kindly clarify whether DDCMIS can be part of Plant DCS or should be separate like SCADA.</p> <p>v) There is no hard wired control panel is required as per spec. Only hardwired Generator control/Synchronisation panel will be considered.</p>	<p>1.ON/OFF commands shall be hard wired. Other signals for soft/hard communication shall be finalized during detail engineering.</p> <p>2. As per clause NO.2.04.00 of chapter-II E1, vol-II , all switchgear/MCC shall be controlled from PLC/DCS. Accordingly, architecture for interfacing shall be finalised during detail engineering.</p> <p>3.Shall be finalized during detail engineering.</p> <p>4. No separate SCADA system envisaged. Technical specification is clear in this regard. Bidder to comply Technical requirement.</p> <p>5. Technical specification is clear in this regard (refer reply at Sl. No.2 above). Bidder to comply TS requirement. No data concentrator panel envisaged for LV/MV switchgear. Cards/systems required for interfacing with main plant DCS/PLC shall be in bidders scope.</p>
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	VI/B	Volume II E9	602/1178		MV Switchgear Scheme	As per schemes, Multifunction numerical relay is having two setting groups, please clarify two setting groups and operating philosophy.	The two setting groups include the setting during starting/running conditions. The setting groups/protection functions shall be as per the details specified in Technical specifications/schemes attached in MV switchgear chapter.
201.	VI/B	Volume II E9			Spare Feeder	Bidder not considering any spare feeders in 33kV switchgear. If any spare feeders required in 33kV Switchgear by owner please furnish Quantity & Rating.	Spares shall be considered in 33KV switchgear also as per the Technical specification requirement.
202.	VI/B	Volume II E9	597/1178	6.00.00 (b)	MV SWITCHGEARS DESIGN AND CONSTRUCTION FEATURES	DESIGN AND CONSTRUCTION FEATURES : Height of the Switchgear Panel shall not to exceed 2600 mm. In this regard, Height of the switchgear shall be selected as per OEM type tested design panels.	Bidder to comply technical specification

203.	VI/B	Volume II E6	561/1178	Annexure B	Lux level for DC emergency Lighting	As per Annexure-B, DC emergency lighting is to be designed in Unit Control room and Control Equipment room with 100Lux level in case of failure of AC lighting. However, only few DC fixtures are to be provided for safe evacuation in each area as per Cl. 3.03.01 of Chapter- II-E6. Both clause are contradictory in nature. We are proceeding with Cl. 3.03.01 of Chapter- II-E6 as lumen output of DC fixture is very low and achieving 100 Lux level is very difficult. Please accept the same.	Bidder to comply Technical specifications. Bidder to provide lux level as per the specifications.
204.	VI/B	Volume II E1	513/1178	2.05.00	33KV CABLES	As per Clause 6.02.00, 33kV system shall be solidly earthed. As per clause 2.05.00, all HT Cables shall be Unearthed grade. For solidly earthed 33kV system, 33kV(UE) cable is not required. Hence 33KV Earthed grade HT cables are being considered by Bidder. Please confirm.	Please refer amendment issued in this regard

205.	VI/B	Volume II E5	544/1178	2.01.00	LT Cable sizes	<p>As per clause 2.11.00, all LT power cables of sizes more than 120 sq.mm. shall be XLPE insulated and sizes shall be of 1Cx150, 1Cx300, 1Cx630, 3Cx150 & 3Cx240 sq.mm However for cable sizes up to 120 sq.mm. both XLPE insulated & PVC insulated LT power cables are acceptable.</p> <p>Single core XLPE insulated cables of all standard sizes (as per IS standards) up to and including 630 sq.mm. are being considered by Bidder</p> <p>Multi core XLPE insulated cables of all standard sizes (as per IS standards) up to and including 300 sq.mm. are being considered by Bidder</p> <p>Pls confirm</p>	Bidder to comply technical specification
206.	VI/B	Volume II E5	518/1178	SLD	Metering System	<p>Please clarify the requirement of following.</p> <ol style="list-style-type: none"> 1. Please clarify the location of ABT Meters, CTs & PTs 2. Separate set of 33kV CTs, PTs required for Main, Check & Standby ABT Meters or Common for Each Feeder. 3. Applicability of 33kV Metering cubical consists of CTs, PTs & Meter. 	<ol style="list-style-type: none"> 1. ABT meters, CT and PT shall be located in 33kV switchgear room. 2. CTs,PTs for main check and standby ABT meters shall be provided as per Tender SLD and prevailing metering regulations. 3. bidder to comply specifications.

207.				General		<p>We understand 33kV switchgear will be connected with 33kV cables for transmission lines (owner). PI. clarify our understanding is correct. There is no outdoor switchyard is applicable. If applicable please furnish SLD, Layout & Technical Specification.</p> <p>As per this our terminal point will at 33kV Breaker feeder.</p> <p>If Bidder understanding is not correct please furnish bidder terminal point for outgoing power.</p>	Bidder to comply with specification requirements
208.				General		<p>Feeder requirement for owner was no mentioned. If Any feeders required for owner use please furnish List & Rating.</p>	No feeder for owners requirement is envisaged.
209.	VI/A	Volume III	191/1178	12.02.00 (f)	Control System for Fire Detection & Protection PLC based control panels	<p>1. Bidder understood that separate dedicated PLC shall be provided for fire water pumps and associated systems located in fire water pump house.</p> <p>2. Location of PLC shall be Common control room(CCR).</p> <p>Customer may please confirm.</p>	<p>1. Bidder understanding is correct.</p> <p>2. Location of PLC shall be decided during detail engineering.</p>

210.	VI/A	Volume III	197/1178	16.03.00	CONTROL SYSTEM-PLC	<p>1. Bidder understood that PLC based control system (main plant PLC) shall be provided for Gas Engines as well as for Common and Electrical System Controls. Common systems shall include Water package, Compressed air system. Customer may please confirm.</p> <p>2.Customer may please confirm if PLC of fire water pumps and associated systems need to be hooked with main Plant PLC.</p>	<p>1. For Gas engine & auxiliaries, OEM standard and proven practice is acceptable and for all other system control requirements, bidder to provide PLC based control systems meeting the specification requirement.</p> <p>2. Bidder to comply the specification requirement.</p>
211.	VI/A	Volume III	198/1178	16.04.00	PCP	Customer may please furnish details of PCP.	PCP is process connection piping, for which detailed specification are mentioned at Section VI, Part B subsection IIIC Control & Instrumentation, Clause 7.00.00.
212.	VI/A	Volume III	198/1178	16.05.00	Continuous monitoring of temperature & humidity of Control room/ RIO rooms	Customer may please furnish specification of continuous monitoring of temperature & humidity system.	Details regarding referred system shall be finalized during detailed engineering.
213.	VI/B	Volume IIIC	725/1178	8.02.00	SPECIFICATION OF INSTRUMENTATION CABLE	<p>1. Single pair cable (1Px0.5sqmm Cu PVC) shall be provided between instrument to Junction box and multipair cable (2P/4P/6P/12Px0.5sqmm Cu PVC) shall be provided between Junction box to Control system (PLC).</p> <p>2.Multipair cable (2P/4P/6P/12Px0.5sqmm Cu PVC) shall be provided between MCC/LT SWGR to Control system (PLC).</p> <p>Customer may please confirm.</p>	Cabling details shall be finalized during detailed engineering as per system/specification requirements.

214.	VI/A	Volume III	211/1178	27.00.00	Civil & structural works shall be excuted by employer.	As per the technical specification it is understood that i) Civil & foundation scope for all civil and structural works are excluded from bidder scope. ii) Bidder has to furnish foundation load data to customer. iii) Structural fabricatin and erection of structures(Above ground) are in Customer's scope and foundation design and construction is by Customer. Please confirm.	Bidder understanding is correct
215.	VI/A	Volume III	194/1178	13.00.00	Main control building and switchgear building/Utility building/Power plant building	Please confirm the following: All civil and structural design of all buildings shall be in the scope of Customer.	Bidder understanding is correct
216.					Geotechnical Investigation	As the civil works shall be done by Customer, the respective geotechnical investigation shall be done by Customer. Customer to confirm the same.	Geotechnical investigation is in NVVN's Scope
217.	VI/A	Volume III	203/1178	17.16.00	Contractor shall meet the requirements of type tests on electrical equipment as stipulated in relevant chapters of technical specifications.	Can we know what is the type test content?	Type test requirement for various equipment/system is mentioned in respective chapters of technical specification. Further, the type test procedure shall be submitted by bidder as per applicable codes and shall be finalized during detail engineering.

218.	VI/A	Volume III	203/1178	23.14.00	<p>The Contractor shall guarantee that before going out of production of spares parts of the equipment covered under the Contract, he shall give the Employer atleast 2 years advance notice so that the latter may order his bulk requirement of spares, if he so desires. The same provision will also be applicable to sub-contractors. Further, in case of discontinuance of manufacture of any spares by the Contractor and/or his sub contractors, Contractor will provide the Employers, two years in advance, with full manufacturing drawings, material specifications and technical information including information on alternative equivalent</p>	<p>KHI shall immediately inform that when Kawasaki receive the announce from our vendors or something on the contract between EPC and KGA.</p>	<p>Intent of the query is not clear. Bidder to comply specification requirements.</p>
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219.	VI/A	Volume IV	250/1178	3.01.01	Note : Bidder shall use EN 16726:2015 (E) for calculating the Methane number for deciding reference point of correction curve as well as for calculating the Methane number of supplied gas during Performance guarantee test. Bidder shall necessarily submit the calculation of reference methane number following complete methodology as mentioned above along with the bid.	Methane Number is calculated with AVL program. We are open for discussion.	Bidder to follow EN 16726:2015 and submit the calculation as per specification requirements.
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220.	VI/A	Volume IV	252/1178	3.04.01	<p>Performance test of each Engine (output & Heat rate) shall be calculated during PG tests at Site. During evaluation of Performance Guarantee Test results, corrections shall be applicable only for following:</p> <ul style="list-style-type: none"> a. Methane Number RLNG fuel b. Power Factor c. Frequency 	<p>Below parameter shall be considered for correction of the performance test result. Correction by Kawasaki shall be done at "gross" output and "gross" heat rate based on LHV value. During performance test, electrical power demand stability and frequency stability shall be client's responsibility. If the delay occurs due to these issues, the cost shall be borne by client.</p> <ul style="list-style-type: none"> 1.Intake air temperature 2.Charge air temperature 3.Absolute barometric pressure 4.Exhaust back pressure 5.Methane Number 6.Power factor 7.Frequency 	<p>Correction as per specification shall only be applied. Frequency correction is already mentioned in the bid</p>
221.	VI/A	Volume IV	252/1178	4.01.01	<p>Specific design features to permit the above operational flexibility shall be provided. Genset units shall be designed to withstand rapid load changes within the frequency band of 47.5 – 51.5 Hz without any restriction.</p>	<p>Could you elaborate what is "withstand rapid load changes"?</p>	<p>Equipment/system shall be designed for ramp up/down as per grid requirements within specified frequency band without any limitation.</p>

222.	VI/A	Volume IV	252/1178	4.03.01	<p>The Plant shall be designed for trouble free and reliable operation within the following range of operating and ambient conditions:</p> <p>Design Reference Range of Variation</p> <p>Ambient Temp. (DBT) 28 0C 14.6 to 36.1 0C</p> <p>Barometric Pressure 1001.8 mbar 996.9 to 1014 mbar</p> <p>Relative Humidity (RH) 80 % 65 % to 100 %</p> <p>Grid Frequency 50 Hz 47.5 to 51.5 Hz</p>	RH: No condensation.	Bidder's Query not clear
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223.	VI/A	Volume VI	287/1178	5.00.00		1. GAS ENGINEJIS, ISO, DIN, LES, JGA-C01-90, KMS/KMT. 2. GENERATORISO, IEC, JIS or KIS 3. KGA, KGG MODULEJIS 4. CONTROL SYSTEMJIS, IEC, ISO, JEC, JEM, JCS, DIN. 5. REMOTE MONITORING SYSTEMIEC, ISO, JIS 6. PIPING JIS is our basic standard. 7. CABLE JIS, IEC	Specification requirement is clear in this regard. Bidder to comply specification requirement.
224.	VI/A	Volume VI	289/1178	5.06.00	Two (2) English language copies of all national and international codes and/or standards used in the design of the plant and equipment shall be provided by the Contractor to the Employer within two calendar months from the date of the Notification of Award.	Basically can we know what is the scope and contents of the document?	Please refer amendment in this regard.

225.	VI/A	Volume VI	290/1178	8.01.00	Each main and auxiliary equipment/item of the plant including instruments shall be assigned a unique tag number. The assignment of tag numbers shall be in accordance with KKS system. In all drawings/documents/data sheet etc. KKS tag number of the equipment/item/instrument etc. shall be indicated.	Is KHI standard can be applied?	Bidder to comply specification requirement.
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226.	VI/A	Volume VI	322/1178	33.01.00	<p>All scales and charts shall be calibrated and printed in Metric Units as follows:</p> <p>1 Temperature - Degree centigrade (deg C).</p> <p>2. Pressure - Kilograms per square centimetre (Kg/cm²). Pressure instrument shall have the unit suffixed with 'a' to indicate absolute pressure. If nothing is there, that will mean that the indicated pressure is gauge pressure.</p> <p>3. Draught - - Millimetres of water column (mm wc).</p> <p>5. Flow (Gas) - Tonnes/ hour</p> <p>7. Flow (Liquid) - Tonnes / hour</p> <p>8. Flow base - 760 mm Hg. 15 deg.C</p> <p>9. Density - Grams per cubic centimetre.</p>	<p>If this unit can be accepted?</p> <p>1 Temperature - Degree centigrade (deg C)</p> <p>2. Pressure - Pa (g)</p> <p>3. Draught - - Pa</p> <p>5. Flow (Gas) - m³/ hour</p> <p>7. Flow (Liquid) - m³/ hour</p> <p>8. Flow base –</p> <p>9. Density - Grams per cubic centimetre.</p>	Bidder to comply specification requirement.
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227.	VI/B	Volume IIC	699/1178	2.02.02	It shall be possible to remove / replace online, various modules (like Controller, I/O module, interface module, etc.) from its slot for maintenance purpose without switching off power supply to the corresponding rack. System design shall ensure that while doing so, undefined signaling and releases do not occur and controller operation in any way is not affected (including controller trip to manual, etc.) except that information related to removed module is not available to controller.	During replacement work, the power supply shall be off.	Bidder to meet specification requirement.
228.	VI/B	Volume IIC	703/1178	2.05.00	FAT shall include Functional testing of software and hardware in accordance with the approved logic drawings and simulation of the system with switches, relays, and solenoid valves etc. or equivalent loads. All other parametric tests as decided during detailed engineering shall be undertaken during FAT.	Can we know what kind of FAT required?	FAT (Factory acceptance test) shall be carried out as indicated in the referred clause and shall be finalized during detailed engineering.

229.	VI/B	Volume IIIC	703/1178	2.06.00	Further to the relevant clause regarding training specified elsewhere, Contractor's experienced personnel/engineers shall also provide training courses on offered PLC system to Employer's engineers in the following areas viz. Operator training, Hardware maintenance training, Software training, any other specialized training as required.	If requested, only operation training shall be done as the part of site training.	Bidder to meet specification requirement.
230.	VI/B	Volume II E1	514/1178	2.09.00	PLC based control system wherever envisaged shall be provided with 100% redundancy i.e. Hot standby.	The project allows modular configuration with 4 to 11 units. Redundant control system is not a standard feature of these engines & providing redundancy will involve special engineering & extra costs. Our standard control system has proven reliability even in utility size power plants of up to 110 MW capacity with over 94% availability. We strongly recommend to allow standard engineered control system	Refer amendment

231.	VI/B	Volume IIC	706/1178	3.07.00	<p>Turbine type Gas flow meter shall be provided for individual Gas Engines. The accuracy of the flow meter shall be 1% at max. gas flow. The Gas Flowmeter shall be calibrated at NABL certified laboratory. An electronic volume corrector for online pressure and temperature compensation shall be provided for each Gas Engine. Analog 4-20 mA signal corresponding to corrected Gas flow and totalized flow shall be available from the volume corrector and shall be wired to the PLC panel of individual Gas Engine. However standard and proven practice of the contractor is also acceptable based on documentary evidence.</p>	<p>The voltex flowmeter shall be supplied as Kawasaki standard. The measurement uncertainty shall be considered for the offered guaranteed performance.</p>	<p>Bidder's standard and proven practice is also acceptable based on documentary evidence as already indicated in the referred clause.</p>
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232.	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.	Ditto to 2.09.00	Bidder to meet specification requirement.
233.	VI/A	Volume IV	252/1178	4.01.01	All equipment, including Engine and Generators/Alternators shall be designed to withstand frequency variation in 47.5 – 51.5 Hz frequency range. Bidder shall indicate the period of operation of Gensets permitted during the life of the plant for operation beyond the frequency range of 47.5 - 51.5 Hz.	Basically, Operation between \pm 1.5Hz from rated frequency shall be accepted.	As per Indian law the grid frequency band shall be as 47-5 to 51.5 HZ. Bidder to comply technical specification.

234.	VI/A	Volume III	207/1178	23.02.00	Mandatory spares	Some items are actually not spare parts, but they are components of the gas engine, such as piston, push rod, and etc. In our practice, we do not change these components. In fact, we only clean the piston skirt. If Owner buy and store these items, they will be just kept in warehouse and never be used in entire power plant operation life. We never quote this item to our customer, so we do not have good idea how to provide the price. We recommend our scheduled maintenance spares for each level of maintenance. So when the level of maintenance approach, we will deliver the items to the site at an agreed time before the maintenance. So owner do not need to bother to keep and preserve the parts. We attach our scheduled maintenance parts for your reference (Document name "Scheduled Maintenance Spare Parts"). Nevertheless, we will provide our emergency spare part list of plant operation. These are items like spark plugs, gas valves and etc.	Bidder to comply technical specification
235.	VI/A	Volume II	176/1178	Annexure IA	Pressure Bar (g) 8(min) to 10 (max)	Request NVVN to provide gas with pressure 11 barg to 13 barg at Power Plant boundary	Bidder to comply specification requirement.

236.	VI/A	Volume III	185/1178	2.03.00 (xiii)	2no. of EOT crane as per IS 3177 (Common for all the engines) . Each crane capable of lifting 105% of the single heaviest equipment/components (Except Gas Engines) including lifting beam and slings etc. (as applicable) for maintenance and loading/unloading in the engine hall. However, min. 5 Tons capacity EOT cranes each to be provided.	1 No. crane of 2 MT capacity is sufficient for the plant as per our Global experience. Please clarify the reason for increasing the number of cranes from 1 to 2.	Bidder to comply specification requirement.
237.	VI/A	Volume III	186/1178	3.03.00 (iii)	Each stack shall be provided with continuous online NOx, SO2, CO & NMHC (Non-Methane hydro-carbons) analyzer equipment. Suitable approach and platform for these shall also be provided. NOX, SO2, NMHC and CO values shall be made available in CCR through required instrumentation.	NMHC not required for Gas Engine Power Plant. Also there is no accurate methodology available for measurement of the same as the values will be very very small. Request NVVN to reconsider the requirement.	Please refer amendment in this regard

238.	VI/A	Volume III Chapter M1	186/1178	4.00.00 (ii)	Necessary structural steel for stack, Dampers, ducting roof, weather canopies and the platforms at the sides of the Gensets and in other areas.	Please re-confirm that all steel structures are to be supplied by Bidder. Typically structural scope comes under Civil Contractor. At places the word "Contractor" has been used which may lead to confusion.	All steel structures as per specification requirement is in scope of Bidder.
	VI/B		425/1178	1.02.06	The exhaust ducting and supporting structure shall be supplied and installed by the CONTRACTOR complete with all supports, hangers,		
239.	VI/A	Volume III	187/1178	10.01.00	Location of above meters shall be finalized during detailed Engineering.	As per OEM the engine wise flowmeters are installed on Compact Gas Ramp module of each genset which are placed inside engine hall.	Location of flow meters shall be finalized during detail Engineering.

240.	VI/A	Volume III	187/1178	11.01.01	<p>11.00.00 WATER SYSTEM</p> <p>The seawater will be used as source of water for the operation of power plant. The freshwater requirements (i.e. Engine jacket cooling, Lub oil cooling, potable water, Service water, intermittent fire water requirements etc.) for the power plant, is to be met by freshwater generated through the desalination plant.</p>	<p>Since the water requirement of a typical engine based power plant is very less ,we Suggest the water requirment for the plant be made available from Andaman water authority.</p> <p>Also as per our previous experience for this tender, there is no qualified vendor to supply such a small seawater treatment plant.</p>	Bidder to comply to Technical Specification requirements
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241.	VI/A	Volume III	190/1178	12.01.00 (a)	Two (2) numbers (2x100%) oil free, rotary screw type air cooled air compressors for instrument air and service air applications for complete plant each of adequate capacity & adequate pressure, with their motor drives and other accessories as per equipment sizing criteria mentioned in Volume-IV (Plant Performance & Design Philosophy), Part-A of Technical Specification. However, minimum capacity of each air compressor shall be 5 Nm ³ /min at discharge pressure of 8.0 Kg/cm ² (g).	We shall be supplying air cooled reciprocating type compressor and rating shall be such that the capacity will be sufficient to charge the air receivers from atm to max. pressure required in 60 minutes. Also we do not have any PTR for the requested compressor type, we therefore request NVVN to accept our request.	Bidder to comply with specification requirements.
242.	VI/A	Volume III	195/1178	14.00.00	VENTILATION SYSTEM	Since the Ventilation System is dependant on Room Size and Design this is more Civil Dependant. Except Process Ventilation the entire Ventilation and Air Conditioning should be part of Civil Contractor's Scope.	Bidder to comply with specification requirements.
243.	VI/A	Volume III	196/1178	15.00.00	ELEVATOR, CRANES AND HOISTS ETC.	Since Building Design is part of Civil Contractor's Scope the crane , mono rail and Elevator should be part of Civil Contractors Scope.	Bidder to comply specification requirement

244.	VI/A	Volume III	197/1178	16.02.00	Primary instruments like Microprocessor based transmitters employing HART protocol, thermocouples & RTDs along with temperature transmitters, pressure/diff. pressure/temperature/flow transmitter & gauges, flow sensing elements (orifice plates, flow nozzles etc.), Radar type level transmitters, Gas leak detectors, Fuel Gas flowmeter etc. to be provided on as required basis complying the specification requirement specified in Part B.	As per OEM standard HART protocol is not applicable. The engine power plant control system is a modular PLC based control system. All regular instruments and actuators are directly connected to distributed I/O units. Advanced instruments are connected to the plant control system. With this design, HART-based instruments are not used.	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.
245.	VI/A	Volume III	199/1178	17.02.00	MV Busduct	Due to space constraint at site we request NVVN to allow the option of Cables instead of Bus duct.	Bidder to comply technical specification
246.	VI/A	Volume III	200/1178	17.04.00	LV SWITCHGEARS AND LV BUSDUCTS	Due to space constraint at site we request NVVN to allow the option of Cables instead of Bus duct.	Bidder to comply technical specification

247.	VI/A	Volume III	201/1178	17.09.00	<p>Earthing and Lightning Protection</p> <p>Below ground and above ground earthing mat / Grounding and lightning protection for the complete plant is in the bidder's scope.</p>	Below ground earthing and Lightning Protection should be necessarily part of Civil Contractor's Scope. Bidder will however share the required design inputs.	Bidder to comply technical specification
248.	VI/A	Volume III	202/1178	17.10.00	Station Lighting	Lighting should be part of Civil Contractor's Scope as it goes along with the Building Design.	Bidder to comply technical specification
249.	VI/A	Volume III	211/1178	27.00.00 (iii)	Civil works shall be executed by employer based on detailed dimensional drawings and loading data furnished by the equipment supplier .	Standard inputs will be provided by Bidder for foundation design. Request NVVN to share if additional information needs to be shared for Civil Works by Civil Contractor.	Standard inputs required for civil design to be provided by bidder. Same has been mentioned in technical specification.
250.	VI/A	Volume IV	249/1178	3.01.01 (a)	Further, Bidder may calculate Methane number / Heating value for calculating the guarantee performance.	The calculation of LHV is not responsibility of Bidder. It shall be provided by Owner or gas supplier. The LHV no. shared will be used for calculating performance nos. which shall be done at the time of finalizing Performance Guarantee test procedure	Refer amendment in this regard.

251.	VI/A	Volume V	279/1178	1.03.01 (ii)	The Contractor shall establish following Statutory (Category II) Guarantees: (ii). Noise level (near field and far field) of Engines, Generators/Alternators and including all the auxiliaries and their system at 100% and 80% of the base load of Gensets as per the applicable Norms.	Since Civil is not in Bidder's scope , guaranteeing the noise level outside Engine Hall is not possible. We can however provide guarantee for Noise level (incident on the wall of Engine Hall) from the Genset which can be used for designing effective Acoustic Solution.	Refer amendment in this regard.
252.	VI/A	Volume VI	289/1178	5.06.00	Two (2) English language copies of all national and international codes and/or standards used in the design of the plant and equipment shall be provided by the Contractor to the Employer within two calendar months from the date of the Notification of Award.	These being license based , submitting standards is not possible. Also, this clause was deleted as per Amendment 6 during last tender.	Refer amendment in this regard

253.	VI/A	Volume VI	292/1178	8.03.01 (b xvi) xviii)	<p>Instrument schedule, measuring point list, I/O list, Interconnection & wiring diagram, functional write-ups, installation drawings for field mounted instruments, logic diagrams, control schematics, wiring and tubing diagrams of panels and enclosures etc. Drawings for open loop and close loop controls (both hardware and software). Motor list and valve schedule including type of actuator etc</p> <p>Sequence and protection interlock schemes.</p>	Bidder propose deviation as information sought are proprietary. However bidder proposes to share limited information which shall be discussed during detailed Engg.	Bidder to meet specification requirements
254.	VI/A	Volume VI	297/1178	8.03.03.01	The plant handbook shall be submitted within ten (10) months from the date of award of contract. After the incorporation of Employer's comments, the final plant handbook complete in all respects shall be submitted three (3) months before start-up and commissioning activities.	Preparation of Plant Handbook is one of the last tasks done after all the designs and solutions are finalised and frozen. Hence submission of the same within 10 months is not possible.	Bidder to comply specification requirement

255.	VI/A	Volume VI	306/1178	13.01.00	All the first fill and one year's topping requirement of consumables such as greases, oils, lubricants, servo fluids / control fluids and essential chemicals etc. which will be required to put the equipment covered under the scope of specifications into successful commissioning/initial operation and to establish completion of facilities shall be supplied by the contractor.	Since O&M is not in scope of Bidder, request NVVN to remove the "One year's Topping requirement of consumables" from scope as well.	Bidder to comply specification requirement
256.	VI/A	Volume VII	383/1178	28.04.00	Site laboratory for civil works	Since Civil is not in scope of Bidder , request NVVN to remove the Site Laboratory requirement too from our scope.	Site laboratory for civil work in Owner's scope
257.	VI/A	Volume VII	383/1178	28.07.00	The Contractor shall provide one (1) no. multi-utility vehicle (min. 6 seater) for facilitating movement of Employer's official of the Project, within as well as outside the plant premises.	Since the Civil Contractor will be the first one to start Site Works , the 6 seater Vehicle should be part of the Civil Contractor's scope.	Bidder to comply specification requirement

258.	VI/A	Volume VII	383/1178	32.00.00	<p>CONTRACTOR'S AREA LIMITS The Employer will mark-out the boundary limits of access roads, parking spaces, storage and construction areas for the Contractor</p>	<p>We understand the Roads within site and the preparation works for Engine movement at site will be done by Civil Contractor.</p> <p>Since the Civil Contractor will be the first one to start Site Works , we understand the Sewage , Site Illumination and Parking arrangements required during Construction will be done by the Civil Contractor.</p>	<p>Road work within plant is in owner's scope. However, preparation work for Engine movement is not in Owner's scope.</p> <p>Plant Sewerage work is in owner's scope. Site illumination and planning of parking is in bidder's scope.</p>
259.	VI/B	Volume I M1	422/1178	1.02.02.00	Provide permanently connected, Continuous Oil Purification system having following major equipment / features.	Gas being a cleaner fuel , External Lube Oil purification system is not required for Gas engine based power plants. Request NVVN to re-consider.	Bidder to comply specification requirement.
260.	VI/B	Volume I M1	429/1178	3.02.02	Design, construction, installation and operation of the Flow Meter shall be in accordance with the relevant Recommendations/ Reports from AGA/ API.	The flowmeters shall be as per OEM standard which is non- API	Bidder to comply specification requirement.
261.	VI/B	Volume I M4	454/1178	1.02.00	The complete Fire Detection and Protection Systems shall be as per the guidelines/ codes/ standards / rules of TAC/ NFPA / IS: 3034 / OISD etc.	OISD shall not be applicable for power plant	Noted.

262.	VI/B	Volume I M4	455/1178	5.01.00	Approval of FAS components	Major components of FAS shall be FM/UL/VDS approved / listed. Getting the components' approval from listed institutions shall be done, if required by default to get FM/UL/VDS approval / listing. Otherwise, specific approval from these institutions cannot be done.	Noted.
263.	VI/B	Volume I M4	455/1178	5.02.00 (c)	QB detector for MVW system	MVWS system is provided in cable galleries where the detection is through LHSC and Smoke detectors. Please clarify whether QBDs are required for cable galleries / vaults.	QBDs have not been envisaged for cable galleries/vaults.
264.	VI/B	Volume I M4	455/1178	5.02.00 (d)	Beam detectors	Only building with high roof is DG shed and beam detector in this area has not been found successful because of moving hoist resulting in false alarms. NVVN to review this.	Noted.
265.	VI/B	Volume I M4	456/1178	5.03.06 5.03.08	Painting of detectors	It may be noted that the detectors shall conform to FM / UL requirement and no special treatment as desired in clause shall not be possible.	Noted.

266.	VI/B	Volume I M4	465/1178	6.02.00	a) Central control rooms, control equipment rooms, UPS/Battery charger rooms, PC room, programmer room, PADO room, panel room, etc. of main plant building.	Please provide the dimensions of the rooms where gas flooding is to be provided. Please also specify which of the rooms would have false ceiling & false floors. Also , mentioned whether satndby cylinders to be considered or not.	Sizing of control room, control equipment room, etc. is in the scope of Bidder. All air-conditioned rooms shall be provided with false ceiling. Requirement of false floor shall be finalized during detailed engg. Standby cylinders shall be provided as per specification.
267.	VI/B	Volume I M4	468/1178	Annexure I		Sand blasting is mentioned as surface prepration in this annexure while in clause 9.03.00, it is mentioned as cleaning by wire brushing. Please clarify as what type of cleaning is to be considered. All pipes are of stainless steel. Will surface cleaning and painting of SS pipes also to be considered?	Surface Preparation & Painting scheme specified at Annexure-I is for MS fire water tank plates and structural steel. Surface Preparation & Painting scheme specified at clause 9.03.00 of referred chapter is for other steel surfaces. Surface Preparation & Painting for SS pipes is not applicable.
268.	VI/B	Volume I M4	469/1178	Annexure II	Gate valves	Gate valves as per IS:14846 / BS 5150 does not specify MOC as SS and hence shall not be applicable. Please suggest alternative code.	As per clause 8.01.00 iii), Page-13 of 35 of referred chapter, all valves shall be Stainless Steel (SS) Gr. 316L as per applicable IS/BS codes. Refer amendment being issued in Annexure-II of referred chapter.

269.	VI/B	Volume I M4	469/1178	Annexure II	Check valves	Check valves as per IS: 778 does not specify MOC as SS and hence shall not be applicable. Please suggest alternative code.	As per clause 8.01.00 iii), Page-13 of 35 of referred chapter, all valves shall be Stainless Steel (SS) Gr. 316L as per applicable IS/BS codes. Refer amendment being issued in Annexure-II of referred chapter.
270.	VI/B	Volume I M4	476/1178	Annexure III 3.11	PIPELINES AND VALVES	In this clause the MOC for pipes, valve is stated to be SS 304 while at all other places, it is SS 316. Please clarify.	Clause 3.11 of Annexure-III of referred chapter is for fire tenders only. Bidder to comply with specification requirements.
271.	VI/B	Volume I M6	504/1178	7.01.00	One number Air drying plant shall be provided for each air compressor envisaged for instrument and service air application. Drying shall be by adsorption process through a desiccant medium	OEM's Solution doesn't require Air Drying Plant. The instrument air units are equipped with Air Dryer (built on the Unit itself) which is sufficient for the air quality required by the plant. Redundant Instrument Air Unit will be provided.	Bidder to comply with specification requirements.
272.	VI/B	Volume II E7	570/1178	7.01.00	While developing the layout the bidder must give due consideration to the following requirements:	Bidder will ensure the same while Installation of the Electrical Equipment. However the Civil aspects to be ensured / provided by Civil Contractor.	Layout is in bidder's scope. Specification requirement to be complied

273.	VI/B	Volume III C	705/1178	3.05.03	Transmitter shall be HART compatible, have EMC compatibility as per EN 61326, weather proof IP-67 metallic housing with durable corrosion resistant coating, plug and socket type electrical connection, integral digital display with self-indicating diagnostics, operating ambient temperature of 85 deg C without display & 70 deg C with display, suitable for 2 inch pipe mounting in enclosure/rack.	The engine power plant control system is a modular PLC based control system. All regular instruments and actuators are directly connected to distributed I/O units. Advanced instruments are connected to the plant control system. With this design, HART-based instruments are not used.	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.
274.	VI/B	Volume V	765/1178		General	Since the design of Roof Top Solar is completely dependant on Building design we suggest this be put in Civil Contractor's Scope.	Bidder to comply specification requirement

275.	VI/B	Volume V	766/1178		In all buildings where solar PV system is installed permanent Staircase access has to be provide with Mild Steel Stairs with minimum width of 1.0m & finished with primer & weather resistant enamel paint. In case the requirement of staircase in such building is already defined under the specification, then the same shall prevail. However, if the staircase specified is caged ladder type, then Mild Steel Stairs minimum width of 1.0m & finished with primer & weather resistant enamel pain has to be provided to access the rooftop building	We understand this is scope of Civil Contractor.	Bidder to comply with provision of tender requirement.
276.	VI/B	Volume V	767/1178	1.6	Bidder to provide Operation and Maintenance (O&M) of the plants for a period of one year from the date of trial run of all the rooftop locations.	Since the power plant O&M is not in scope of bidder, request NVVN to remove the O&M of Roof Top Solar as well.	Refer amendment in this regard
277.	VI/B	Volume VI Q01	786/1178	5.00.00	All the Engines along with associated auxiliaries shall be tested at the Factory.	The engine will be tested with available test bed Auxiliaries only. However, at Site Genset along with project specific Auxiliaries will be tested in presence of Customer.	Bidder understanding is noted.

278.	VI/A	Volume II	171/1178	1.01.00 (vi)	Complete structural and Architectural works, providing construction offices, field laboratory, construction equipment, construction power.....	Bidder request NTPC to provide construction power at one point within plant boundary on chargeable basis during construction.	Bidder to comply specification requirement
279.	VI/A	Volume III	206/1178	22.01.00 (ii)	Construction water - Water for construction purposes shall be arranged by the bidder. He shall make his own arrangement for drawl, pumping, storage and distribution etc. The drawal scheme, arrangement shall be subject to approval of NVVN. Bidder may discuss his drawl scheme / arrangement during his site visit before submitting his bid. Bidder shall exercise full restraint that the water drawn is minimum and not wasted. Quality of construction water should be such that it shall meet the requirement for construction purposes.	Bidder request NTPC to provide construction Water at one point within plant boundary at free of cost during construction.	Bidder to comply specification requirement
280.	VI/A	Volume III	206/1178	22.01.00 (i)	Drinking Water -. Bidder shall arrange and make own arrangements for drinking water.	Bidder request NTPC to provide drinking water at one point within plant boundary at free of cost during construction.	Bidder to comply specification requirement

281.	VI/A	Volume III	188/1178	11.02.00 (b)(1)	2x100% of capacity RO permeate water storage tanks,	Bidder request NTPC to specify the minimum tank capacity requirement in terms of operating hours.	These details to be finalized during detailed engineering based on downstream requirements of various systems & bidder's design.
282.	VI/A	Volume III	188/1178	11.02.00 (b)(8)	Brine dilution tank (1).	Bidder request NTPC to specify the minimum tank capacity requirement in terms of operating hours.	These details to be finalized during detailed engineering based on downstream requirements of various systems & bidder's design.
283.	VI/A	Volume III	188/1178	11.02.00 (b)(8)	Potable water storage tanks (2x100%),	Bidder request NTPC to specify the minimum tank capacity requirement in terms of operating hours.	These details to be finalized during detailed engineering based on downstream requirements of various systems & bidder's design.
284.	VI/A	Volume III	188/1178	11.02.00 (b)(1)	Service water tanks (2x100%),	Bidder request NTPC to specify the minimum tank capacity requirement in terms of operating hours.	These details to be finalized during detailed engineering based on downstream requirements of various systems & bidder's design.
285.	VI/B	Volume I M3	446/1178	4.03.00	Storage Tanks - Capacity required : As per Equipment sizing criteria	Bidder request NTPC to specify the minimum tank capacity requirement in terms of operating hours.	These details to be finalized during detailed engineering based on downstream requirements of various systems & bidder's design.
286.	VI/A	Volume III	189/1178	11.02.00 (i)	Pumps & blowers (n+1) unless otherwise mentioned. n – No. of working Pumps & Blowers.	Bidder understood that N+1 requirement for pumps & blowers quantity will be common for both the streams. Please confirm.	Bidder's understanding is not correct. Requirement for pumps & blowers' quantity will be separate for each stream
287.	VI/A	Volume III	190/1178	12.01.00 (b)	Two (2) numbers (2x100%) air-cooled Air-Drying Plants (one for each air compressor) of adequate capacity with all interconnecting piping, valves, fittings, etc.	Bidder understood that 1x100% ADP will be provided per compressor. Please confirm.	Bidder's understanding is incorrect.

288.	VI/A	Volume III	191/1178	12.02.00 (c)	Automatic fire detection cum high velocity water spray system for various transformers, lube oil tanks and purification unit, feed pumps of lube oil system, etc.	Bidder understood that HVW spray water system applicable to transformers if oil capacity is more than 2000 Ltrs. Please confirm.	All transformers having oil capacity above 2000Ltrs/10MVA rating shall be provided with HVW spray fire protection system.
289.	VI/A	Volume III	191/1178	13.00.00 (b)	Packaged Air conditioners (Ductable type) of suitable capacity with 100 % redundancy shall be provided for main control room building.	Bidder understood that for Packaged AC, i) Vapor compression type chilling units: 2X100% ii) Chilled water pumps: 2X100%	Bidder's understanding is not correct. Centralized chilled water type A/C system with chilling units, pumps, AHU, etc. has not been envisaged.
290.	VI/B	Volume I M5	490/1178	4.01.00	Redundancy of various A/C system equipments shall be 100% standby for Package Air Conditioners units and Cassette / Hi-wall Split type Air conditioners	iii) AHUs: At least one (1) no. unit, capacity same as each working unit shall be provided as common standby. Fresh air fans shall be 1 x 100 % Capacity for each AHU room. Please confirm.	1x100% fresh air fans shall be provided in PAC room. Bidder to comply with the specification requirements.
291.	VI/A	Volume III	191/1178	13.00.00 (c)	Suitable capacity with 100 % redundancy for office, meeting/conference rooms	Bidder request NTPC to accept 1 no. of installed capacity of Cassette and Hi-wall Air-conditioners as redundancy.	Bidder to comply with the specification requirements.
292.	VI/B	Volume I M5	490/1178	4.01.00	Redundancy of various A/C system equipments shall be 100% standby for Package Air Conditioners units and Cassette / Hi-wall Split type Air conditioners.		

293.	VI/A	Volume III	196/1178	15.03. 00 (i)	01 nos. conventional type elevator having capacity of 6 persons (408kg.)	Bidder understood that conventional type elevator means electrical traction type elevator. Please confirm.	Conventional elevator means the elevators normally used in office buildings.
294.	VI/A	Volume III	210/1178	26.00. 00 (i)	Tap-off from gas supplier within plant premises. Exact location of tap-off point shall be informed during detailed Engineering.	Bidder request NTPC to mark the terminal point of fuel Gas location in GLP drawing for our estimation.	As mentioned in the clause, it will be decided during detail engineering.
295.	VI/A	Volume III	210/1178	26.00.00	Terminal point for Sea water intake.	Bidder request NTPC to mark the terminal point of sea water intake location in GLP drawing for our estimation.	Approximate distance of Intake well from Plant boundary may be considered as 150 Mtrs. Further Civil scope of Intake well covered in employer scope & further interface details will be finalized during detailed engineering.
296.	VI/A	Volume III	210/1178	26.00. 00 (ii)	plant effluent: Effluents discharge from disposal pumps to the Sea. RO Reject discharge to sea	Bidder request NTPC to mark the terminal point of disposal location in GLP drawing for our estimation.	Approximate distance of reject outfall point from Plant boundary may be considered as 220 Mtrs. Further, Civil scope of reject well covered in employer scope & further exact details will be finalized during detailed engineering.
297.	VI/A	Volume III	210/1178	26.00. 00 (ii)	plant effluent: Effluents discharge from disposal pumps to the Sea. RO Reject discharge to sea	Bidder understood that both effluent waste and RO reject will be routed into reject well and discharge to sea. Please confirm.	Bidder's understanding is incorrect.

298.	VI/A	VolumeIV	251/1178	3.02.0 0 (d) & Lighting loads	Bidder request NTPC to exclude lighting load power consumption from auxiliaries power consumption list.	Bidder to comply specification requirement.
299.	VI/A	VolumeIV	251/1178	3.02.0 0 (e)	Compressed air system.....	Bidder request NTPC to accept following duty factor for Compressed air system as per earlier NTPC projects. For compressors: 0.6 ADP Heater: 0.5	Refer amendment in this regard
300.	VI/A	VolumeIV	251/1178	3.02.0 0 (e) and Start-up air system	Since, Start-up air system may not be in continuous operation, bidder request NTPC to exclude Start-up air system power consumption from auxiliaries power consumption list.	Refer amendment in this regard
301.	VI/A	VolumeIV	251/1178	3.02.0 0 (f)	Lube oil purification system	Since, Lube oil purification system may not be in continuous operation, bidder request NTPC to exclude Start-up air system power consumption from auxiliaries power consumption list.	Bidder to comply specification requirement

302.	VI/A	Volume IV	264/1178	3.02.0 0 (f)	<p>DG sets being provided are required to cater the load of some of the air-conditioning equipment so that Main Plant Control Rooms and CER remain air-conditioned. The equipment to run on DG set are:</p> <ul style="list-style-type: none"> 1 No. Packaged air conditioner. <p>1 No. Fresh air fan.</p>	Bidder request NTPC to exclude air conditioner load requirement from DG set sizing.	Bidder to comply with the specification requirements.
303.	VI/B	Volume I M4	466/1178	7.00.0 0 (xii)	Fire Water Storage Tanks: Two numbers each of 50% capacity vertical cylindrical column supported fixed cone roof type MS fire water storage tanks shall be provided by.....	Bidder understood that Fire water storage tanks will be mild steel & above ground construction. Please confirm.	Bidder's understanding is incorrect.
304.	VI/B	Volume I M6	504/1178	7.02.00	Air Drying (ADP) Plant shall be "Heat of (HOC) Compression type".	Bidder request NTPC to accept "Open through type (blower reactivated)" also as an option as per earlier NTPC tenders.	<p>"Open through type (blower reactivated)" air drying plant are now obsolete and phased out.</p> <p>Bidder to comply with the specification requirements.</p>
305.	VI/B	Volume I M6	504/1178	7.07.00	Each ADP shall be provided with two (2) numbers of 100 percent capacity pre-filters and two (2) numbers of 100 percent capacity after-filters at the upstream & downstream of towers.	Bidder request NTPC to accept pre-filters and post-filters requirement as per ADP OEM requirement.	Bidder to comply with the specification requirements.

306.	VI/A	Volume II	174/1178	1.01.02	Power generation shall be with RLNG fired engine sets. The Net Capacity of Plant shall be 50 MW \pm 10% (45 MW to 55 MW) with 4 to 11 nos. of identical units.	Please clarify.	Specification requirement is clear. The net output of plant shall be withing 45 to 55 MW
307.	VI/B	Volume II E1	511/1178	1.13.00	The responsibility of coordination with electrical agencies /TAC/Pollution control board and obtaining all necessary clearances shall be of the contractor.	It is requested that the owner may please coordinate with electrical agencies /TAC/Pollution control board and obtaining all necessary clearances. However, necessary document shall be provided by the contractor.	Bidder to comply specification requirement
308.	VI/B	Volume II E7	569/1178	3.05.00	Neutral points of HT transformer shall be earthed through NG resistors. The Contractor shall connect the NGR earthing point to earth electrodes by suitable earth conductors.	As per SLD (6400-999-POE-J-001), Neutral point of HT Transformer is directly grounded. Please clarify.	Neutral grounding for transformers as shown in SLD to be followed.
309.	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.	MV busduct is not in SLD from Generator transformer to 33kV switchgear. Please clarify.	For connection between Gen Transformer to 33kV Switch gear 33kV cable has to be considered
310.					SLD (6400-999-POE-J-001)		

311.	VI/A	Volume III	200/1178	17.04.02	LV Switchgear & Busduct SLD (6400-999-POE-J-001)	LV busduct is not in SLD from Aux. transformer to 415V switchgear. Please clarify.	For the connection from aux transformer to 415 V switchgear cable/bus-duct to be considered in line with clause no 2.03.00 of tech spec chap II - E-I General tech req of Part-B
312.	VI/B	Volume II E1	518/1178		SLD	Please confirm weather this metering cubicle includes CT, PT and tariff meter shall be installed in 33kV switchgear. If this metering cubicles along with CT & PT installed separately then how much is the distance from 33kV switchgear.	Metering cubicle with padlock arrangement (as mentioned in SLD) to be installed in 33kV switchgear building only.
313.	VI/B	Volume II E1	518/1178		SLD	Please clarify the scope of 33kV termination in 33kV switchgear for outgoing line 1,2,3 &4.	Scope of outgoing line 1,2,3,4shall be till plant boundary as indicated in SLD
314.	VI/B	Volume II E1	513/1178	2.05.00	All HT cables shall be of unearthedgrade.	AS per SLD (6400-999-POE-J-001) 33kV system is solidly earthed. Please clarify.	33 kV cable shall be earthed grade. Please refer amendment
315.		General				Please share the Autocadfile of plot plan.	Bidder shall develop their own drawing.

316.	VI/A	Volume III	211/1178	27.00. 00 (iii)	All civil works other than grouting of the equipment and fixing supports in walls, floors and trenches etc. Civil works shall be executed by employer based on detailed dimensional drawings and loading data furnished by the equipment supplier. However, erection including grouting & embedment of equipment, fixing supports in walls, floors & trenches etc. as required is in the scope of bidder and the contractor shall supply all required anchor bolts, foundation plates, sleeves, nuts, inserts etc. Each equipment skids shall be provided with suitable lifting lugs, eyebolts etc. to facilitate erection & maintenance.	Bidders understanding is all the civil and structural works for the building and all machine foundation is in customer's scope.	All civil work as described in scope chapter is included in Bidder's scope. Structural work with respect to equipment erection is also in bidder's scope. Civil work with respect to building and machine foundation is in employer's scope.
317.	VI/A	Volume III	175/1178	1.06.01	Provision of Rainwater harvestings shall also be kept for the plant for collection of rain water to be used for make-up.	As the civil work is excluded from Bidders scope, we understand that the same is also not in the scope of bidder.	Civil work of Rainwater harvesting pond is not in bidder's scope.

318.	VI/A	Volume III	191/1178	12.2.00 f (i) & (ii)	<p>Centralized PC based monitoring station along with mini-UPS and one A4 size color laser printer shall be provided for main control room. It shall serve the purpose of Central PC Station with facility of monitoring information related to all fire alarm system and of operating drives of fire water pump house.</p> <p>iii) One number addressable type repeater annunciation panel in central fire station with power supply system (batteries and battery chargers, suitable for providing battery backup of 24 hours (stand by) and 30 minutes (in alarm conditions), etc.</p>	<p>Bidder understands that common UPS system for Fire Protection and Detection system shall be considered for both the Central PC and Repeater/Annunciation Panel along with PLC, MFAP, detectors etc. Battery backup of the UPS shall be maximum 4 hours standby and 30 minutes (in alarm conditions). Please confirm.</p>	<p>Bidder's understanding is not correct.</p> <p>Bidder to comply with the specification requirements.</p>
319.	VI/A	Volume III	195/1178	13.00.00 (g) 14.00.00 (g)	<p>Details related to control system of Ventilation system are indicated in Sub-section IIC, Control & Instrumentation, Scope of Supply & services, Part-A of Technical Specifications.</p>	<p>Bidder was unable to locate Sub-section-IIC in PART A, kindly provide page number also.</p>	<p>Control System for ventilation system has been specified in CI 15.00.00 of Chapter- M5, part- b of Section VI. Bidder to comply with Specification requirement.</p>

320.	VI/A	Volume III	237/1178	Annexure I C	MANDATORY SPARES LIST FOR CONTROL AND INSTRUMENTATIONS	Bidder understands, that the items which are not coming in the main BOQ, even though mentioned in this section, are not applicable. Please confirm.	No such item is included in the list. Bidder to comply specification requirement.
321.	VI/B	Volume III C	699/1178	2.02.05 (d)	I/O racks and modules	Bidder understands that either separate marshalling cabinet or system cabinet with partition for marshalling, can be considered as per OEM's standard & proven practice. Please confirm.	Bidder's understanding is incorrect.
322.	VI/B	Volume III C	699/1178	2.02.05	General	Bidder understands that the redundant Binary IOs are not applicable. Please confirm.	This shall be as per bidder's standard & proven practice and same shall be finalized during detail engineering
323.	VI/B	Volume III C			General	Bidder understand that since no details have been given, EPBAX systems are not applicable for this project. Please confirm.	EPABX requirement is not mentioned in C&I part of specification.
324.	VI/B	Volume III C			General	Kindly provide Typical P&IDs for Instrumentation qty estimate	PIDs to be submitted as engineering drawings to employer. Same shall be finalized during detail engineering.

325.	VI/B	Volume I M1		1.02.05	In case of starting to be done by air, following to be followed: Min. 2 no. Working+1 no. Stand by starting air compressors of 60Nm ³ /hr, 30 bar to be provided with Air bottles and with all the piping, valves, instruments etc.	Bidder request NTPC to accept 2 no. Working+1 no. Stand by Compressors common for both starting air and Instrument & service air application as an option.	Dedicated starting air system and dedicated instrument/service air system have been envisaged. Bidder to comply with specification requirements.
326.	VI/A	Volume III		12.01.00	Two (2) numbers (2x100%) oil free, rotary screw type air cooled air compressors for instrument air and service air applications for complete plant each of adequate capacity & adequate pressure, with their motor drives and other accessories		
327.	VI/B	Volume II E1	518/1178		SLD	Please clarify whether, the generator transformers can be clubbed with 2 or more generators or whether it is necessary that each generator will have its own generator transformer separately and dedicated to that generator.	Bidder to comply with scheme given in tender SLD.
328.	VI/A	Volume IV	249/1178	1.00.00 (b)	Engine: Medium Speed Type	Bidder understood that RPM range for medium speed gas engine is max. 750 RPM. Please confirm.	Please refer amendment in this regard

329.	VI/A	Volume IV	251/1178	3.02.00	Auxiliary Power Consumption	<p>Since, the following equipment are may not be in continuous operation, bidder request NTPC to consider the following:</p> <ol style="list-style-type: none"> 1. Lighting loads: to be excluded from auxiliary power consumption list. 2. For compressors: 0.6 & ADP Heater: 0.5 as duty factor. 3. Start-up air system: to be excluded from auxiliary power consumption list. 4. Lube oil purification system: to be excluded from auxiliary power consumption list. 5. Sea Water Intake pump: to be excluded from auxiliary power consumption list. 6. Desalination Plant: 0.5 as duty factor. 	<p>For starting air compressor and Instrument air compressor, please refer amendment.</p> <p>For all other points bidder to comply specification.</p>
330.	VI/A	Volume III	186/1178	6.00.00	Thermal Insulation	<p>Bidder request NTPC to accept Thermal insulation for Gas Engine & auxiliaries shall be as per OEM standard proven practice.</p>	<p>Refer amendment in this regard</p>

331.	VI/A	Volume III	204/1178	21.06.00	Training of Employer's Personnel	<p>Bidder request NTPC to accept Training Schedule/duration for Gas Engine & auxiliaries shall be as per below OEM standard practice.</p> <p>(1) Location : Site (2) Number of Trainee : Mechanical - total three (3) people & Electrical/Control - total three (3) people (3) Duration of training : Three (3) days (4) Method of Training : Classroom type training</p>	Bidder to comply specification requirement.
332.	VI/A	Volume III	212/1178	Annexure IA	Mandatory Spares	<p>As per Engine OEM, Mandatory spares list is massive, normally best procured as part of maintenance program as per schedule rather than stocking them and not getting used for 3/4 years (cylinder, cylinder heads, piston, etc.). we can provide recommended emergency spares list which will address normal breakdowns.</p>	Bidder to comply specification requirement.

333.	VI/A	Volume IV	250/1178	3.01.02	Guaranteed performance at above mentioned reference conditions shall be without any output enhancement measure.	Bidder request NTPC to clarify details about Output enhancement measures.	No temporary arrangement (internal or external) beyond engine's design is allowed.
334.	VI/A	Volume IV	254/1178	4.03.02	Design and sizing of Engines, Electric Generators/Alternators, Cooling Systems, various mechanical and electrical auxiliaries and other balance of plant (BOP) equipment shall be not be constraint, whatsoever, for achieving the 100% base/full load output at all conditions within the specified range of operating conditions.	Engines, Electric Generators/Alternators, Cooling Systems, various mechanical and electrical auxiliaries and other balance of plant (BOP) equipment will be achieved 100% base/full load output at Design reference (Guarantee) condition only. However, system shall be designed for range of variations and Engines, Electric Generators/ Alternators output will varies with respect to ambient condition.	Specification requirement is clear in this regard.
335.	VI/A	Volume IV	254/1178	4.04.02	Redundancy level in plant equipment and systems shall be such as to support operation of the plant in all specified modes of operation. Where redundant (standby) equipment is provided, the standby equipment shall be capable of automatic and immediate initiation in to	Bidder request NTPC to accept redundancy of Plant Equipment, system and Instrument as per OEM standard proven practice.	Redundancy of all equipment shall be as per specification requirement.

336.	VI/A	Volume IV	255/1178	4.05.00	In addition to the initial Acceptance Tests to be conducted by the Contractor, the Employer would be conducting periodic Performance Tests for Gensets and their associated individual equipment/ systems. The Bidder shall duly consider the requirements for instrumentation accuracy (as per applicable test codes), recalibration requirements of on-line Instruments, location of plant instrumentation (to be used for testing) and provision for installation of temporary test instrumentation and design the systems and equipment accordingly.	Bidder request NTPC to accept PG test will be done successfully at one time as against periodic performance test.	Specification requirement is clear in this regard.
337.	VI/A	Volume VI	301/1178	8.03.05	e-Learning Package:	Bidder shall provide necessary documents and information for e-learning package as soft copy. NTPC shall arrange feeding of those documents in their learning management server.	Specification Requirement is clear in this regard. Bidder to comply.

338.	VI/A	Volume V	277/1178	1.02.00	The bidder shall guarantee and establish following Category – I guarantees for each Genset: (i) Net Power Output of genset at Base/Full Load. (ii) Net Heat Rate at LHV basis at 100% of Genset base load.	During performance test, electrical power demand stability and frequency stability shall be client's responsibility to achieve PG test successfully. Please confirm.	Correction is already envisaged for frequency variation.
339.	VI/B	Volume I M1	424/1178	1.02.03 (II)	RLNG flow meter: Turbine type/ Coriolis type. Output data: Mass flow, Volume flow, Density, Temperature, Totalizer with local display and remote integration with DCS system.	Bidder request NTPC to accept "Vortex" type flow meter as per Engine OEM's standard proven practice as an option.	Bidder's standard and proven practice is also acceptable based on documentary evidence as already indicated in the referred clause.
340.	VI/B	Volume I M1	433/1178	5.00.00	Factory Acceptance Test of all the Engines and Alternators shall be attended by the owner/client.	As per Engine OEM only one gas engine, Generator, Engine control panel, Air cooler, etc. FAT will be attended by the owner/client. The test report of other's shall be submitted to client.	Bidder to comply specification requirement.
341.	VI/A	Volume III	197/1178	16.02.01	All the instruments shall be provided to meet the actual system requirements and meeting redundancy and other requirements specified under technical specifications, as per OEM practice, subject to Employer's approval	Bidder request NTPC to accept redundancy of Instrument for Gas Engine & auxiliaries as per 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.

342.	VI/B	Volume IIC	745/1178	5.00.00	5 Nos. of industrial grade Walkie Talkie sets shall be provided by the Contractor along with all required licenses from government authorities.	Since the licenses from government Authorities required for Walkie Talkies(and other wireless communications if any required) are to be obtained in the name of the End User/NVVN, Bidder understands that the same Licenses shall be in NVVN scope. Please confirm.	Bidder to meet specification requirement.
343.	VI/B	Volume II E4	533/1178	1.07.00	Degree of protection for various enclosures as per IEC60034-05 shall be as follows:- i) Indoor motors - IP 54 ii) Outdoor motors - IP 55 iii) Cable box-indoor area - IP 54 iv) Cable box-Outdoor area - IP 55	Since, Some motors are integral part of Gas engine & it's skid and will be installed inside the building, Hence, As per Gas engine OEM proven practice such motors will have IP 44 degree of protection. Please confirm.	Bidder to comply specification requirement.

344.	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.	Bidder to comply specification requirement.
345.	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	Bidder to comply specification requirement.

346.	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 moters. Please confirm.	Bidder to comply specification requirement.
347.	VI/B	Volume I M1	422/1178	1.02.02	All the piping, fittings, valves, Lube Oil Tanks, and complete strainers including body and element shall be of stainless steel. Further all the parts of lube oil coolers which are coming in contact of lube oil shall be of stainless steel.	Bidder request NTPC to accept Lube oil system MOC shall be carbon steel/equivalent as per Engine OEM's proven practice.	Bidder to comply specification requirement.
348.					Painting Schedule/Colour code	Painting schedule & colour code for Gas engine and Auxiliaries shall be as per Gas engine OEM's proven practice suitable for coastal region	Bidder query is general and does not pertain to any particular specification clause. This shall be finalised during detail engineering.

349.	VI/B	Volume II E4	534/1178	3.01.02	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.	Bidder to comply technical specifications. However any special motor/cables, it shall be be discussed during detail engineering.
350.	VI/B	Volume II E5	541/1178		HT & LT Power cable & Control cable	For any special cable including control panel wiring (Engine control panel, generator control panel etc.) shall be as per Engine OEM proven standard practice.	Bidder to comply Technical specifications. However any special motor/cables, it shall be be discussed during detail engineering