

**HIMACHAL PRADESH
GENERAL INDUSTRIES CORPORATION LIMITED
(A Govt. of HP Undertaking)
Himrus Bldg., Cart Road, SHIMLA-171 001
(Phone No.0177-2624438, 2624824 Fax-0177-2624925)**

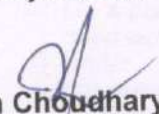
No. HPGIC/AC Tender/2024 - 4688

Dated: 07 - 01-2024

**SHORT TERM TENDER NOTICE FOR PURCHASE/SUPPLY, INSTALLATION
AND COMMISSIONING ON F.O.R. DESTINATION BASIS OF VRV/VRF AIR
CONDITIONING SYSTEMS IN THE OFFICE OF DIRECTOR ENERGY DEPTT.,
NEW MC PARKING, NEAR MLA CROSSING, SHIMLA, HP:**

Sealed tenders are invited from Original Equipment Manufacturer/Original Equipment Supplier/ Authorized Dealer of reputed companies like Daikin, O General, Trane, Hitachi, Mitsubishi etc. having average annual turnover of **Rs. 1.00 crore for last three financial years** i.e. 2021-22, 2022-23 & 2023-24 for purchase of **VRV/VRF AIR CONDITIONING SYSTEMS** which are to be supplied, installed and commissioned on F.O.R. destination basis in the office of Director of Energy, New MC Parking, Near MLA Crossing, Shimla, Himachal Pradesh inclusive of all taxes and duties except GST as applicable, so as to reach this office complete in all respects on or before **15-01-2025** upto **2.30 PM** along with earnest money of Rs. 2.00 Lac and cost of tender document of Rs. 3,000/- + GST@ 18% in the shape of demand draft/RTGS/NEFT payable in SBI A/c No. 55012850082 IFSC SBIN0050118 in favour of MD, HPGIC, Shimla. The detailed terms & conditions can be collected from this office or can be downloaded from our official website: www.hpgic.co.in on any working day. The short term tender will be opened on the same day at **3.00 PM** in the presence of the tenderers or their authorized representatives. If required, the negotiations will be held with L-1 party.

Further any addendum/corrigendum in this regard, shall be displayed on official website of the Corporation i.e. www.hpgic.co.in. only. The undersigned reserves the right to accept/reject any/all tenders without assigning any reason.


**Arindam Choudhary, IAS
Managing Director**

**HIMACHAL PRADESH
GENERAL INDUSTRIES CORPORATION LIMITED
(A Govt. of HP Undertaking)
Himrus Bldg., Cart Road, SHIMLA-171 001
(Phone No.0177-2624438, 2624824 Fax-0177-2624925)**

No.

Dated :

**SHORT TERM TENDER NOTICE FOR PURCHASE/SUPPLY,
INSTALLATION AND COMMISSIONING ON F.O.R. DESTINATION BASIS
OF VRV/VRF AIR CONDITIONING SYSTEMS IN THE OFFICE OF
DIRECTOR ENERGY DEPTT., NEW MC PARKING, NEAR MLA
CROSSING, SHIMLA, HP:**

Sealed short term tenders are invited from Original Equipment Manufacturer/Original Equipment Supplier/ Authorized Dealer of reputed companies like Daikin, O General, Trane, Hitachi, Mitsubishi etc. having average annual turnover of **Rs. 1.00 crore for last three financial years** i.e. 2021-22, 2022-23 & 2023-24 for purchase of **VRV/VRF AIR CONDITIONING SYSTEMS** which are to be supplied, installed and commissioned on F.O.R. destination basis in the office of Director of Energy, New MC Parking, Near MLA Crossing, Shimla, Himachal Pradesh inclusive of all taxes and duties except GST as applicable, so as to reach this office complete in all respects on or before **15-01-2025 upto 2.30 PM** along with earnest money of Rs. 2.00 Lac and cost of tender document of Rs. 3,000/- + GST@ 18% in the shape of demand draft/RTGS/NEFT payable in SBI A/c No. 55012850082 IFSC SBIN0050118 in favour of MD, HPGIC, Shimla. The detailed terms & conditions can be collected from this office or can be downloaded from our official website: www.hpgic.co.in on any working day. The short term tender will be opened on the same day at **3.00 PM** in the presence of the tenderers or their authorized representatives. If required, the negotiations will be held with L-1 party.

Further any addendum/corrigendum in this regard, shall be displayed on official website of the Corporation i.e. www.hpgic.co.in. only. The undersigned reserves the right to accept/reject any/all tenders without assigning any reason.

VRV/VRF AIR CONDITIONING SYSTEM:-

Sr No	Specifications	Qty. for Tender	Estimated cost of complete work order (In Crore)	EMD & cost of Tender document (Rs. in Lac)
1	<p>Outdoor Unit -20 HP: Supply, Installation, Testing & Commissioning of factory fitted microprocessor based self diagnostic auto check VRV/VRF system outdoor unit equipped with PCBs, accumulator, oil separator, brushless DC inverter fan motor, OEM self manufactured hermetic sealed multi valve scroll type compressors. Compressor should be based on low pressure shell technology for longer life with integrated IPM & PWM to ensure effective operation even at low/partial load conditions for better efficiencies. Compressor shall be fixed in metallic chamber for lower noise with enhanced fire safety protection. Outdoor unit shall be equipped with highly efficient induction type heater using eliminated wasted heat. VRT/VET system shall be based on advanced & automatically modulation evaporating refrigerant temperature between 0°C to 11°C for instant cooling and better energy efficiency as per user's demand. Outdoor units shall be essentially equipped with safety devices like fuse, noise filter PCB, low pressure switch, high pressure switch, pulse based LEV for optimized refrigerant flow control, isolating valve, protective corrosion resistant polyester coating on panels, hydrophilic coating on Aluminum fins, protective polyurethane coating on PCB, OEM provided Inbuilt automatic reverse phase detector & sequencer/corrector to avoid any kind of failure due to phase</p>	5 units	Rs. 1.00	<p>EMD-Rs. 2.00 Lac & Cost of Short term tender Document-Rs.3000 + GST@18% =Rs.3540/- to be deposited in shape of Demand Draft/ RTGS/ NEFT</p>

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	<p>sequence reversal which makes system reliable and redundant. Heat exchanger must be essentially equipped with internally grooved copper tubes for better heat exchange performance and operate in extreme conditions i.e. even at ambient temperature of 52°C or more. Outdoor units shall be pre-charged with R401A gas, pump down function and shall also be equipped with charging valve/ports for additional charge of refrigerant as per site requirement. All outdoor units shall be able to perform in duty cycle mode to optimize wear and tear of system when more than one outdoor unit is connected to a circuit. Outdoor units must also be equipped with four way valve for necessary provision of heating during winters. All outdoor shall have approximately following as per OEM standards rated capacities at ARI conditions and, with the criteria of delivering 95% capacity at 43°C being most likely temperature to occur during summers. (All Unit shall confirm the detailed specification of short term tender document and providing power/ control cabling/earthing of indoor unit complete with supplying of all material in all respect as per specifications and any other items required to make the system complete as required) The manufacturer of ODU and compressor shall be same i.e. the maker of compressor shall be identical of the ODU.</p>			
2	<p>Indoor Units: Round Flow Cassette Type Supply, Installation, Testing and Commissioning of VRV/VRF indoor units with factory fitted electronic expansion valve, multi speed fan motors, dynamically balanced blowers, synthetic washable plasma media filter with hydrophobic coating on cooling coil. Electronic components like PCBs must be essentially enclosed in a metal box compartment being integrated part of indoor unit to ensure enhanced fire protection with auto by pass technology allowing uninterrupted operation of indoor units connected to a circuit in event of break down in any indoor connected to same circuit. All indoor units shall have individual fan speed and temperature control mechanism to be operated from corded/cordless remote. In addition to all indoor units can also be operated from central remote control. (All Unit shall confirm the detailed specification of short term tender document and providing power/ control cabling/earthing of indoor unit complete with supplying of all material in all respect as per specifications and any other items required to make the system complete as required)</p> <p>a. Cassette Type Indoor Unit - 1.6 TR b. Cassette Type Indoor Unit - 2.08 TR c. Cassette Type Indoor Unit - 2.65 TR d. Cassette Type Indoor Unit - 3.2 TR e. Cassette Type Indoor Unit - 4.1 TR f. Cassette Type Indoor Unit - 4.6 TR</p>	<p>2 units 4 units 3 units 2 units 12 units 1 units</p>		

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Arindam Chaudhary, IAS
Managing Director

**HIMACHAL PRADESH
GENERAL INDUSTRIES CORPORATION LIMITED
(H.P. Government Undertaking)
(Registered Office: New Himrus Building, Circular Road)
SHIMLA-171 001
(Phone No: 0177-262 4438, 262 4824 Fax: 0177-262 4925)**

No.

Dated :

TERMS & CONDITIONS FOR PURCHASE/SUPPLY, INSTALLATION AND COMMISSIONING ON F.O.R. DESTINATION BASIS OF VRV/VRF AIR CONDITIONING SYSTEMS IN THE OFFICE OF DIRECTOR ENERGY DEPTT., NEW MC PARKING, NEAR MLA CROSSING, SHIMLA, HP.

- (1) Short term tender should be sent in two sealed envelopes referring Technical Bid and Financial Bid and date of opening on the envelope along with sign and stamp on each page of terms and conditions as acceptance of the terms and conditions of the short term tender document. The short term tender will be opened on **15-01-2025** at **3:00 PM** in the presence of tenderers or their authorized representative, if any, in the office of the Managing Director, H.P. General Industries Corporation Ltd, Himrus Building, Cart Road, Shimla-171 001.
- (2) **Requirement of Technical Bid-**
i) Earnest Money of Rs. 2.00 Lac (ii) Cost of short term tender document of Rs. 3,000/- + GST@ 18% (iii) Balance-sheet and statement of manufacturing Accounts/Profit & Loss Accounts indicating average annual turnover of Rs. 1.00 Crore or above for last three financial years i.e. 2021-22, 2022-23 & 2023-24 duly certified by the Chartered Accountant of the Company/Firm. (iv) Affidavit of non blacklisting by any Govt. Deptt., Board, PSUs (Central or State) all over India (v) Acceptance of Terms & Conditions (vi) Copy of GST Registration (vii) Memorandum of Association & Article of Association in case of company and partnership deed in case of partnership firm if applicable (viii) Valid Dealership Registration Certificate from Daikin, O General, Trane, Hitachi, Mitsubishi etc. as applicable in case of OES/ Authorized Dealers as applicable. (ix) Experience certificate regarding successful execution of three similar types of projects in Govt. or private sector.
- The Financial Bid will be opened of those tenderers who qualified the mandatory requirement of technical bid.
- (3) The short term tender must be accompanied with required earnest money and cost of short term tender document in the form of demand draft/RTGS/NEFT in SBI A/c No.55012850082 IFSCBIN0050118 in favour of MD, HP General Industries Corporation Ltd payable at Shimla. However, the Corporation will not be liable to pay any interest thereon. No short term tender shall be accepted without the earnest money and requisite cost of short term tender document.
- (4) There should be no over writing in the technical and financial bid documents.
- (5) The quoted rates/price must be inclusive of all taxes and duties except GST as applicable. The financial bid must be filled in abstracts of cost form as per **Annexure-"A"**.
- (6) The work should be completed within 60 days after issuance of award letter to the selected party.
- (7) The Complete Abstracts of cost /specifications of the **VRV/VRF AIR CONDITIONING SYSTEMS** are enclosed as **Annexure "A"** to the short term tender Document.
- (8) For the procurement of **VRV /VRF AIR CONDITIONING SYSTEMS** L-1 will be decided on accumulative lowest quoted rates of the complete work order for supply, installation, testing and commissioning of **VRV/VRF AIR CONDITIONING SYSTEMS** including cost of equipment, accessories, parts & components etc and not on item based cost system.

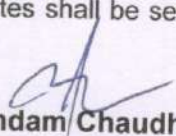
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- (9) The tenderer should specifically declare as to whether his company/firm is registered under MSME, Act 2006 or not. If so, the tenderer is required to submit the Registration Certificate to this effect with the short term tender document.
- (10) The Managing Director of this Corporation reserves all the right to accept/reject any/all tenders without assigning any reason.
- (11) Conditional, unsigned, late and delayed tenders will not be considered/ entertained. In case, the date of opening happened to be holiday, the short term tender will be opened on the next working day.
- (12) The tenderer should supply the equipments, parts & other accessories strictly as per specifications of short term tender document/supply order on F.O.R. basis. If the material is found of inferior quality and not as per given specification and satisfaction of the indenting Department, the supplier has to replace the substandard material at his own cost.
- (13) Loading/unloading, stacking, dismantling of ceiling and re-installation thereof, electrical and civil works, MS structure etc. required for installation of **VRV/VRF AIR CONDITIONING SYSTEMS** at proper locations will be in the scope of the selected party and no claim will be considered on this account.
- (14) The Managing Director reserves the right to hold negotiations, if required, with L-1 party.
- (15) No hike/ increase in the rates/price will be allowed during the currency of contract.
- (16) The successful tenderers will have to execute an agreement with the Manager, SDA Complex, Kasumpti, Shimla on judicial stamp paper of Rs. 100/- duly signed by himself or through his authorized representatives. The successful tenderer(s) will have to deposit security amount equal to 5% of the gross value of the order for faithful execution of the contract which will be released only after successful completion of the warranty period i.e. after one year from the completion of the project. However, no interest shall be paid on this security amount for the period it remains with the Corporation.
- (17) The L-1 party shall have to provide comprehensive after sale service & technical support(including replacement of components parts/equipments) to the Director, Energy Department, Shimla, HP for a period of 1 year without any cost.
- (18) In case, there is failure to supply, installation, testing and commissioning of **VRV/VRF AIR CONDITIONING SYSTEMS** as per supply order and violation of any terms & conditions of the contract/supply order, the undersigned reserves the right to withhold the payment, cancel the supply order and forfeit the security amount. If any, purchases are made from alternate sources necessitated due to failure of the supplier to supply equipments, accessories, components/parts & installation, testing & commissioning of the **VRV/VRF AIR CONDITIONING SYSTEMS** as per supply order, the amount of difference of rates of such risk purchases shall be recoverable from the supplier.
- (19) The Managing Director reserve the right to increase/decrease the quantity of **VRV /VRF AIR CONDITIONING SYSTEMS** as mentioned in short term tender notice as per the requirement of the indenting Department i.e. Director, Energy Department (H.P).
- (20) The quoted prices should be on F.O.R. destinations basis, inclusive of all taxes and duties, except GST, as applicable from time to time.
- (21) Only Original Equipment Manufacturer/original Equipment Supplier/ Authorized dealer of Daikin, O General, Trane, Hitachi, Mitsubishi etc. having all the mandatory documents as per mandatory requirement of the short term tender document can send their tenders.



- (22) Original Equipment Manufacturer/Original Equipment Supplier/ Authorized Dealer of Daikin, O General, Trane, Hitachi, Mitsubishi etc. having average annual turnover of Rs. 1.00 crore or more for last three financial years are eligible and will have to submit copy of Balance Sheets duly certified by the Chartered Accountant.
- (23) Tenderer should inspect the site and examine all the required information and satisfy himself regarding all matters and things before submission of his tender such as: the type and number of equipments and facilities required for the satisfactory completion of work, dimensions of room where work is to be carried out the quantities of various sections of the work, the availability of local labour, availability and rates of materials, local working conditions, extreme weather conditions, uncertainties of weather, obstructions and hindrances that may arise, etc. all which may affect the work or cost thereof.
- (24) 70% payment against the invoices of all required equipments only will be released after delivery of AC equipments & production of delivery acknowledgement from the indenting department and balance of the gross order including equipments will be released after satisfactory Installation, Testing and Commissioning and successful running of **VRV/VRF AIR CONDITIONING SYSTEMS** at the designated destination/place and after submission and receipt of satisfactory work completion report from the Director, Energy Deptt., Shimla, HP.
- (25) The contractors shall fully indemnify HPGIC Ltd. of the officer-in-Charge against any action, claim or proceeding relating to infringement or the use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article or part thereof included in the contract in the event of any claim being made or action brought against HPGIC Ltd or officer-in-charge in respect of matters aforesaid, the contractor shall immediately be notified thereof for taking necessary action provided that payment of indemnity shall not apply when such infringement has taken place in complying with the specific directions issued by HPGIC Ltd but the contractor shall pay any royalties payable in respect of any such use.
- (26) In case any direction from the Director of Energy department or any instruction or decision from the Board of Directors of this Corporation is received regarding non requirement of work/withdrawal of concerned short term tender at any stage then this arrangement will be discontinued and the party shall have no claim in this regard.
- (27) No Chinese brand / Chinese manufactured machinery will be considered for this short term tender as per Govt. of India guidelines.
- (28) The successful tenderers will have to provide complete bank address, Bank Account number and IFSC code to enable the Corporation to make the payments through NEFT/RTGS etc. and the charges, if any, on this account will be debited to the tenderer /Supplier.
- (29) Any addendum/corrigendum in this regard shall be displayed on the official website i.e. www.hpgic.co.in of the Corporation. No separate notice will be published in any newspaper in this regard.
- (30) Neither party will be liable for failure or delay in performing obligations so set-forth in this agreement and neither shall be deemed in breach of its obligations, if such failure or delay is caused due to natural disasters or any causes beyond the control of either party e.g. fire, strike/lock out, floods, earthquake, riots, curfew etc. in HP and in the premises of Furniture Factories of the first party i.e. Furniture Factory Bilaspur, Furniture Factory Chambaghat and Furniture Division SDA, Sale Complex-Kasumpati (Shimla) or at the office/ site premises of the Industry Department i.e. Directorate Energy in Shimla.

- (31) The tenderer/party should not have been blacklisted by any Govt. Department, Board, PSU's (Central or State) all over India. Hence, the tenderer shall have to submit an affidavit regarding non-blacklisting/Debarment on Non-Judicial stamp paper of Rs.50/-.
- (32) If any difference of opinion arises between the first party and second party in relation to interpretation, operation or affect of any clause of this agreement, the Managing Director of the Corporation reserves the right to decide the same and the decision of the Managing Director of the Corporation shall be final. In case, the second party is not satisfied with the decision of the Managing Director of the Corporation, then the matter can be referred in writing by the second party to the sole arbitrator i.e. Administrative Secretary (Industries), Govt. of HP, as per the provision under Arbitration & Reconciliation Act 1996 and as amended from time to time. The decision of such an Arbitrator shall be binding on both the parties.
- (33) All legal proceedings, arising out of this contract shall be subject to the jurisdiction of the courts situated at Shimla HP only. Therefore, all disputes shall be settled within the jurisdiction of courts at Shimla only.


Arindam Chaudhary, IAS
Managing Director

Annexure "A"

Abstract of Cost						
Name of Work:- Name of Work:- (SH:- Providing VRV/VRF Air conditioning (HVAC) of reputed companies like Daikin, O General, Trane, Hitachi, Mitsubishi etc. Directorate of energy at MC Parking, Shimla						
A	SUB HEAD VRV/VRF	Unit	Qty	Basic Rates	GST	Amount Including GST
1.00	Supply, Installation, Testing & Commissioning of factory fitted micro processor based self diagnostic auto check VRV/VRF system outdoor unit equipped with PCBs, accumulator, oil separator, brushless DC inverter fan motor, OEM self manufactured hermetic sealed multi valve scroll type compressors. Compressor should be based on low pressure shell technology for longer life with integrated IPM & PWM to ensure effective operation even at low/partial load conditions for better efficiencies. Compressor shall be fixed in metallic chamber for lower noise with enhanced fire safely protection. Outdoor unit shall be equipped with highly efficient induction type heater using eliminated wasted heat. VRT/VET system shall be based on advanced & automatically modulation evaporating refrigerant temperature between 0°C to 11°C for instant cooling and better energy efficiency as per user's demand. Outdoor units shall be essentially equipped with safety devices like fuse, noise filter PCB, low pressure switch, high pressure switch, pulse based LEV for optimized refrigerant flow control, isolating valve, protective corrosion resistant polyester coating on panels, hydrophilic coating on Aluminum fins, protective polyurethane coating on PCB, OEM provided Inbuilt automatic reverse phase detector & sequencer/corrector to avoid any kind of failure due to phase sequence reversal which makes system reliable and redundant. Heat exchanger must be essentially equipped with internally grooved copper tubes for better heat exchange performance and operate in extreme conditions i.e. even at ambient temperature of 52°C or more. Outdoor units shall be pre-charged with R401A gas, pump down function and shall also be equipped with charging valve/ports for additional charge of refrigerant as per site requirement. All outdoor unit shall be able to perform in duty cycle mode to optimize wear and tear of system when more than one outdoor unit is connected to a circuit. Outdoor units must also be equipped with four way valve for necessary provision of heating during winters. All outdoor shall have approximately following as per OEM standards rated capacities at ARI conditions and, with the criteria of delivering 95% capacity at 43 °C being most likely temperature to occur during summers. (All Unit shall confirm the detailed specification of short term tender document and providing power/ control cabling/earthing of indoor unit complete with supplying of all material in all respect as per specifications and any other items required to make the system complete as required) The manufacturer of ODU and compressor shall be same. i.e. the make of compressor shall be identical of the ODU.					
1.01.00	Outdoor Unit -20 HP	Nos	5			0
2.00	Indoor Units: Round Flow Cassette Type: - Supply, Installation, Testing and Commissioning of VRV/VRF indoor units with factory fitted electronic expansion valve, multi speed fan motors, dynamically balanced blowers, synthetic washable plasma media filter with hydrophobic coating on cooling coil. Electronic components like PCBs must be essentially enclosed in a metal box compartment being integrated part of indoor unit to ensure enhanced fire protection with auto by pass technology allowing uninterrupted operation of indoor units connected to a circuit in event of break down in any indoor connected to same circuit. All indoor units shall have individual fan speed and temperature control mechanism to be operated from corded/cordless remote. In addition to all indoor units can also be operated from central remote control. (All Unit shall confirm the detailed specification of short term tender document and providing power/ control cabling/earthing of indoor unit complete with supplying of all material in all respect as per specifications and any other items required to make the system complete as required)					
2.01	Cassette Type Indoor Unit - 1.6 TR	Nos	2			0

2.02	Cassette Type Indoor Unit - 2.08 TR	Nos.	4		0
2.03	Cassette Type Indoor Unit - 2.65 TR	Nos.	3		0
2.04	Cassette Type Indoor Unit - 3.2 TR	Nos.	2		0
2.05	Cassette Type Indoor Unit - 4.1 TR	Nos.	12		0
2.05	Cassette Type Indoor Unit - 4.6TR	Nos.	1		0
3.00	Supply and installation of Refrigerant Piping Y/T-Joints or Headers as required to connect the above outdoor units and indoor units. (liquid and gas line as one set)	Nos.	23		0
4.00	Supply installation testing and commissioning of Wire Remote the Temperature can be steps of 1 °C to 1 °F Increment. The Button Panel can be access and Air flow Direction and error icon's display on the screen.	Nos.	24		0
5.00	Supply installation testing and commissioning of Twinning Kit for Connecting of ODU Unit	Nos.	3		0
6.00	Refrigerant Charges For the complete system-R410A. Its a member of hydro fluorocarbon (HFC) Class of Refrigerants and is Composed of equal parts R-32 and R-125.	Kg	120		0
7.00	SITC of PVC (Minimum 15 Kg/Sqcm pressure rated) Drain Water Piping complete with fittings niterl insulation (elbows, tees, reducers, sockets etc.), supports, jointing and any other item required to make the system complete. Nominal Diameters of Pipes in mm as indicated below:				
7.01	25 mm (with 6 mm Class- O XLPE)	RMT	500		0
8.00	SITC of Copper Refrigerant piping for VRV / VRF System complete with fittings, supports, jointing, insulation with class O -XLPE , gas charging & commissioning as per specifications, all accessories as per specifications and any other item required to make the system complete. Nominal Dia in mm OD as indicated below : Make : Rajco/Maxflow/Mandev/Jobu/MTL				
8.01	28.5 (with 19 mm insulation)	RMT	120		0
8.02	15.9 (with 13 mm insulation)	RMT	240		0
8.03	12.7 (with 13 mm insulation)	RMT	150		0
8.04	9.5 (with 13 mm insulation)	RMT	360		0
8.05	6.3 (with 13 mm insulation)	RMT	150		0
9.00	Providing & fixing control cum transmission wiring of 2 core x 1.5 sqmm copper shield cable in suitable conduits between indoor units and outdoor units and indoor units and remote controllers.	RMT	500		0
10.00	Providing & fixing of 25 MM Dia of medium class PVC Conduit Along with the accessories in Surface/ recess including cutting the wall and making goods the same in case of recessed conduit.		400		0
11.00	Providing & Fixing of Cable Tray for carrying of copper pipes, & Cables Size : 100 X 50 MM	RMT	150		0
12.00	Supply and Laying of 2 core x 1.5 sqmm pvc insulated copper conductor communication control cable in Pvc Conduit. Havells/Polycab/RR Kabel/Anchor etc.	RMT	700		0
13.00	Supply and Laying 4.0 core x 10 Sq.mm copper conductor armoured cable. Make : Havells/Polycab/RR Kabel/Anchor etc.	RMT	80		0
14.00	Supply and Laying of 300 sqmm 3.5 core XLPE aluminium armoured LT cable underground cable 0.75 metre below ground level covered without sand and bricks including excavation and refilling of existing trench. Make : Havells/Polycab etc.	RMT	100		0
15.00	Supply & erection of 300 sqmm aluminium lugs heavy duty including	Nos.	20		0

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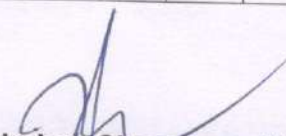
	crimping etc. Make : Ascon/Dowells etc.					
16.00	S/E of TPN DB Horizontal type double door 4 way. Make : Havells/C&S Electric/ABB etc.	Nos.	2			0
17.00	Supply & erection of MCB 240/415 V in the existing distribution board including making necessary connection Make -Havells//C&S Electric/ABB etc. HSR item 23.22.5.1—6 amp to 32 amp single pole	Nos.	30			0
18.00	40 amp to 63 amp MCB's four pole					0
19.00	Earthing and lightening arrestor Earthing with GI earth plate 600mm x 600mm x 6mm thick including accessories and providing masonry enclosures with cover plate having locking arrangement and watering pipe etc (but without charcoal or coke and salt) complete as required	Nos.	1			0
20.00	Extra for charcoal or coke and salt for GI plate or copper earth electrode	Nos.	1			0
21.00	Providing & fixing 25 mm x 3 mm GI strip on surface or in recess for connections etc as required with all labour and materialm	Nos.	50			0
22.00	Main Electrical Panel (CPRI Approved manufacturer at least 70 K) DSR 15.1					0
	The panel drawing shall be approved before taking up the fabrication and Shall have compatible BMS for future requirement.					
	Main A.C. Panel					
	Incomer					
	INCOMING SUPPLY : MCCB 300 Amps 65 KA 4 Pole Micro processor based Adjustable type with Rotary Mechanism & all Protections along with spreader links,etc : 1 No.	Nos.	1			
	Multi Function VAF/VIF Meter (96mmX96mm Size) ,Indication Lamps LED Type RYB, Control MCB SP for Control (3 Nos),CT's 400/5 (3 Nos) and Control Terminal (8.0 Nos.) etc.					
	Outgoing					
	10 No. 40- 63 Amps TP+NL MCCB with adjustable release 50 KA with ROM & Spreader links S/c, O/L & other protections outgoing for 20 HP ODU .					
	All starter shall have following accessories :					
	1 No. overload relay					
	1 No. Ammeter with CTs.					
	1 No. single phase preventer					
	2 Nos. ON/OFF indicating lights					
	2 Nos. ON/OFF push buttons					
	Hardware (PVC Channels/MCB Channels/FibreGlass/Gaskits/Sleeves/nuts/Bolts/washers/coo ling fans/etc)					

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	crimping etc. Make : Ascon/Dowells etc.					
16.00	S/E of TPN DB Horizontal type double door 4 way. Make : Havells/C&S Electric/ABB etc.	Nos.	2			0
17.00	Supply & erection of MCB 240/415 V in the existing distribution board including making necessary connection Make -Havells//C&S Electric/ABB etc. HSR item 23.22.5.1---6 amp to 32 amp single pole	Nos.	30			0
18.00	40 amp to 63 amp MCB's four pole					0
19.00	Earthing and lightening arrestor Earthing with GI earth plate 600mm x 600mm x 6mm thick including accessories and providing masonry enclosures with cover plate having locking arrangement and watering pipe etc (but without charcoal or coke and salt) complete as required	Nos.	1			0
20.00	Extra for charcoal or coke and salt for GI plate or copper earth electrode	Nos.	1			0
21.00	Providing & fixing 25 mm x 3 mm GI strip on surface or in recess for connections etc as required with all labour and materialm	Nos.	50			0
22.00	Main Electrical Panel (CPRI Approved manufacturer at least 70 K) DSR 15.1					0
	The panel drawing shall be approved before taking up the fabrication and Shall have compatible BMS for future requirement.					
	Main A.C. Panel					
	Incomer					
	INCOMING SUPPLY : MCCB 300 Amps 65 KA 4 Pole Micro processor based Adjustable type with Rotary Mechanism & all Protections along with spreader links,etc : 1 No.	Nos.	1			
	Multi Function VAF/VIF Meter (96mmX96mm Size) ,Indication Lamps LED Type RYB, Control MCB SP for Control (3 Nos),CT's 400/5 (3 Nos) and Control Terminal (8.0 Nos.) etc.					
	Outgoing					
	10 No. 40- 63 Amps TP+NL MCCB with adjustable release 50 KA with ROM & Spreader links S/c, O/L & other protections outgoing for 20 HP ODU .					
	All starter shall have following accessories :					
	1 No. overload relay					
	1 No. Ammeter with CTs.					
	1 No. single phase preventer					
	2 Nos. ON/OFF indicating lights					
	2 Nos. ON/OFF push buttons					
	Hardware (PVC Channels/MCB Channels/FibreGlass/Gaskits/Sleeves/nuts/Bolts/washers/coo ling fans/etc)					

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	Complete Wiring inclusive of thimbles,etc					
	Make-Kalyani,KEPL, Swayut ,Varindawan etc.					
23.00	Civil and MS Structure work For all ODU Units..	Lot	1			0
24.00	Dismantling and Reinstallations Of Ceiling Work work For Installations Of HVAC Cooper Piping, Indoor Unit, Electrical Work, Supporting material if any required at site is included...	Lot	1			0
	TOTAL					


Arindam Chaudhary, IAS
Managing Director