

Bid Document

Bid Details	
Bid End Date/Time	09-07-2020 14:00:00
Bid Opening Date/Time	2020-07-09 14:30:00
Bid Life Cycle (From Publish Date)	90 (Days)
Bid Offer Validity (From End Date)	30 (Days)
Ministry/State Name	Ministry Of Power
Department Name	Contracts And Materials
Organisation Name	Power System Operation Corporation Limited
Office Name	Srldc Bangalore
Total Quantity	1
Item Category	Drinking Water ATM / Water Vending Machine
MSE Exemption for Years of Experience and Turnover	No
Startup Exemption for Years of Experience and Turnover	No
Bid to RA enabled	No
Inspection Required	No

EMD Detail

Required	No
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ePBG Detail

Required	No
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Splitting

Bid splitting not applied.

Drinking Water ATM / Water Vending Machine (1 pieces)

Technical Specifications

* As per GeM Category Specification

Specification	Specification Name	Values	Bid Requirement (Allowed Values)
COIN / CARD ACCEPTOR / Quantity of Dispensing Water	Number of Dispensing points	3	3
	Water Dispensing using coin acceptor	Yes	Yes
	Coins accepted for payment	Rs.1, Rs. 2, Rs. 5, Rs.10	Rs.1, Rs. 2, Rs. 5, Rs.10
	Water Dispensing using RFID/NFC card	Yes	Yes
	Mobile Wallet accepted for payment	No	No
	Quantity of Dispensing Water	Configurable as Per Customer Requirement	*
CAPACITY / TYPE / WATER SOURCE / OUTLET WATER QUALITY	Purification Capacity of Water ATM	250 LPH	250 LPH
	Type of Operation	Semi-Automatic	Semi-Automatic
	Water Source	Municipal Tap water	Municipal Tap water
	Quality of outlet water from each dispenser of the Water ATM	Conforms to IS:10500(latest)	*
TECHNOLOGY	Technology	Reverse Osmosis (RO)	Reverse Osmosis (RO)
	UV Disinfection	Yes	Yes
	"Filters deployed in the system"	Pressure Sand Filter, Activated Carbon Filter, 10 Micron Filter, 5 micron Filter, Ultra Filtration, Nano Filtration, Multi Grade Filter (MGF), Thin- Film Composite Membrane	Pressure Sand Filter, Activated Carbon Filter, 10 Micron Filter, 5 micron Filter, Ultra Filtration, Nano Filtration, Multi Grade Filter (MGF), Thin- Film Composite Membrane
	Anti scalant dosing pump	Yes	Yes
	pH Correction Dosing Pump	No	No
LIMITING CHARACTERISTICS OF INLET / FEED WATER	TDS of inlet/feed water (ppm)	501-3000 ppm	501-3000 ppm
	Turbidity of inlet/feed water	Upto 5 NTU	Upto 5 NTU
	Hardness of inlet/feed water	Upto 200 ppm	Upto 200 ppm
	pH of inlet/feed water	6.5 to 8.5	6.5 to 8.5

CONSTRUCTIONAL	Iron content of inlet/feed water	Upto 20 ppm	Upto 20 ppm
	Arsenic content of inlet/feed water	Upto 2 ppm	Upto 2 ppm
	Fluoride content of inlet/feed water	Upto 7 ppm	Upto 7 ppm
	Raw water Storage capacity	1000	1000.0
	Raw water Storage Tank Material of Construction	HDPE	HDPE
	Location of the Raw Water Storage Tank	Inside the ATM Enclosure	Inside the ATM Enclosure
	Treated water Storage capacity	225	225.0
	Treated water Storage Tank Material of Construction	Stainless Steel, 304 Gr	Stainless Steel, 304 Gr
	Equipped with an in-built chiller unit for providing continuous cold water of temperature around 15 degree Celcius	Yes	Yes
	In-built Chiller Tank Capacity	220	220.0
	Chiller Tank Material of Construction	Stainless Steel, 304 Gr	Stainless Steel, 304 Gr
	ATM Installation Type	Floor mounted	*
	Number of Filtration steps	5	5
	Minimum Water Recovery Percentage @27 degree ambient temperature (%)	31-40	31-40
	Provided with suitable vending place for filling container of 20 liters capacity	No	No
	Agreed to STC of the product category	Yes	*
DISPLAY	Display of water purity parameters	Yes	*
	Display Type	LED	LED
	Backlit Display	Yes	Yes

	Touch Screen Display	No	No
	Display Size (Characters x Lines)	NA	NA
	Display of outlet water TDS level	Yes	Yes
	Display of outlet water pH level	No	No
	Display of outlet water Hardness	Yes	Yes
	Display of outlet water Temperature	No	No
Inlet / Feed Pump to feed water from raw water storage tank to filter	Inlet / Feed Pump Type	Horizontal Centrifugual	Horizontal Centrifugual
	Number of Inlet / Feed Pumps	1	*
	Rated Head	30	*
	"Pump Motor Rating (HP)	1.25	*
	Inlet / Feed Pump Capacity at rated head (LPH)	1.25	*
	Pump Motor / Head (HP)	1	*
Multi Media Filter Vessels for First stage filtration for suspended particles	Type of Multi Media Filter Vessels	Vertical Multi Media Filter	*
	Material Of Construction for Multi Media Filter Vessels	FRP	FRP
	Number of Multi Media Filter Vessels	2	*
	Size of Multi Media Filter Vessels	-	*
Multi-Port Valve to control filtration and backwash for media filter having sand & carbon	Type of Multi-Port Valve	Manual	Manual
	Multi-Port Valve Material of Construction	ABS	ABS
	Number of Multi-Port Valves	1	*
	Nominal Bore (Size) of Multi-Port Valve	20	*
Anti scalent Dosing Pump to inhibit scaling of hardness salt and	Type of Anti scalent Dosing Pump	Electronic diaphragm	Electronic diaphragm

silica on RO Membranes, doze pH and Cl as per water quality	Material Of Construction for Anti scalent Dosing Pump	PP	PP
	Number of Anti scalent Dosing Pumps	1	*
	Capacity of Anti scalent Dosing Pump (LPH)	4	*
pH Correction Dosing Pump & Dosing Tank to dilute water with dosing chemicals	Type of pH Correction Pump	NA	NA
	Material Of Construction for pH Correction Dosing Pump	NA	NA
	Number of pH Correction Dosing Pumps	0	*
	Capacity of pH Correction Dosing Pump (LPH)	0	*
	Dosing Tank Material of Construction	NA	NA
	Dosing Tank Capacity (LPH)	0	*
High Pressure Pump to develop required pressure for Reverse Osmosis on RO Membranes	Type of High Pressure Pump	Vertical Centrifugual Pump	*
	Material Of Construction for High Pressure Pump	SS	*
	Number of High Pressure Pumps	1	*
	Low pressure switch for Protection of HP pump from burn-out	NA	*
RO Pressure Vessel	Type of RO Pressure Vessel	Membrane housing mounted on skid - End port type	Membrane housing mounted on skid - End port type
	Material Of Construction for RO Pressure Vessel	FRP	FRP
	Number of RO Pressure Vessels	1	*
Ultra Violet (UV) System to disinfect water, kill bacteria and micro-organisms	Material Of Construction for UV System	SS	SS
	Number of UV Systems	1	*
	Number of UV Lights	1	*
	Total UV Power	12 Watts	12 Watts

CIP (Clean-In-Place) Tank to mix / Dilute chemicals for membrane cleaning and permeate back wash	Cip Tank	Yes	Yes
	CIP Tank Material of Construction	LLDPE	LLDPE
	Number of CIP Tanks	1	*
	Capacity of CIP Tank	50	*
Piping	Material of Construction for Piping from storage tank to Raw water inlet, total internal piping HPP side / Low Pressure side, plant to product tank & through UV distribution system	ISI Marked U-PVC	*
Power Source	Power Source	Water ATM shall be able to work on AC Power. Water Dispensing section shall also be able to work on DC Power supply from a battery. Battery is inclusive in the scope of supply.	*
	Power Supply	230 \pm 10 V AC	230 \pm 10 V AC
	Battery Voltage	6 V	*
	Battery Chemistry	Lead Acid	*
	Battery Capacity (AH)	100	*
	Battery back-up time	6	6.0
EMBEDDED DEVICES FOR AUTOMATION	Quantitative Monitoring	NA	NA
	Outlet Water Quality Monitoring	TDS level of water	TDS level of water
	Multi-Processor Integrated Control System with Interface cables/ connectors for integration	NA	NA
	OTHER FEATURES	Interface for connecting coin-acceptors, Interface for Card Reader, NA	Interface for connecting coin-acceptors, Interface for Card Reader, NA
	Additional features, if any	-	*
Water ATM - Enclosure	Structure	Rigid structure, made of G.I. frame	Rigid structure, made of G.I. frame
	Thickness of the frame of structure	2	2.0

	Material of Construction of Side Panels of Water ATM	Galvanized Steel sheet	Galvanized Steel sheet
	Side Panel Sheet Thickness	0.6	0.6
	PUF insulation of Side Panels of Water ATM	With	With
	PUF insulation of the door of Water ATM	With	With
	Provision for in-built litter space	No	No
	Covered area of treatment plant enclosure	60	*
	Shape of the Water ATM housing	Hexagonal	Hexagonal
	Top Canopy of the Water ATM housing	Dome	*
	Floor area around the unit covered with vitrified / anti-skid tiles (Specify area of the tiles)	25	*
	Headroom for the Water ATM enclosure	7	*
	Internal / External finish on Steel panels	As per Buyer requirements	*
	Floor area around the Water ATM enclosure covered with anti-skid tiles	Yes	Yes
	Water ATM enclosure protected with enclosed MS grill / mesh	No	No
Installation & Commissioning / Warranty	Installation and Commissioning inclusive in the scope of Supply	Yes	Yes
	Trial Run and Training provided (inclusive in the Scope of Supply)	5	5, 10 Or higher
	Warranty for storage Tanks	1	1, 2, 3, 4, 5 Or higher
	Warranty for electrical motors	1	1, 2, 3 Or higher

Warranty for the filters	1	1, 2, 3 Or higher
Warranty for the system	1	1, 2, 3 Or higher

* Specifications highlighted in bold are the Golden Parameters.

* Bidders may note that In respect of non-golden Parameters, the specifications 'Values' chosen by Buyer will generally be preferred over 'Bid requirement (allowed Values) by the Buyer.

Additional Specification Documents

Consignees/Reporting Officer and Quantity

S.No.	Consignee/Reporting Officer	Address	Quantity	Delivery Days
1	H T Divith	560009,SRLDC POSOCO 29 Race Course Cross Road Bangalore	1	30

Special terms and conditions for category Drinking Water ATM / Water Vending Machine

1. A. General Technical Requirements 1) The Water ATM / Water Vending Machine shall be fully enclosed and easy to relocate.2) The structure of the enclosure shall be rigid, made of MS / SS frame of minimum thickness as specified in the contract. MS frame shall be with duly anti rust treatment, painted / galvanized for rust protection. The structure shall be appropriate to protect the entire treatment plant system, including its equipment and accessories in all weather conditions and it shall be able to withstand the extreme climatic variations.3) All the side panels shall be made of stainless steel / galvanized steel, with / without PUF insulation as specified in the contract. Side panels with insulation, if specified in the contract, shall have stainless steel / galvanized steel sheets on both sides with PUF insulation in between. PUF insulation shall be of 50 mm thick and 40kg/m3 density.4) Single door of adequate size with good quality locking arrangement shall be provided to restrict access to the unit. The door shall be made of steel with matching colours with adequate protection against breakage.5) The raw water storage tank, if provided, shall have provision to be attached to piped water supply as well as fitting of external nozzle which provides the option for sourcing raw water from tankers and functioning as a standalone unit in case piped water supply is not available.6) Adequate space shall be provided for storing materials / consumables required for the Water ATM / Water Vending Machine, inside the enclosure itself.7) A chiller unit of suitable storage capacity, if specified in the contract, shall be provided inside the unit. Proper ventilation facility must be provided for the removal of chiller unit heat.8) Easily washable stainless steel / FRP counters for dispensing drinking water must be provided on the external panels of the housing structure. Each counter shall be capable of dispensing water and each must have latching system for switching ON with push button.9) The top canopy protecting the enclosure shall be made with materials like PP reinforced UV stabilized Poly Vinyl / FRP covering so as to cover the entire equipment and accessories in the enclosure and to protect them from heating and external weather conditions.10) Each Water ATM / Water Vending Machine shall have provision for float valve for overflow control.11) After installation at site, all components, equipment shall be field tested to prove satisfactory performance of outlet water quality and/or fulfilment of functional requirements without showing any sign of defect as individual equipment and as well as a system.12) User Manual for safe operation of the unit along with instructions for preventive maintenance, frequency for back wash, treatment of waste water, if required, etc

shall be supplied along with each Water ATM / Water Vending Machine.13) All the materials which are in direct contact with treated water inside the machine shall be of food grade quality.14) Water ATM / Water Vending Machine shall be able to work on AC Power (230 \pm 10 V AC or 415 \pm 10 V AC). Water dispensing section shall be able to work on DC Power supply from a battery having back-up capacity of minimum hours as specified in the contract. Battery is inclusive in the scope of supply.B. The Scope of installation and Commissioning for Water ATM shall be as under: Following are the responsibilities of Seller: 1) Design, Supply, construction / installation of Water ATMs / Water Vending Machines along with water storage tanks, necessary filters and all other equipment and accessories necessary for satisfactory operation of the unit shall be the responsibility of the Seller.2) Supply / changing of necessary filters during the warranty period shall be the responsibility of the Seller.3) Unloading and placement of Water ATM / Water Vending Machine at the time of delivery at sellers cost is inclusive in the scope of supply. The consignee shall ensure that the site is located along a motorable road.4) Necessary foundation for RO+UV system and required platforms for specified category of treatment plant system shall be provided with plinth depth of 150 mm above ground level, wherever applicable. Civil Work to the extent necessary for satisfactory installation of the equipment shall be the responsibility of the Seller.5) Supply of bolts, nuts, washers, etc., and all other material necessary for satisfactory installation and commissioning of the equipment shall be the responsibility of the Seller.6) Supply, laying & installation of necessary Electrical cables, electrical fittings from the power connecting point / Energy meter to the Water ATM / Water Vending Machine shall be the responsibility of the Seller.7) Supply, laying & installation of all inter connecting Pipes from the water source to the discharge out let of the equipment including waste water connection to nearby sewerage system shall be the responsibility of the Seller.8) Supply of suitable Pre filters, RO Plant, UV System, Control Valves, Dosing Pumps, Vessels, Pressure Gauges, Flow meters, etc, wherever required shall be the responsibility of the Seller.9) Trial Run of the equipment for the period specified in the contract shall be the responsibility of the Seller. All components, equipment shall be tested during trial run to prove satisfactory performance and /or fulfilment of functional requirements without showing any sign of defect as individual equipment and as well as a system.10) Providing Training to the buyer's representatives after successful installation & Commissioning of the equipment, during Trial Run shall be the responsibility of the Seller.11) Seller shall co-ordinate with the Consignee / User regarding exact place / location where the Water ATM / Water Vending Machine has to be installed, Quantity of Dispensing Water, Internal / External finish on Steel panels etc. C. Following are the responsibilities of Consignee / User: 1) Providing necessary Space, Water source, Electricity, Security, Sewerage, Water quality monitoring / testing shall be the responsibility of the buyer / consignee. 2) Providing Water source, Power meter and Sewerage, within 20 meters from the place where Water ATM / Water Vending Machine has to be installed shall be the responsibility of the buyer/ consignee.3) Providing Single phase or three phase power supply as required including installation of Electric Energy meters/Legal connection for Water ATM's shall be the responsibility of the buyer / consignee.4) Consignee / User shall co-ordinate with the Seller regarding exact place / location where the Water ATM / Water Vending Machine has to be installed, Quantity of Dispensing Water, Internal / External finish on Steel panels etc.5) Necessary approvals, if any, shall be obtained by the consignee.6) Consignee shall ensure readiness of the site within to 10 days of receipt of stores.7) Revenue from the water ATM / Water Vending Machine, if any, shall be collected by the consignee or his authorized representative.

Bid Specific Additional Terms and Conditions

1. Scope of supply (Bid price to include all cost components) : Supply Installation Testing Commissioning of Goods and Training of operators and providing Statutory Clearances required (if any)

[This Bid is also governed by the General Terms and Conditions](#)

---Thank You---