DEENDAYAL PORT AUTHORITY

An ISO 9001 : 2008 & ISO 14001 : 2004 Certified Port

Office of Executive Engineer (Electrical),
Room No. 2, Ground Floor, Nirman Building, New Kandla, Kutch– 370210

No. : EL/ AC/2188/146 Date : 07/07/2026.

"Budgetary Offer"

Sub. : "Supply, Installation, Testing & Commissioning of Smart Decorative Lighting System at Gopalpuri Colony of DPA."

Executive Engineer (Electrical), DPA invites Budgetary Offers for the work of "**Supply, Installation, Testing & Commissioning of Smart Decorative Lighting System at Gopalpuri Colony of DPA**" from the firms from those who have executed similar work in Government / Public Sector and other leading private organizations as per Scope of Work and Technical Specifications enclosed herewith.

The interested firms are requested to submit their Budgetary Offers in the BoQ format enclosed herewith to the office of the undersigned on or before 15/07/2026 through hard or soft copy. A soft copy of Budgetary Offer shall be submitted through e-mail Id cme@deendayalport.gov.in and copy to email address deepak.hazra@deendayalport.gov.in.

Sd/-
Executive Engineer (E)
Deendayal Port Authority

Sub. : "**Supply, Installation, Testing & Commissioning of Smart Decorative Lighting System at Gopalpuri Colony of DPA**."

Bill of Quantity

Sr. No.	Description	Unit	Qty.	Rate	Amount
1	SITC of 6 Way outdoor Load Points Panel with mounting Stand as per the Technical Specification No. 1.	No.	8		
2	Supply, Installation, Testing & Commissioning of IoT based 3 Phase Smart CCMS Feeder Panel with Streetlight Controller with LCD Display & Software support along with all the accessories as per the Technical Specification No. 2.	No.	25		
3	Supply, erection, testing and commissioning of Decorative Pole GI PU Painted 4 m height & Wall Thickness of 4 mm. with Post Top LED luminary of 40 W (440 Nos.), 60 W (164 Nos.), 100 W (96 Nos.) asymmetrical & complete with all the relevant accessories as per the Technical Specification No. 3.	No.	700		
4	Civil Foundation work suitable of 4 m Lighting Pole as per the Technical Specification No. 4	Nos.	700		
5.	Supply at site 3/4 Core, LT Armored/Flexible Aluminum/ Copper conductor XLPE/ Normal Cable of 1.1 kV grade of following type & size as per the Technical Specification No. 5				
	A) 120 Sq. mm., 4 Core, LT armored aluminum conductor XLPE Cable	Mtr.	800		
	B) 50 Sq. mm., 4 Core, LT armored aluminum conductor XLPE Cable	Mtr .	6000		
	C) 25 Sq. mm., 4 Core, LT armored aluminum conductor XLPE Cable	Mtr.	1500		
	D) 16 Sq. mm., 4 Core, LT armored aluminum conductor XLPE Cable	Mtr.	12000		
	E) 2.5 Sq. mm., 3 Core, LT Flexible Copper Cable	Mtr.	5500		
6.	Laying of U/g 4/3 Core Armored /Flexible Cable along with supply & laying of DWC Pipe with ISI				

	Marked with min. 750 mm. defth after removing the exiting Paver Blocks & lay the cable and back fill & re-set the Paver Blocks as per the original as per the Technical Specification No. 6.	Mtr.	21800		
7.	HDD in the RCC/Road Crossing and supply & laying of 4" HDPE heavy duty Pipe with wall thickness of 12 mm. in the Crossing with laying of XLPE Cable in the Pipe up to 120 Sq. mm. as per the Technical Specification No. 7.	Mtr.	4000		
8.	SITC of earthing system with chemical electrode & back fill compound as per the Technical Specification No. 8.				
	A) 50 mm. X 3 Mtr. Electrode	No.	24		
	B) 25 mm. X 3 Mtr. Electrode	No.	48		
	C) 2 Mtr. Pipe Earthing	No.	700		
9.	SITC of Laying GI Earthing Strip of following size as per Technical Specification No. 9.				
	A) 25 X 6 mm. GI Strip	Mtr.	200		
	B) 50 X 6 mm. GI Strip	Mtr.	150		
10.	Supply of Cable Joint Kit of LT Cables as per the Technical Specification No. 10.				
	A) 50 Sq. mm., LT Straight Joint Kit suitable for Armoured Cable.	Nos.	10		
	B) 16/25 Sq. mm. LT Straight Joint Kit suitable for Armoured Cable.	Nos.	25		
11.	Installation/fixing of Cable Joint Kit of size up to 50 Sq. mm. for LT Cables as per the Technical Specification No. 11	Nos.	35		
Total :					

(In words Rupees only)

(Note: The rates should be inclusive of all taxes, duties, fees, cess etc. and all incidental charges; but exclusive of GST).

Signature & Seal of Contractor

Sd/-
Executive Engineer (E)
Deendayal Port Authority

Scope of Work and Technical Specification

1.0 Scope of work

The scope of work envisages the following:

- Supply, Installation, Testing & Commissioning of Smart Decorative Lighting System as per the BoQ, Technical Specifications with all Labours, Materials, Transportations, Loading and un-loading etc. The work shall be carried out at Kandla and the Site shall be cleaned after completion of the work.
- The work shall be carried out strictly as per the IER and IEA.

Technical Specification

Technical Specification No. 1

This includes design, supply at site, installation, testing and commissioning of Outdoor mounted type 6 Way Load Point Panel with double shutter, Top Canopy, Handle with Locking arrangement, dust, damp and vermin proof. The Panel shall be fabricated from 3 mm. thick SS sheet for outer frame using suitable size of MS Angle and MS Flat for the frame structure. The inner sheet and the Door shall be made from 1.8 mm. thick SS sheet. The Panel shall be powdered coated using Simens grade paint.

The Panel shall be spacious for easy maintenance and shall be spacious to accommodate all the components/parts mentioned below.

Sr. No.	Description	Qty.
1	250 A, 415 Volt, 4 Pole MCCB, 36 kA C-curve	2 Nos.
2	Indicating lamp Red, Yellow & Blue 230/240 V AC, with in built resistance	1 No. each
3	Multi-Function Meter	1 No.
4	Suitable size of Aluminium bus-bar for Phase & Neutral, PVC sleeved with colour code. Danger Board, tie belt etc.	Lump sum
5	100 A 3P + N MCCB, 36 kA, with RYB Indication & Amp + ASS 3P + N MCCB, 36 kA, with RYB Indication & Amp + ASS X 6 No. with complete Wiring as directed.	Lump sum.

All these components shall be mounted in the Panel by means of suitable cadmium passivated hardware. The feeder pillar shall be complete in all respects with cable glands, lugs for incoming and outgoing cables including interconnection with PVC insulated cable single core, standard copper conductor of 650/1100 V grade.

The Panel shall be erected using MS channel frame of proper size on the civil foundation at least 500 mm. above the ground.

The Panel shall be tested as per IS. It shall be provided with 2 Nos. SS terminals for earthing. The Panel shall be manufactured from type test holder having type test certificate of Panel of similar or

above ratings. The above Panel drawing should have to be approved by inspection agencies/Engineer-in-charge before placing the order showing the position of the components as mentioned above. This includes all labour & material as directed by Engineer-in-charge.

Technical Specification No. 2

Supply, Installation, Testing & Commissioning of NB-IoT/4G LTE Smart CCMS Meter based Lighting Control Panel suitable for centralized control and monitoring of the street lights, complete with Smart Energy Meter, inbuilt Communication Controller with SIM connectivity, cloud-based lighting management software and web/mobile monitoring system for remote operation of the Panel.

The Panel enclosure shall be fabricated from CRCA sheet steel (minimum 16 SWG body, 14 SWG mounting plate and gland plate) with IP65 ingress protection and IK10 impact resistance, powder coated RAL 7032 with 7-tank process, complete with locking arrangement, proper earthing terminal, engraved aluminium name plate and internal wiring with ferrules, terminals and connectors as per industrial standards.

The 3-phase Smart Lighting Control Panel shall have load capacity up to 20 KW (25 kVA) (or as required) and include reputed make electrical components such as MCBs, contactors, bus-bars, terminals (Connect well/Elmex) and accessories like ABB / Schneider /L&T or equivalent.

The system shall monitor Phase Voltage, Phase Current, Power Factor, Frequency, total kW, kVA and cumulative kWh and detect faults such as MCB trip, Contactor fault, Mains failure, Door open status, Over-voltage, Under-voltage, Over-current and Over-voltage alerts.

The CCMS shall support remote On/Off control, schedule-based operation (Astro timer/configurable schedule), Real-time monitoring, energy reporting, event alerts and data logging through cloud-based Street Light Management Software, with two-way Communications, Firmware OTA upgrade capability and minimum 30 days data storage, accessible through web and mobile application dashboards.

The system shall comply with IS-16444 and IS-15959 Communication Protocol standards, communicate securely over 4G/5G/NB-IoT Cellular Network and provide features such as Dashboard monitoring, Asset Management, daily Operational Reports, Energy Consumption Reports, SMS/email alerts and GIS Map view of feeder Panels.

The Panel shall be outdoor type with Canopy provided with Bypass Single Pole MCB of 32 A (3 Nos.)

It shall be provided with ELCB, Door Switch, Wires, Connectors, Terminal Blocks as directed.

The Network shall be with advanced & latest technology for communication and shall be NB-IoT/ 4G/ 5G. The network readiness at site location shall be 100% and it shall be public network only. The network up-time must be 99% as per the DoT guidelines and shall have license to deploy & maintain the network from Department of Telecom, Govt. of India. The network service provider (NSP) shall have experience of providing network service under Make in India Initiative in any Public/Private sector and have capability to scale & maintain the network during the life span. However, time to up-gradation shall be done by DPA.

The CCMS based Lighting Management Software shall have the facility to monitor & control from any internet connected device(s) like Laptop, Desktop, Mobile apps with 2 steps/factor login authentication for security of data access. This CCMS Lighting Management Software/app shall be developed under Make in India by Indian Registered Agency only and must have experience of building scalable software's or mobile apps in the past for India based users/subscribers in any sector. The software must be hosted on MeitY (Ministry of electronics and IT Deptt., Govt. of India) approved cloud server and managed by cloud service provider (CSP) agency empanelled on GoI, MEGHARAJ portal as CSP. The encrypted data should not cross or storage (shall not be done or accesses physically or virtually) it should be within boundaries of India. The CSP shall have Data Centers (DC) and Data Recovery Center (DR) in India and must have experience of handling

the data communication. The Cloud Server infrastructure shall be certified to International Organization for Standardization (ISO) 27001. It must be scalable platform for easy future upgrade developments and efficient maintenance. The server availability (SA) must be 99.5% or higher. The server shall be designed in such a way that, the CPU utilization < 60% and disk utilization <75%. The cloud server shall use cloud services or stack of Azure /AWS.
The CCMS Lighting Management Software shall support both CCMS feeder and individual light monitoring & control with the same platform with single login to the system, without using separate software or login for the end user. The inventory management feature is must. The Lighting Management Software (LMS) should be deigned, hosted and managed by Indian origin organization within India under Make-In-India Policy, GoI. This LMS software shall support the scalablity, support virtual Group creation and operation, manual operation (On/Off), schedule On/Off, Metering data collection, Scheduling based on astronomical clock (default), display real time Alert status, data polling time minimum every 1 hour (default) and configurable up to 1 minute. Software shall support, graphical representation for project KPI's.

The software shall have provision for selection of astronomical Mode, Calendar (Schedule mode), Manual Mode. The dashboard must have Street Light & CCMS Panel Status, Energy saving status of whole system, Summary of all devices connected – Online, Offline, faulty, maintenance mode and no power details. Also, alert, project inventory details shall be displayed on dashboard. The operation response time in maintenance mode shall be < 10 sec, data update time on LMS < 10 min, Alert reflection time < 10 sec, can map all switching point on the map/Google map interface or web based digital map. All control point's data/status visualization on a map for monitoring On/Off commands from Map/List View, Wattage on each control points, Voltages on each control points, Current on each control points, PF on each control points, Metering kWh cumulative for total system, Metering kVAh cumulative for total system, Incoming supply status on each control points, High/Low voltage on each control points, Overload on each control points, Over-current of all control points, Over/ Under voltage of all control points, Power outage of all control points, Manual On or Off of all control points, Power Theft of all control points, Relay failure of all control points, Lamp Failure of all control points, Lamp Life of all control points, Node loss of all control points, Alert Status, All alert records/ history, Alert level & ID, Ability to clear/acknowledge or auto resolved the alarms, Display alarm list with date & time stamping, Display details for each alarm type, status, area Easily navigate between maps & alarms, Alarm details along with corrective suggestions, "Provision to configure max 3 Mobile Number's for getting alerts on email, SMS or from dedicated WhatsApp number to group," Alert Configurations (severity), Escalation Matrix Management & Reporting, Setting new On/Off timings, Setting the Real Time Count (RTC) time of Automation unit, Reset the unit.

The remote FOTA upgrade facility support is must. The software application support "Create hierarchy ex) City > Region / Ward > Lane / Road > Street Light", Grouping control points, Alert level with ID and probable condition must be mentioned under alert ID. The LMS server should support Real time data storage for last 24 Months, archive data on cloud for 5 years. All historical data shall be stored for 5 years. The LMS shall support reports for Energy saving report, Lamp failure report, Actual hours of operation, Lamp up-time (%), Export as CSV format, Manual & Auto Generated Reports, Events & Log Management, Daily, Monthly, Yearly Trends, Hierarchy Definition & Creation, Group Creations, User authorization Management, log-in credentials, Group & Role Management, Add/remove control points by admin user, Semi-manual commissioning through application, all control points continue working in local mode as per Astro time in case of network failure or no communication.
The hardware commissioning must be done through mobile app and upload details to LMS during installation & commissioning. The QR code reader app must be provided for onsite commissioning and QR code sticker shall present on CCMS Panel, individual controller & lights comprising of OEM details, model, year & month of manufacturing, unique serial number, wattage details, Panel details etc.

Technical Specification No. 03

SITC of Decorative Post Top 40/60/100W, Power Module LED, 3000/4000/6000 K, IP 66. Upper part in circular shape & Lower part in """"V"""" shape, both are in single piece made of die-cast aluminum using pressure die casting process. Manufacturer's name/logo should be embossed on the body. Prismatic/Frosted screen in Flat tempered glass. Pure polyester powder coating in customised colour Metallaic Grey. Silicone gasket ensures with the IP Rating of IP 66. Preferable Height of 500 mm., Diameter of 420 mm. & Weight of 8 Kgs.
Power LED Module with Company/brand name printed on PCB with the metal core plate. CRI >70. LED chips of CREE/NICHIA/OSRAM/LUMILED make shall be used. Electronic Power Supply for LED Module, which offers Protection against Short Circuit, Over- Voltage & Over - Current, with in-built surge protection (an additional surge protection device of 10kV also provided in-built the fixture). Protection screen in prismatic/frosted tempered glass with impact resistance IK 08 minimum. Optics with refractive lens in PMMA which should offer all the Type II, III, IV & V distributions. LED Lifetime >1,00,000 Hours @Ts 85°C. LM80 report from LED Manufacturer should be submitted. Safety test report as per IEC 60598/IS 10322 from UL/UL Authorized/3rd Party NABL should be submitted. LM79 report also should be submitted from UL/UL Authorized/3rd party NABL Laboratory. BIS Certificate with manufacturer's name of the proposed brand should be submitted. Sample should be submitted for approval from concerned engineer-in charge.
Architectural 4 M Post Top Pole
4 M height Post Top Pole (Hot dip galvanized PU painted) Made of Steel Pipe Section of 89 mm. dia. & 4 mm. thick. Entire Pole shall be made to provide pleasing aesthetics as approved by the Engineer-in-Charge. After Fabrication, Entire Pole should be shot blasted for the effective adhesion of 3 layer coating so as to avoid the corrosion. The Pole should be provided with an inbuilt Junction Box with 1 No. 32 A Heavy Duty Stud type connector and 1 No. 6 A SP MCB, at the bottom - the inbuilt box should have a flush door of suitable size. The Pole to be provided with suitable size base plate. This base plate along with foundation bolts of suitable size to be used for ensuring firm grouting into the specially designed RCC foundation. Wind pressure calculation as per IS 875 (Part-3) & Structural calculation report as per EN40 should be submitted to verify the Pole design. Pole to be painted in 3 layer coating (coating thickness - 100 microns minimum) in which 1st layer with etch primer, 2nd layer with epoxy primer & 3rd final layer with PU paint - customised colour Metallaic Grey.
The Pole & Light Fitting shall be one of the NERI/ DW Windsor/GHM/Ligman/Unilamp//Iguzzini make only.

Technical Specification No. 4

The Poles shall be erected in plumb at an approx. distance of 15 Meter, bolted on a precast RCC foundation with a set of foundation bolts. The Pole foundation to be prepared as per the following drawing by excavation of pit by removal & re-fitting of the paver blocks as per the original. All the waste materials to be removed, shifted & dumped in a place within 3 Km. as directed by the Engineer-In Charge.
This includes providing and laying in position machine batched & mixed design mix of M-30 grade cement concrete as per the approved design mix, including pumping of concrete to site of laying including the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as directed by the Engineer-in-Charge."(Note :- Cement content considered in this item is @ 330 Kg./Cm. "Excess/ less cement used as per design mix is payable/recoverable separately). The Steel reinforcement for RCC work including straightening, cutting, bending, placing in position and binding all, complete up to plinth level & above. Thermo-Mechanically treated bars of grade Fe-500 D or more. Foundation Bolt shall be hot dipped Galvanised & preferably of "J" type and shall be buried in the RCC with proper projected length over the foundation thereafter pit shall be filled with 1:2:4 CC mix of cement concrete and 6 to 20 mm. graded metal course aggregate concrete. DWC Pipe of suitable size shall be kept while concreting

for the In & Out cables. This also includes supply & installation of earthing for each Pole.

Technical Specification No. 5

(A) This includes supply at site 1.1 KV grade, 4 Core, 120 Sq. mm. Aluminum conductor, XLPE insulated armored cable confirming to IS: 7098 (Part-I) 1985 with up to date amendments and of approved make with ISI mark. The cable shall have marking/embossing at the interval of every Meter showing its progressive length. The contractor shall produce the routine test certificate during supply of cable at site. The rate shall inclusive of all taxes, duties, packing, forwarding, insurance, transportation and unloading at the site of work etc.

(B) This includes supply at site 1.1 KV grade, 4 Core, 50 Sq. mm. Aluminum conductor, XLPE insulated armored cable confirming to IS: 7098 (Part-I) 1985 with up to date amendments and of approved make with ISI mark. The cable shall have marking/embossing at the interval of every Meter showing its progressive length. The contractor shall produce the routine test certificate during supply of cable at site. The rate shall inclusive of all taxes, duties, packing, forwarding, insurance, transportation and unloading at the site of work etc.

(C) This includes supply at site 1.1 KV grade, 4 Core, 25 Sq. mm. Aluminum conductor, XLPE insulated armored cable confirming to IS: 7098 (Part-I) 1985 with up to date amendments and of approved make with ISI mark. The cable shall have marking/embossing at the interval of every Meter showing its progressive length. The contractor shall produce the routine test certificate during supply of cable at site. The rate shall inclusive of all taxes, duties, packing, forwarding, insurance, transportation and unloading at the site of work etc.

(D) This includes supply at site 1.1 KV grade, 4 Core, 16 Sq. mm. Aluminum conductor, XLPE insulated armored cable confirming to IS: 7098 (Part-I) 1985 with up to date amendments and of approved make with ISI mark. The cable shall have marking/embossing at the interval of every Meter showing its progressive length. The contractor shall produce the routine test certificate during supply of cable at site. The rate shall inclusive of all taxes, duties, packing, forwarding, insurance, transportation and unloading at the site of work etc.

(E) This includes supply at site 1.1 KV grade, 3 Core, 2.5 Sq. mm. Copper Conductor flexible Cable confirming to IS: 7098 (Part-I) 1985 with up to date amendments and of approved make with ISI mark. The cable shall have marking/embossing at the interval of every Meter showing its progressive length. The rate shall inclusive of all taxes, duties, packing, forwarding, insurance, transportation and unloading at the site of work etc.

Technical Specification No. 6

Laying of 4/3 Core Armored /Flexible Cable in the underground in the DWC Pipe with ISI Marked to be supplied & laid with min. 750 mm. defth below the ground level after removing the exiting Paver Blocks and after laying of the Cables, the back filling & re-set of the Paver Blocks shall be done as per the original as directed by the Engineer-in-Charge.

Technical Specification No. 7

This includes laying of single length cable of size up to 4 Core, 120 Sq. mm. LT armoured aluminum Conductor XLPE Cable of 1.1 KV. The contractor has to arrange the horizontal boring machine and should bore minimum 2 Meters below the ground level in the Road/RCC Crossings as directed by the Engineer-in-Charge. This also includes insertion of HDPE Pipe of size 4" or more dia. & wall thickness of 12 mm. having coupler arrangement at one side or flexible pipe of same dia with 400 Meter length may be used for above work as directed. The work is to be executed at various locations and will be of different lengths. After completion of boring and cable insertion, the Contractor has to place cable route marker wherever directed at an interval of 20 Meter. It shall be of heavy duty HDPE plate with Red Radium colour. The work includes complete labour & material and to entire satisfaction of Engineer-in-Charge.

Technical Specification No. 8

This includes preparation of earth station with chemical electrode of 50 mm.. X 3 Mtrs.& 25 mm. X 3 Mtrs. dimensions with back fill compound as directed. The work also includes Pole Earthing by providing 2 Mtrs. Of 40 mm. dia. & 3 mm. thick GI Class – B Pipe for Earthing.

A cement concrete (ratio 1:4:8) chamber of at least 30 cm. X 30 cm. shall be provided just below the surface of ground over the funnel for watering and having RCC/CI cover of suitable size as directed. This also includes removal of extra-excavated earth from the site.

Technical Specification No. 9

This includes supply, laying/fixing of GI Strip (Single/Double Run) from Panel/Feeder Pilar/Pole to the Earthing Station as directed by the Engineer-in-Charge with necessary clamps, nut & bolts. The work includes all labour and material as directed by Engineer-in-charge.

Technical Specification No. 10

The work includes supply at site of the Cable Jointing Kit for LT Cable of the size of 16/25 Sq. mm. and 50 Sq. mm.

Technical Specification No. 11

The work includes fixing of the Cable Jointing Kit in LT Cable of the size up to 50 Sq. mm. with all labour & material as directed by the Engineer-in-Charge.

Sd/-

Signature & Seal of Contractor

Executive Engineer (E)
Deendayal Port Authority