20 YEARS Integrated Research and IRADe Action for Development

Subject: Request for Detailed Technical and Commercial Quotation

Requirement

IRADe invites experienced vendors and developers to submit **Detailed Technical and Commercial Quotations** for the **design, supply, installation (both civil and electrical), commissioning and maintenance** of an **Integrated Solar Hybrid system with Battery Energy Storage System (BESS)**, under an Odisha Government collaborative infrastructure pilot project–related engagement with IRADe.

Location

S.No	Site Name	Block	District	Coordinate
1	**Narsinghpatana Multipurpose Cyclone Shelter**	Bramhagiri Block	Puri	Lat: 19°45'49.57"N Long: 85°42'11.53"E
2	**Keutajanga Multipurpose Cyclone Shelter**	Astarang Block	Puri	Lat: 19°54'35.3"N Long: 86°13'42.1"E

Load and backup system requirement

Table 1: Actual Existing Critical Load Assessment for Both Multipurpose Cyclone Shelters (Based on Site Survey)

S. No.	Description of Load	Quantity (Nos.)	Unit Rating (W)	Connected Load (W)
1	Led lighting – Basement and Corridor	10	10	100
2	Led lighting– indoor (rooms and washroom)	15	10	150
3	Flood lights	2	50	100
4	Ceiling fans	10	50	500
5	Submersible water pump	1	1200	1200
6	Charging points	10	20	200
7	Provision for extra miscellaneous emergency load in future			750
	Total Connected / Provisioned Load	**3 kW**		

Table 2: Other site related information:

Parameter	Site 1 – Bramhagiri (Narsinghpatana MCS)	Site 2 – Astarang (Keutajanga MCS)
Building load (kW)	3 kW	3 kW
DISCOM bill availability	No	Yes
BESS backup required for (hrs)	24 hrs	24 hrs
Rooftop area and condition	Around 2,500 sq.ft (RCC, Good condition)	Around 4,000 sq.ft (RCC, Good condition)
Grid status	Disconnected by DISCOM	Connected.

DG backup	No	Yes
Existing solar and BESS	0.5 kWp off-grid with 7.2 kWh BESS	0.5 kWp off-grid with 7.2 kWh BESS
Net metering feasibility	Requires new connection & upgradation	Requires DISCOM approval & upgradation

Important Instructions for Submission of Bid

- The bidder shall submit **two (2) separate techno-commercial quotations** for the two identified Multipurpose Cyclone Shelter (MCS) sites mentioned in this tender document.
- Since both project sites are located in coastal regions within approximately 1 km from the seashore, the proposed mounting structures and associated balance-of-system components shall be:
  - **Designed for high cyclonic wind speed conditions**, and
  - **Corrosion-resistant suitable for coastal environmental conditions**.
- The proposed renewable energy system shall be **on-grid, net-metering compatible, and compliant with applicable DISCOM/regulatory requirements.**
- The proposed **Battery Energy Storage System (BESS) shall be designed to provide a minimum backup autonomy of 24 hours** for the identified critical loads.
- Preference shall be given to **Lithium-Ion (Li-ion) based BESS technology**.
- The **inverter and associated auxiliary systems shall be adequately sized to handle the starting current/load requirement of a 1.5 HP submersible water pump.**

Eligibility and Prior Experience Criteria

The bidder shall possess a minimum of 3–4 years of relevant experience in the design, engineering, supply, installation, testing, commissioning, and Operation & Maintenance (O&M) of Solar PV Systems and Battery Energy Storage Systems (BESS), including associated civil and electrical works.

Preference shall be given to bidders having prior experience in execution of projects related to:

- Public infrastructure facilities,
- Emergency/backup power systems,
- Disaster-resilient or critical infrastructure applications, and
- Coastal or high wind-speed zone installations.

The bidder shall submit relevant supporting documents such as work orders, completion certificates, commissioning certificates, client references, or other documentary evidence in support of the claimed experience as mentioned in **"Bid Submission Requirement"** section.

Bid Submission Requirements

Sl. No.	Category	Requirement / Details to be Submitted by Vendor
1	Techno-Commercial Proposal	Vendors shall submit detailed Techno-Commercial Quotations for both Solar-only and Solar + Wind (if available) Hybrid configurations.

	2	Separate Quotations	**2 Separate quotations** shall be submitted for each of the two identified shelter locations.
	3	System Sizing	Detailed estimation of Solar PV capacity along with corresponding BESS sizing and system configuration **as per load mentioned above**.
	4	EPC Scope	Comprehensive EPC proposal including design, engineering, supply, installation, testing, commissioning, validation, and handover plan.
	5	Cost Estimation	• **Itemized CAPEX and OPEX** estimates covering design, procurement, supply, installation, commissioning, operation & maintenance, AMC, and warranty. • Vendors shall provide unit-wise/item-wise cost breakup for all major system components and services.
	6	Inclusive Pricing	All quoted costs shall include taxes, GST, labour charges, transportation, insurance, installation, commissioning, and all incidental expenses.
	7	AMC Requirement	Annual Maintenance Contract (AMC) and O&M cost shall be clearly specified in the proposal.
	8	Domestic & Commercial Project Experience	Details of domestic and commercial rooftop solar projects executed during the last 2–3 years along with project completion certificates shall be submitted.
	9	Company Profile	Detailed company profile including organizational background and technical capabilities.
	10	Financial Documents	Audited annual turnover certificates/statements for FY 2022–23, FY 2023–24, and FY 2024–25 shall be submitted.
	11	Execution Schedule	Detailed project implementation schedule supported with Gantt chart indicating project completion within 1.5–2 months.
	12	Cyclone Resistant Structure	Vendors shall provide details of rooftop mounting structure designed for high cyclonic wind speed conditions and coastal environment.
	13	Supporting Structural Documents	Structural design calculations, test certificates, technical datasheets, videos, wind load calculations, and corrosion protection details shall be submitted.
	14	Domestic and Commercial LT Category Experience	Vendors shall provide details of executed Commercial LT rooftop solar projects including capacity, client details, and installation locations.
	15	Supporting Experience Documents	Client testimonials, work orders, project completion certificates, commissioning

			certificates, and other supporting documents shall be submitted.
	16	Virtual Net Metering (VNM) Experience	Vendors shall confirm prior experience in execution of commercial VNM-based rooftop solar projects and submit relevant supporting documents, if applicable.
	18	Coastal Installation Requirement	Since both shelters are located within 1 km from the seacoast, all structures and components shall be corrosion-resistant and suitable for coastal conditions.
	19	Grid Connectivity Requirement	Proposed system shall be on-grid and net-metering ready in compliance with applicable DISCOM regulations.
	20	BESS Backup Requirement	Proposed BESS shall provide minimum 24-hour autonomy for the identified critical load.
	21	Battery Technology	Only Lithium-Ion (Li-ion) based Battery Energy Storage System (BESS) shall be preferred.
	22	Pump Starting Load Requirement	Inverter and auxiliary systems shall be capable of handling the starting current/load of a 1.5 HP submersible pump.
Submission Address	**Interested bidders are requested to submit their Expression of Interest (EoI) duly signed and sealed on or before 10/06/2026 (EoD) to the address provided below.** **Mr. B.K. Sarkar** **Chief Administrative Officer, IRADe** C-80, Shivalik, Malviya Nagar, New Delhi – 110017, India; Phone: +91-11-2667 6180-81; Email: bk.sarkar@irade.org, nmehta@irade.org, rchaudhuri@irade.org		