

GSM / IoT Smart Controller for Remote Power Management Rollout

1. Introduction

The organization intends to deploy a **GSM / IoT-based Smart Controller Solution** across approximately **400 locations** to enable centralized control of electrical power for non-critical loads. The system will support remote ON/OFF, automation, monitoring, and energy optimization.

2. Objective

- Enable **remote ON/OFF control** of branch power from Head Office/Zonal Office/Regional Office
- Improve **energy efficiency and reduce electricity costs**
- Provide **automation and scheduling capabilities**
- Ensure **safe isolation of non-critical loads**
- Maintain uninterrupted power to **critical infrastructure**

3. Scope of Work

3.1 Supply

- GSM / IoT Smart Controllers
- Power contactors / MCCB interface modules
- Communication modules (SIM / Ethernet as applicable)
- Central monitoring software/dashboard

3.2 Installation & Integration

- Installation in existing electrical panels
- Integration with contactor-based master switch
- Wiring, testing, and commissioning
- Connectivity setup (GSM / Internet)

3.3 Configuration

- Central dashboard access for Head Office/Zonal/Regional Office
- Mobile application access
- SMS-based fall-back control
- Scheduling rules and automation
- Alert setup (power failure, device offline, faults)

3.4 Training & Documentation

- Training for facility, security, and branch staff
- SOP for operations and safety

- Electrical single-line diagram at each site

4. Functional Requirements

4.1 Core Features

- Remote ON/OFF control from central system
- Mobile app & web dashboard access
- SMS command fallback (critical requirement)
- Time-based scheduling
- Event logging and audit trail
- Power outage and restoration alerts
- Manual override at branch

5. Load Management Requirements

Controlled Loads (Non-Critical)

- Lighting
- Power sockets
- Pantry equipment
- Air conditioning
- Fans
- Printers

Excluded Critical Loads

- Servers & server racks
- UPS systems
- Network equipment
- CCTV systems
- Fire alarm

Must remain with dedicated UPS

6. Technical Requirements

- Compatible with **contactor/MCCB-based switching systems**
- Network support: **GSM (4G/3G), optional LAN/Wi-Fi**
- Secure communication (encrypted protocols)
- Offline command support via SMS
- Device uptime $\geq 99\%$
- Scalable cloud-based or centralized platform
- API capability (preferred for future integrations)

7. Safety & Compliance

- Compliance with IS / IEC standards
- Electrical isolation between control and power circuits
- Overload and short-circuit protection compatibility
- Lockout/Tagout (LOTO) compatibility
- Surge protection and earthing standards

8. Deliverables

- Installed GSM / IoT controllers at all locations
- Configured automation schedules
- SOPs and safety instructions
- Training completion reports
- Warranty and AMC details

9. Service & Support

- **Minimum 2-year warranty**
- SLA-based support (response & resolution time)
- Remote diagnostics capability
- Preventive maintenance plan
- Pan-India service network (mandatory)

10. Vendor Qualification

- Proven experience in IoT / energy management solutions
- Successful multi-site deployment experience
- Strong telecom/GSM integration capability
- Nationwide support presence

11. Proposal Submission

Vendors must provide:

- Technical architecture and solution design
- Commercial proposal (BoQ-wise)
- Implementation plan (phase-wise rollout)
- Product datasheets
- Customer references/case studies
- SLA & support model

12. Timeline

- RFP Release: 05-06-2026
- RFP queries: 10-05-2026
- Proposal Submission: 12-05-2026
- Email: tenders.gad@pnbhousing.com
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