PrimeTech
TESTING & COMMISSIONING

CORPORATE PROFILE

TESTING | COMMISSIONING | PROTECTION | DIAGNOSTICS



PrimeTech Testing & Commissioning

AIS & GIS Substations up to 765 kV

ABOUT OUR COMPANY

PrimeTech Testing & Commissioning is a specialized electrical engineering company providing comprehensive Testing, Commissioning, Maintenance, and Diagnostic Services for EHV, HV, and MV electrical systems.



We deliver reliable, safe, and elite engineering solutions across the power ecosystem. Our expert teams are engineered to manage critical infrastructure deliverables, maximizing efficiency while maintaining zero-compromise safety metrics across all testing landscapes.

Through precise asset evaluation and standard-compliant diagnostics, we ensure that power plants, switchyards, and distribution networks achieve maximum uptime and perfect operational synergy.

OUR VISION

To become a trusted leader in Testing & Commissioning Services by delivering safe, reliable, and innovative solutions for the power industry.

OUR MISSION

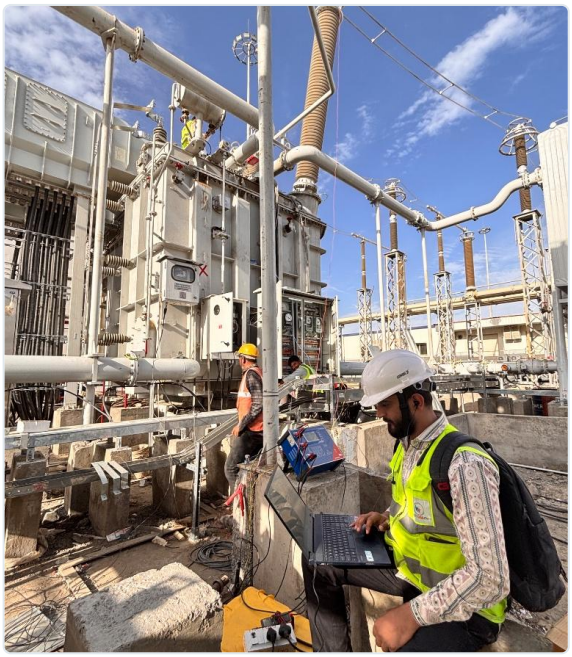
- Ensure the highest quality standards.
- Deliver projects safely and on schedule.
- Provide technically advanced testing solutions.
- Build long-term relationships through excellence.

OUR EXPERTISE

We provide end-to-end testing & commissioning solutions across high-voltage electrical installations up to 765 kV.

SUBSTATIONS & SWITCHYARDS

- AIS Switchyards up to 765 kV
- GIS Substations up to 765 kV
- Busbars & Bus Couplers
- Isolators & Earth Switches



TRANSFORMERS & APPARATUS

- Power Transformers
- Current Transformers (CT)
- Potential Transformers (PT/CVT)
- Lightning Arresters (LA)

PROTECTION & CONTROL ARCHITECTURE

- Circuit Breakers (SF6, Vacuum & Oil)
- Protection & Control Panels
- Numerical Protection Relays
- Battery & DC Systems

SPECIALIZED SERVICES (PART I)

PRIMARY EQUIPMENT TESTING

- **CT Ratio & Polarity:** Verifying core alignment and saturation thresholds.
- **Magnetization Test:** Excitation characteristics mapping for CT cores.
- **PT/CVT Diagnostics:** Ratio testing and high-voltage insulation tracking.
- **Circuit Breaker Timing Test:** Executing millisecond accuracy closing/tripping analysis.
- **Contact Resistance Measurement (CRM):** Micro-ohm level path analysis.
- **Dynamic Resistance Measurement (DRM):** Arcing contact health inspection.
- **SF6 Gas Analysis:** Moisture, dew point, and purity evaluation.

TRANSFORMER DIAGNOSTICS

- **Tan Delta & Capacitance:** Dielectric dissipation factor diagnostic for insulation health.
- **Winding Resistance Test:** Multi-tap transformer winding continuity and balance measurements.
- **Turns Ratio Test (TTR):** High-precision voltage transformation verification across all vectors.



SPECIALIZED SERVICES (PART II)



PROTECTION SYSTEM TESTING

We validate numerical protection infrastructure to ensure responsive trip profiles and precise fault isolation parameters.

- **Relay Secondary Injection:** Calibration and operational timeline verification using advanced test kits.
- **Relay Primary Injection:** Comprehensive configuration loop testing under realistic current scenarios.
- **Differential Protection Testing:** High-sensitivity phase comparison validation for transformers and generators.
- **Distance Protection Testing:** Multi-zone impedance tracking and reach boundary validation.
- **Overcurrent & Earth Fault Protection:** Curve matching and grading compliance check.
- **REF (Restricted Earth Fault) Testing:** Balanced current configuration fault protection.
- **Master Trip Relay Testing:** Contact response time validation.

CONTROL & OPERATIONAL STABILITY

CONTROL & PROTECTION VERIFICATION

- Scheme Check (BIBO - Binary Input Binary Output)
- Closing & Tripping Circuit Integrity Verification
- Control Circuit Wiring & Interlock Logic Audits
- Alarm, Annunciation & Indication Circuit Checks
- Auto-Reclose & Synchronizing Scheme Verification



STABILITY & FUNCTIONAL TESTING

- End-to-End Testing via GPS Time-Sync Kits
- Busbar & Transformer Differential Stability Tests
- Inter-Tripping & SCADA Signal Validation
- Remote Operation & Complex Logic Verification

VALUE PROPOSITION & SECTORS

WHY CHOOSE PRIMETECH?

✓ **Experienced Testing Engineers:** Highly skilled professionals with deep domain knowledge.

✓ **Modern Testing Equipment:** Calibrated, cutting-edge software & hardware platforms.

✓ **Compliance with Global Standards:** Total alignment with IEC & IS metrics.

✓ **Fast Mobilization:** Agile team deployments across India pan-national corridors.

✓ **Quality Documentation:** Transparent, itemized engineering reporting frameworks.

✓ **Safety Integrity:** Strict execution of industrial HSE rules.



INDUSTRIES SERVED

- Power Utilities
- Oil & Gas Refineries
- Renewable Energy Plants
- Petrochemical Sectors
- Industrial Distribution
- Transmission Projects

LEADERSHIP & CONTACT

Get in touch with our leadership team to coordinate project testing timelines or request engineering consultations.



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PRIMETECH TESTING & COMMISSIONING

Testing | Commissioning | Protection | Diagnostics