

**POWER SOLUTION** 

## **Power Solution**

### >> Our Solution

Telkominfra's energy solution offers a fully integrated power management system tailored to various infrastructure requirements whether grid connected or off-grid. Leveraging advanced technology, proven operational expertise, and a nationwide delivery network, we enable clients to optimize energy consumption, improve system reliability, and achieve greater operational efficiency with reduced total cost of ownership.

### Advantages

- We provide end-to-end power solutions spanning design, deployment, operation, and maintenance tailored for both on-grid and off-grid infrastructures.
- Our solutions are competitively priced and delivered with exceptional speed and service quality, ensuring timely execution and high customer satisfaction.
- We offer flexible service models such as Power as a Service (PaaS), allowing clients to reduce capital expenditure while maintaining operational reliability.
- We collaborate with trusted energy and technology partners to ensure the use of high quality, future ready components in every deployment.
- Our nationwide coverage and 24/7 Integrated Operation Center (IOC) enable real-time monitoring, proactive maintenance, and consistent operational excellence.

### Our Scope of Work

### Deployment:

Green energy, Power Deployment (On & Off Grid)

### Operation:

Power As A Services, Power Engineering, Power Operation & Maintenance (On & Off Grid), Carbon Solution

### 01 ▶ Green Energy

Green energy solution with solar PV implementation

### $02 \blacktriangleright$ Power Deployment (On Grid & Off Grid)

Power System Planning & Installation

### 03 ➤ Mechanical Electrical

ME Installation for Telco Network

### 04 ▶ Power as a Service

**Electricity Supply with OPEX** 

### 05 ▶ Power Reengineering

Power System Dismantle & Relocation

### 06 ➤ Power Operation & Maintenance (On & Off Grid)

Power System Maintenance

### 07 ▶ Carbon Solution

Carbon Management for the Telco Industry



## **Power Solution**

### Deployment

### Green Energy

Green Energy service focuses on delivering clean and sustainable energy solutions to support telecom infrastructure, especially in remote or off-grid areas. It combines solar power, battery storage, and smart monitoring for maximum efficiency.

### Service Offered :

- Solar Panel System Design & Installation
- Battery Energy Storage System (BESS)
- Renewable Energy Hybrid Solutions
- Green Power Site Feasibility Assessment

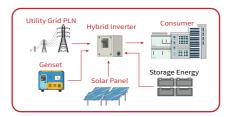
### Advantages:

- Environmentally friendly and low emission
- Reduces fuel dependency and operational cost
- · Scalable and quick to deploy in remote areas
- Enhances energy availability and resilience

### ▶ Scope of Work :

· Renewable energy site survey and simulation

- · Solar PV and battery installation
- Hybrid system integration (solar + genset)
- Remote monitoring and maintenance



### >> Power Deployment (On & Off Grid)

Power Deployment services provide end-to-end infrastructure development for both on-grid and off-grid telecom sites. It includes design, installation, commissioning, and integration of power systems.

### Service Offered :

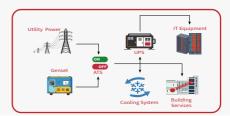
- Grid and Off-Grid Power System Deployment
- · Electricity Planning & Engineering
- Generator and Rectifier Installation
- Power Distribution System Setup

### ▶ Advantages:

- Nationwide project delivery capability
- Expertise in both urban and remote environments
- Efficient project management and logistics
- Fast-track implementation with proven methodology

### Scope of Work:

- Technical survey and engineering design
- Electrical system installation (AC/DC)
- · Integration with telco infrastructure
- Testing, commissioning, and documentation



### >> Mechanical Electrical (ME)

Telkominfra offers Mechanical & Electrical (ME) services to support data centers, STOs, and network sites. This includes design, construction, and maintenance of MEP (mechanical, electrical, plumbing) systems.

### ➤ Service Offered :

- Electrical System (UPS, Generator, Panel)
- HVAC and Precision Cooling
- Fire Suppression & Alarm System
- CCTV and Access Control

### Advantages:

- Certified data center compliance (CDCP, CDCS, etc.)
- Experienced in national-scale deployments
- Tailored solutions for different site types
- Comprehensive documentation and QC process

### ➤ Scope of Work:

- $\bullet$  Site survey, layout, and single-line diagram
- Full MEP installation and cabling
- Verification and safety compliance testing
- Preventive and corrective maintenance



# Power Solution Operation

### >> Power as a Service (PaaS)

Power as a Service offers customers a flexible, OPEX-based model for power infrastructure without upfront capital investment. Telkominfra manages end-to-end power services with performance quarantees.

### Service Offered :

- Monthly Power Subscription Model
- End-to-End Managed Power System
- Full Investment, Operation, and Maintenance by Telkominfra
- Customized SLAs and Performance Reporting

### Advantages:

- Zero CAPEX for customer
- Predictable monthly cost (fixed or based on usage)
- · Quick deployment with fast ROI
- Enables customer focus on core business operations

### Scope of Work :

- · System provisioning and installation
- · 24/7 operation and monitoring
- · Fuel supply, maintenance, and repair
- Power availability performance assurance



### >> Power Reengineering

Power Reengineering aims to modernize and optimize existing power infrastructure by upgrading components and redesigning systems for higher efficiency and lower cost.

### Service Offered :

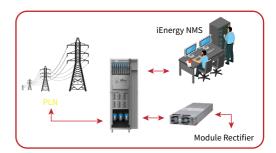
- Generator and Rectifier Modernization
- Power Load Balancing and System Retuning
- · Energy Efficiency Improvement
- Equipment Relocation and Retrofit

### Advantages

- · Lower operational cost through energy savings
- · Reuse of existing assets where possible
- Improved system availability and efficiency
- · Environmentally friendly upgrades

### Scope of Work:

- · Assessment of existing infrastructure
- Dismantling and upgrading obsolete equipment
- Design and implementation of new power topology
- Documentation and integration with existing systems



# Power Solution Operation

### >> Power Operation & Maintenance (On & Off Grid)

Comprehensive operation and maintenance services for on-grid and off-grid power systems, ensuring optimal uptime, cost efficiency, and performance.

### Service Offered :

- Preventive & Corrective Maintenance
- Fuel Management & Refueling Services
- Remote Monitoring via IOC
- Power System Troubleshooting

### Advantages:

- Nationwide coverage with regional support teams
- ISO-certified processes and systems
- Real-time monitoring and alarm escalation
- Increases system availability and prolongs asset life

### Scope of Work:

- Routine inspections and performance checks
- Component repair and replacement
- 24/7 issue escalation and resolution
- Site-based and centralized operations
- Documentation and integration with existing systems



### >> Carbon Solution

Carbon Solution is Telkominfra's initiative to support decarbonization through energy audits, emission monitoring, and deployment of low-carbon technologies in infrastructure.

### Service Offered :

- Carbon Emission Auditing
- Green Energy Conversion Planning
- Smart Metering and Energy Monitoring
- ESG (Environmental, Social, Governance)
   Compliance Advisory

### Advantages

- · Supports customer ESG and sustainability targets
- · Provides measurable carbon savings
- Helps reduce operational risk from future regulation
- · Demonstrates environmental responsibility to stakeholders

### Scope of Work :

- Assessment of carbon footprint persite or project
- Recommendation of green energy transition path
- Integration with digital monitoring platforms
- Emission reduction reporting and impact evaluation
- Documentation and integration with existing systems



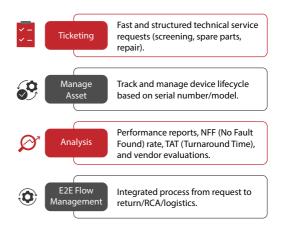
## **Netta & SPMS**

## Beyond End to End Managed Service and SPMS

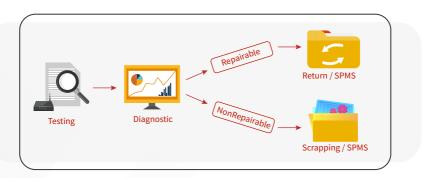
>> NETTA, supported by GSMS Netlife and certified with ISO 9001:2015, ISO 14001:2015, ISO/IEC 17025:2017, and ISO/IEC 27001, provides environmentally sustainable Asset Lifecycle Management services. These include spares management, local part swap and repair, and optimization using customized cloud-based reporting tools. NETTA delivers agile, transparent, and cost-effective solutions to optimize network maintenance and asset reuse.



## NetLife



### **SPMS FLOW**



**Reduce Logistic Cost** 

Performed in-country, with warranty to OEM specifications

Reduce Warehousing

Decide Repairable and Nonrepairable equipment

Beyond End to End

Creating full circular economy ecosystem

# **Project References**

Power System and ME Project



Long Term Services PLN Customer: PLN Period: 2017 - Now



Sewa Daya CDC Customer : Telkomsel Period : 2015 - Now



Large Power System Customer: Telkomsel Period: 2016 - Now



ME Data Center & Enterprise Customer: Gov. /Co. Period: 2016 - 2019



Generator Procuring and Installation Customer: Telkomsel Period: 2016 - Now



Small Power System Customer : Telkomsel Period : 2014 - Now



Scattered Generator Customer: PLN Period: 2017 - Now Telkominfra has delivered around 25 Project related Power System & ME Project (Since 2014, involving about 1200 Resources that covers 11 region national wide)

