



ARNOWA for Microgrids

Resilient. Intelligent. Sustainable
Energy Ecosystems.

Powering the Future with Smart Microgrids

Microgrids are the backbone of resilient, efficient, and sustainable energy systems. Arnowa's AIoT-powered platform enables real-time monitoring, intelligent control, and predictive optimisation of distributed energy resources, storage, and consumption—ensuring reliable, sustainable, and cost-efficient power for industrial, commercial, and remote installations.

Key Capabilities

Real-Time Energy Monitoring & Control



- Track generation, consumption, and storage in real-time
- Integrate solar PV, wind, diesel gensets, and battery systems
- Control loads dynamically for peak shaving and demand response

Smart Grid Automation



- Grid synchronisation and islanding management
- Auto-switching and load prioritisation during outages
- Remote diagnostics and control of distributed assets
- Integration of flexible loads

Renewable Integration & Optimisation



- Forecast solar production using AI-powered weather models
- Manage intermittency with hybrid storage and smart controls
- Maximise renewable penetration while maintaining grid stability

AI-Based Analytics & Forecasting



- Predict load profiles and generation patterns
- Detect anomalies and inefficiencies
- Enable predictive maintenance for critical infrastructure
- Self-optimising microgrid using agentic AI
- GenAI for easy understanding and actionable insights

Regulatory Compliance and Assessments



- Automated audit ready framework aligned reports
- Effortless energy analysis and audits
- Support for net metering, REC tracking, and emission disclosures
- Align with ESG and net-zero strategies

Energy Trading & Participation



- Peer-to-peer (P2P) energy trading within microgrid networks
- Virtual Power Plant (VPP) aggregation and participation
- Price-based optimisation and dynamic tariff management

A Few Use Cases



Campus & Industrial Microgrids

- Integrate solar, wind, and battery storage across campuses, industrial parks, or SEZs.
- Optimise internal energy flows while reducing dependency on the main grid.



Commercial & Smart City Precincts

- Enable precinct-level energy sharing between buildings and EV charging hubs.
- Support demand response and virtual power plant (VPP) participation.



Utilities & Grid-Connected Microgrids

- Support utilities with distributed energy integration and grid balancing.
- Enable ancillary services like frequency regulation and peak demand management



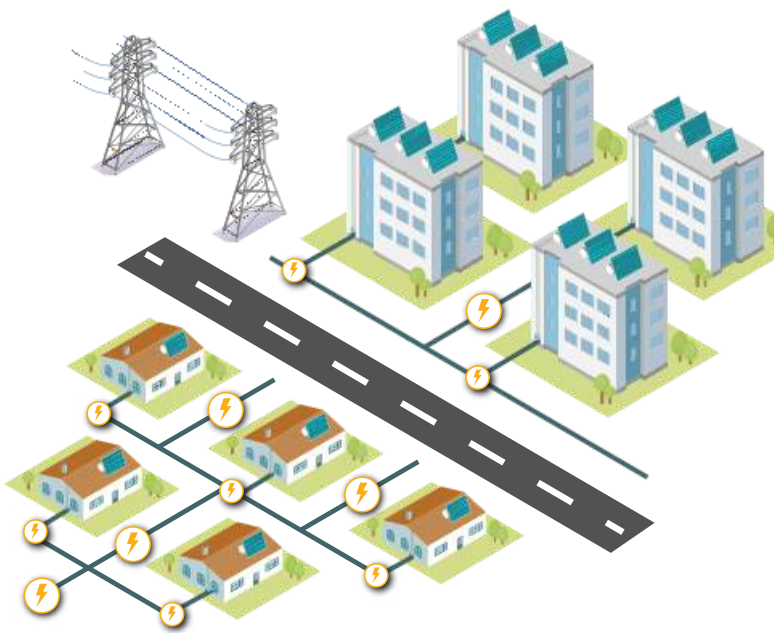
Remote & Islanded Microgrids

- Provide stable, clean power to mining sites, islands, and rural communities.
- Replace or minimise reliance on diesel gensets with renewables and storage.



Critical Infrastructure

- Guarantee reliable power for hospitals, airports, data centres, and defence facilities.
- Seamless islanding and auto-recovery to protect against grid failures.



Benefits at a Glance

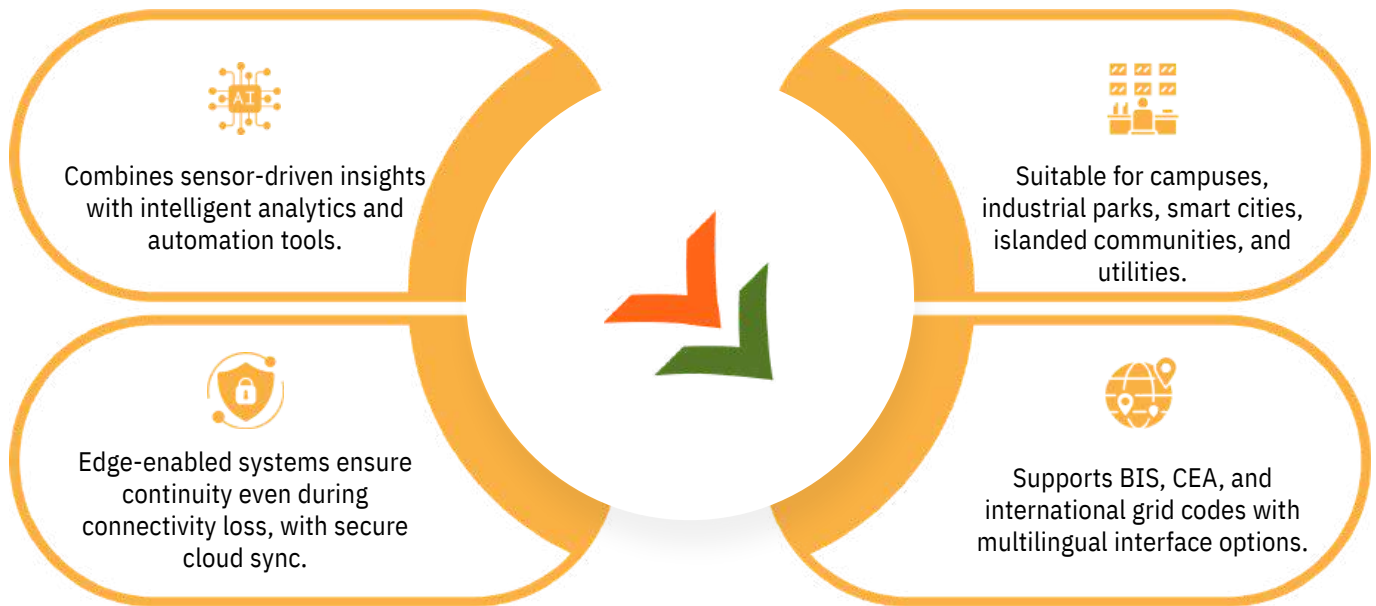
- **Energy Cost Savings** – Reduce grid dependence and optimise consumption with peak shaving and demand response.
- **Resilience & Reliability** – Maintain uninterrupted operations during grid failures through seamless islanding.
- **Sustainability Impact** – Cut carbon emissions with higher renewable penetration and automated reporting.
- **Future-Ready Scalability** – Expand capacity easily as demand grows, without overhauling infrastructure.
- **Grid Services Participation** – Unlock new revenue streams by providing ancillary services and joining VPP markets.

Tech Integration

- Smart IoT devices for real-time monitoring and control
- AI-driven forecasting and predictive optimisation
- Seamless integration of renewables and other energy resources
- Automated grid control with islanding and load shifting
- Edge and cloud intelligence for instant, scalable decisions



Why Choose Arnova?



Empowering Energy Resilience, One Microgrid at a Time.

✉ info@arnowa.com
🌐 www.arnowa.com

📍 **Australia**
1/24 Poletti
RdCockburn, Central WA
6164 Australia
Ph: +61 8 64677144

📍 **USA**
884 Sea Island Ln
Foster City, California
Ph: +1 415 658 9958

📍 **UK**
42 Cranbourne Gardens
London, NW11 0HP
United Kingdom
Ph: +447520636067

📍 **UAE**
A2 IFZA Business Park
Silicon Oasis, Dubai
Ph: +971 56 333 1416

📍 **New Zealand**
60A Olsen Avenue
Hillsborough, Auckland
Ph: +64 27 4444 7859

📍 **India**
179/36,12th B-Main Road
75th E-Cross 6th Block
Rajaji Nagar Bangalore
Ph: +91 93504 00005

📍 **Indonesia**
Rukan Permata Senayan
Blok A-29 Jl. Tentara
Pelajar Kebayoran Lama
Jakarta Selatan
Ph : +62 21 5794 0651

📍 **Malaysia**
W-10-6, Subang Square
Jalan SS15/4G, SS15
47500 Subang Jaya
Selangor Darul Ehsan
Malaysia

LoRa Alliance **localbuy**

IoTA
IoT Alliance Australia

AUSTRALIAN MADE

PREFERRED SUPPLIER



With Arnova, microgrids become not just power systems—but intelligent, adaptable energy ecosystems.