

Intelligent Hybrid Power Systems for a High-Demand World

Delivering stable, efficient, and scalable energy for industrial operations, data centres, and remote infrastructure.

- 👉 Modular systems from 5kW to 500kW
- 👉 Scalable to multi-megawatt deployments
- 👉 Engineered for performance, resilience, and efficiency

What is MAG-GEN™

MAG-GEN™ is a next-generation hybrid power generation and energy optimisation platform that integrates advanced generation technology with kinetic and electrical energy storage.

Designed for modern energy demands, MAG-GEN™ delivers high-efficiency power conversion, load stability, and reduced operating costs across a wide range of applications.

How It Works

At the core of MAG-GEN™ is the Permanent Magnet Generator (PMG), operating on the principles of Electromagnetic Induction.

 **Kinetic Energy Storage (Flywheel)**

- Instantaneous energy response
- Load smoothing and stabilisation

 **Battery Storage**

- Peak demand support
- Backup and energy buffering

 **Intelligent Energy Management**

- Real-time optimisation
- Stable voltage and frequency output

The System Integrates: High-Efficiency Generation

- Permanent magnet-based architecture
- Reduced energy losses
- High power density

Operating Principle

MAG-GEN™ systems are initiated via an external input source and operate through:

1. Energy Conversion via PMG
2. Dynamic Energy Storage (flywheel + battery)
3. Load Balancing & Output Stabilisation

This enables:

- Consistent power delivery
- Reduced input variability
- Improved system efficiency

Performance & Efficiency

MAG-GEN™ systems are engineered to:

- Maximise usable output from input energy
- Deliver stable performance under dynamic loads
- Provide short-term output above instantaneous input through energy buffering

All performance aligns with the First Law of Thermodynamics, with gains achieved through efficiency optimisation and intelligent energy management.

Product Range

Modular Systems Available:

- 5kW – 50kW → Residential / Commercial @ \$2,000 USD, Per kW
- 50kW – 500kW → Industrial / Infrastructure @ \$1,500 USD, Per kW
- Multi-MW Systems → Data Centres / Utilities @ POA

Pricing

- From ~ \$1,500 - \$2,000 USD per kW
- Volume and configuration dependent

*Turn-key system, fully guaranteed, patented, safety certified application.

Applications

Industrial & Manufacturing

- Energy cost optimisation
- Load stabilisation
- Peak demand management

Data Centres & Critical Infrastructure

- High uptime power stability
- Reduced diesel dependency
- Improved energy efficiency per MW

Remote & Off-Grid Locations

- Reliable standalone or hybrid systems
- Reduced fuel logistics
- Ideal for remote infrastructure and communities

Residential & Commercial

- Backup power and resilience
- Energy cost reduction
- Renewable system integration



DATA CENTRE APPLICATIONS



MAG-GEN™ for Data Centres

Reducing Cost per MW. Increasing Uptime.

Modern data centres require:

- Continuous power availability
- High efficiency
- Reduced environmental impact

MAG-GEN™ delivers a hybrid energy optimisation layer that enhances existing infrastructure.



System Role

- Power conditioning and stabilisation
- Dynamic load balancing
- Backup bridging during outages
- Reduced diesel generator runtime

 **ROI Snapshot (Asia)****10 MW Data Centre Deployment** **CapEx:**

- ~\$15M

 **Annual Savings:**

- Singapore: \$3.0M – \$3.75M
- Indonesia: \$4.0M – \$5.2M

 **Investment Metrics:**

- Payback: 3 – 5 years
- IRR: 18% – 32%

 **Hyperscale Deployment (50 MW)**

- CapEx: ~\$75M
- Annual savings: \$15M – \$26M

👉 Strong alignment with infrastructure and institutional investment targets

🧠 Strategic Advantages

- Improved Power Usage Effectiveness (PUE)
- Reduced battery degradation
- Lower diesel consumption
- Faster deployment in grid-constrained regions

Why MAG-GEN™

The Future of Energy is Optimised, Not Just Generated

MAG-GEN™ is positioned as a:

High-efficiency energy optimisation and delivery platform

Rather than a standalone energy source, it enhances how energy is:

- Generated
- Stored
- Distributed
- Utilised

 **Key Benefits** **Efficiency Gains**

Reduced system losses through advanced generator design

 **Cost Reduction**

Lower effective energy cost per kWh

 **Power Stability**

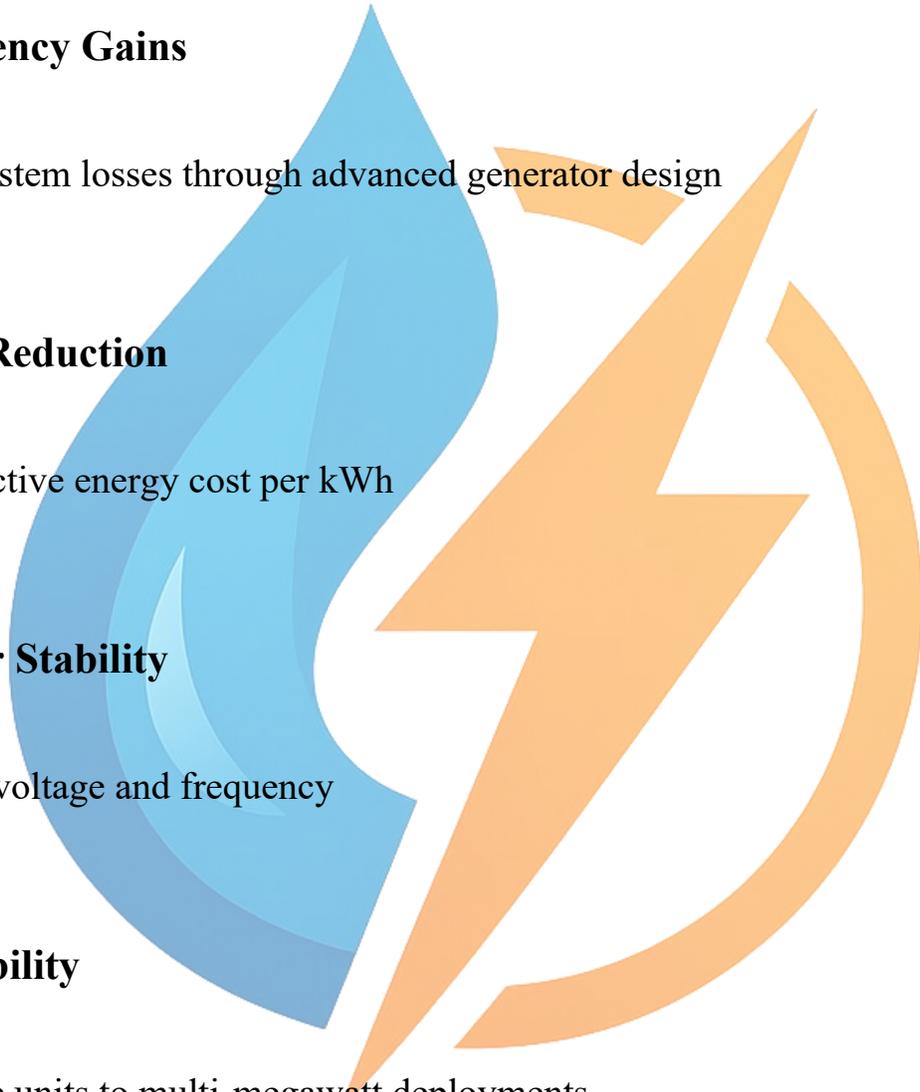
Consistent voltage and frequency

 **Scalability**

From single units to multi-megawatt deployments

 **Resilience**

Reliable power in unstable or remote environments



Technical Integrity

MAG-GEN™ systems operate fully within established physical principles, including:

- First Law of Thermodynamics
- Electromagnetic Induction

Performance gains are achieved through:

- High-efficiency conversion
- Energy storage integration
- Intelligent load management

👉 No reliance on over-unity or non-physical claims

 **CALL TO ACTION**

Powering the Next Generation of Infrastructure

MAG-GEN™ is actively expanding across:

- Data centre infrastructure
- Industrial energy systems
- Remote and off-grid deployments

