

Large-Scale Events



Urban Emergency Power



Powering Progress:

Jobsite Hybrid Energy Storage System Global Success Stories

Proven Performance

from Himalayan Heights to Hollywood Events

High-Altitude Construction



Core Value Propositions



Fuel Savings up to 50%

→ Cut Fuel Costs by Half



Rapid Deployment Anywhere

→ Deploy in Hours, Power Anywhere



Zero Downtime & Peak Shaving

→ Guaranteed Uptime for Mission-Critical Operations





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1. High-Altitude Infrastructure

Energy Storage Reaches New Heights:

ROYPOW's Hybrid ESS Delivers Reliable Power at **4,200m** in Tibet

Client & Location:

China Railway 12th Bureau | Tibet, China
(4,200m altitude)

ROYPOW Solution:

Deployed 3 sets of PowerFusion X250KT DC Hybrid ESS integrated with 500kW diesel generators, forming a smart microgrid.





The Challenge

Facing a critical national infrastructure project with no grid access, the client struggled with extreme cold, highly inefficient diesel generators, and exorbitant fuel consumption of ~633 gallons per day, which threatened both project timelines and budget.

The ROYPOW Advantage

We delivered a ruggedized, high-altitude proven hybrid system that turns inefficient generator power into a smart, reliable, and cost-effective energy source.

The Solution

- **Intelligent EMS:**
Automated generator control and peak shaving for optimal efficiency.
- **High-Altitude Engineering:**
Specifically designed components ensure stable performance in thin air and sub-zero temperatures.
- **Plug-and-Play Deployment:**
Rapid setup and integration despite the rugged, remote terrain.

The Results



30-50% Fuel Savings:

Reduced consumption by approximately 190 gallons per day.



100% Power Reliability:

Ensured zero downtime for critical construction operations.



Reduced Maintenance:

Extended generator lifespan and cut servicing needs.

Powering National Infrastructure:

Hybrid ESS Supports Major Hydropower Project at 3,800m



Client & Location:

Hydropower Station | China (3,800m altitude)

ROYPOW Solution:

PowerFusion X250KT DG Hybrid ESS



The Challenge

High-altitude conditions severely degraded generator efficiency at a key hydropower construction site, leading to unstable power for concrete mixing and concerns over fuel costs.

The ROYPOW Advantage

Our system provided the precise, stable power needed for continuous operations, while dramatically cutting fuel consumption even at high elevations.

The Solution

• Altitude-Optimized Performance:

Maintained rated power output and efficiency where conventional systems fail.

• Seamless Generator Integration:

Smartly managed generator loads to keep them in the most efficient operating range.

• Scalable Design:

Modular setup allowed for quick expansion based on project needs.

The Results



30% Fuel Reduction:

Achieved significant cost savings with stable power output.



Proven Benchmark:

Success led to a follow-on 3-unit contract from China Railway Tunnel Group.

2. Urban Emergency Power

Urban Emergency Power Success

Silent, Zero-Emission Backup for Shanghai Residential Area

Client & Location:

Shanghai Residential Community | Shanghai, China

ROYPow Solution:

Deployed 2 PowerFusion X250KT DG Hybrid ESS-C/A units, providing 6-hour continuous backup power for critical community loads [e.g., lighting, water pumps, and elevators].



The Challenge

A sudden city-wide power outage demanded an immediate, silent, and compact backup power solution to restore essential services without disrupting community life with noise or emissions.

The Solution

- **Instant Response:**

Automatic switchover provided uninterrupted power during grid failure.

- **Zero Noise & Emissions:**

Operated silently within the community, ensuring no disturbance.

- **Compact Footprint:**

High-power density allowed for deployment in space-constrained urban areas.

The ROYPow Advantage

We provided instant, clean, and silent power that operated seamlessly within a residential setting, turning a potential crisis into a non-event.

The Results



- **100% Customer Satisfaction:**

Met all emergency power needs flawlessly.



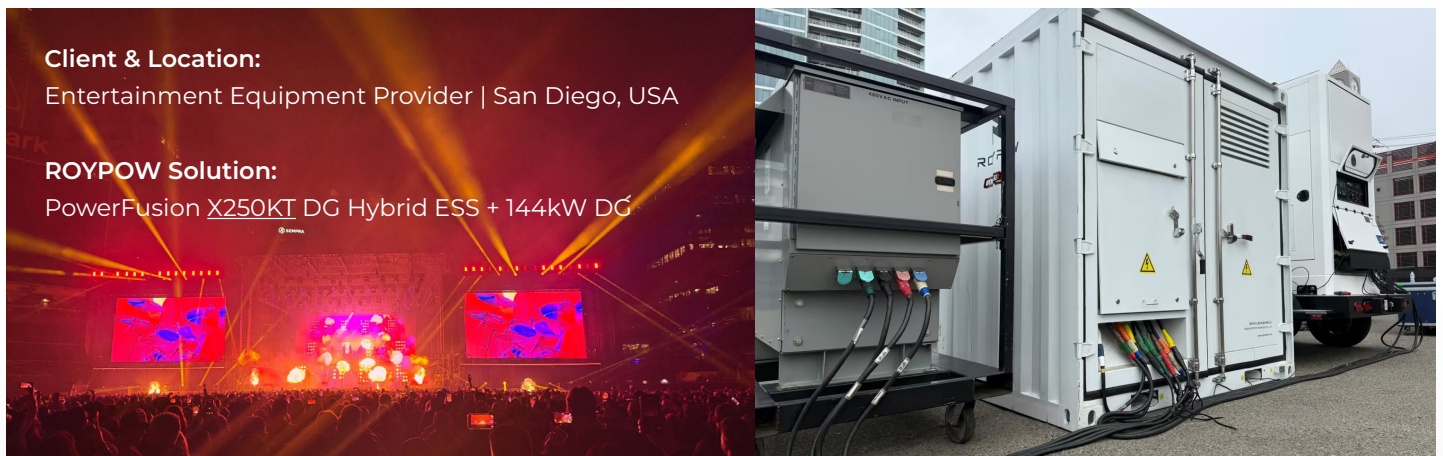
- **New Partnership:**

Secured a 10-unit purchase order and a 10-unit rental agreement, with the client becoming an exclusive ROYPow distributor in Shanghai.

3. Large-Scale Events & Rentals

Large-Scale Event Power

Clean, Quiet Energy for San Diego Stadium Event

**Client & Location:**

Entertainment Equipment Provider | San Diego, USA

ROYPOW Solution:

PowerFusion X250KT DG Hybrid ESS + 144kW DG

The Challenge

A major public event required a clean, quiet, and reliable power source to meet strict noise regulations and sustainability goals, which traditional generators could not satisfy.

The Solution

- **Hybrid Power Management:**
Optimized the combination of battery and generator power for efficiency.
- **Ultra-Quiet Operation:**
Enabled use in noise-sensitive public venues.
- **Reliable High-Capacity Power:**
Supported multiple service points without interruption.

The ROYPOW Advantage

Our hybrid solution delivered all the power of a traditional generator set but with a fraction of the noise, fuel use, and emissions.

**Substantial Fuel Savings & Emission Reduction:**

Demonstrated a cleaner alternative to diesel-only power.

**Flawless Event Execution:**

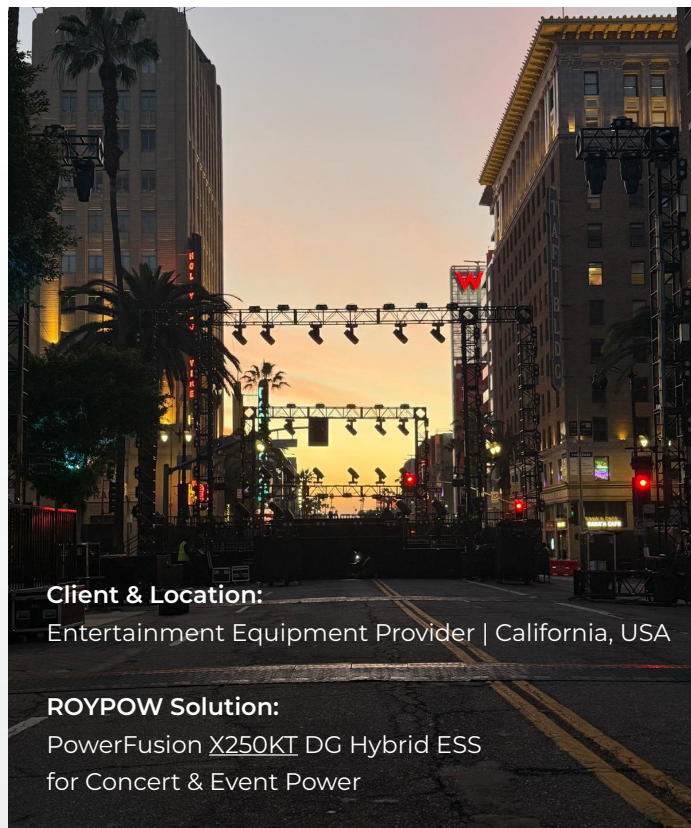
Provided reliable, high-quality power for the entire event.

Sustainable Entertainment Power

Revolutionizing Concert and Studio Energy Management

The Challenge

Traditional generators were grossly inefficient at variable loads typical of concerts and productions, leading to massive fuel waste, high emissions, and the need for costly oversizing.



Client & Location:

Entertainment Equipment Provider | California, USA

ROYPOW Solution:

PowerFusion X250KT DG Hybrid ESS
for Concert & Event Power



The ROYPOW Advantage

We transformed their power infrastructure, enabling them to use significantly smaller generators for longer periods, slashing fuel costs and environmental impact.

The Solution

- **Peak Shaving & Load Management:**
Handled demand spikes with battery power, allowing generators to run at steady, efficient levels.
- **Fuel-Agnostic Operation:**
Maximized battery usage during low-load periods, minimizing generator runtime.
- **Seamless Integration:**
Plug-and-play compatibility with existing generator assets.

The Results



72% Fuel Reduction:

Slash consumption to just 65 gallons from a projected 230+ gallons over a 72-hour event.



Multi-Point Power Supply:

Reliably powered stages, bars, and food locations.



Industry Recognition:

Set a new benchmark for sustainable event power.

"The ROYPOW X250 was fed by two 1200-amp Crawford studio plants, powering three 400-amp services. In a 72-hour period, we burned only 65 gallons of fuel—compared to the 230 gallons we would have used without it!"

— Travis Blake, Entertainment Production Manager, Powertrip Rentals

Uninterrupted Power for Outdoor Events

Ensuring 24/7 Silent Power for Event Rentals



Client & Location:
Generator Rental Company | Estonia

ROYPOW Solution:
Mobile ESS PC15KT (x2 units)



The Challenge

As a rental company, they needed to provide continuous, reliable power for outdoor events without the high cost of refueling, manual monitoring, and noise complaints from traditional generators.

The ROYPOW Advantage

We provided a "set-and-forget" power solution that automated energy management, allowing their clients to enjoy uninterrupted electricity and them to save on operational costs.

The Solution

- **Dry Contact Control:**
Automated generator start / stop based on battery level.
- **Self-Recharging:**
Ensured continuous power availability without manual intervention.
- **Rental-Tough Design:**
Built to withstand the rigors of transportation and field use.

The Results

- **24 / 7 Uninterrupted Power:**
For lights, heating, and electronics.
- **Reduced Operational Costs:**
Lower fuel consumption and decreased maintenance.
- **Fully Unmanned Operation:**
Minimized labor costs and simplified logistics.

Versatile Testing Across Loads & Scenarios

One Mobile ESS, Multiple Applications



The Challenge

The client needed a versatile energy storage solution that could adapt to diverse rental scenarios, from supporting generators to directly powering high-demand tools, all while operating quietly.

The Solution

- **Plug-and-Play Compatibility:**
Effortlessly connected to diesel generators and high-power tools like cutting machines.
- **Wide Load Compatibility:**
Handled both resistive and motor-driven equipment with stable output.
- **Low-Noise Emission:**
Enabled use in noise-sensitive environments like urban areas and events.

The ROYPOW Advantage

Our Mobile ESS proved to be the ideal, flexible add-on for their rental fleet, unlocking new business opportunities across a wide range of applications.

The Results



Verified Wide Applicability:

Successfully powered all tested equipment, confirming its role as a versatile rental asset.



Operational Flexibility:

Added a new, high-value option to their rental catalog.



Enhanced Customer Offerings:

Allowed them to meet more complex and environmentally conscious client demands.

Rugged Power for Construction Sites

Reliable Energy for Heavy-Duty Equipment



Client & Location:

Construction Equipment Rental | Netherlands

ROYPOW Solution:

Mobile ESS PC15KT



The Challenge

The client required a durable power solution that could reliably operate welding machines and construction tools across various job sites, withstanding rough handling and changing weather conditions.

The ROYPOW Advantage

Our Mobile ESS delivered robust performance and exceptional durability, meeting the toughest demands of construction site applications.

The Solution

- **Heavy-Duty Construction:**
Shock-resistant design built for challenging environments.
- **Multi-Equipment Compatibility:**
Consistent performance with welding machines and power tools.
- **Rapid Deployment:**
Simple setup requiring minimal technical expertise.
- **Zero-Emission Operation:**
Clean power alternative for urban construction sites.

The Results



100+ hours of continuous operation with welding equipment.



5+ different construction tools powered simultaneously.



50% noise reduction compared to traditional generators.

Why Choose ROYPOW Jobsite Hybrid ESS



Lower TCO:

Cost-effective investment with reduced energy and maintenance.



Fast Deployment:

Plug-and-play, easy-to-transport design.



Intelligent Management:

Smart coordination with generators and remote monitoring.



Rugged Design:

Built for harsh environments (high altitude, extreme cold).

Applications of ROYPOW Jobsite ESS



Construction Sites



Large-scale Events



Emergency Support



Farming Irrigation



Rental Services

Product Video Gallery

Mobile Energy Storage System PowerGo Series PC15KT



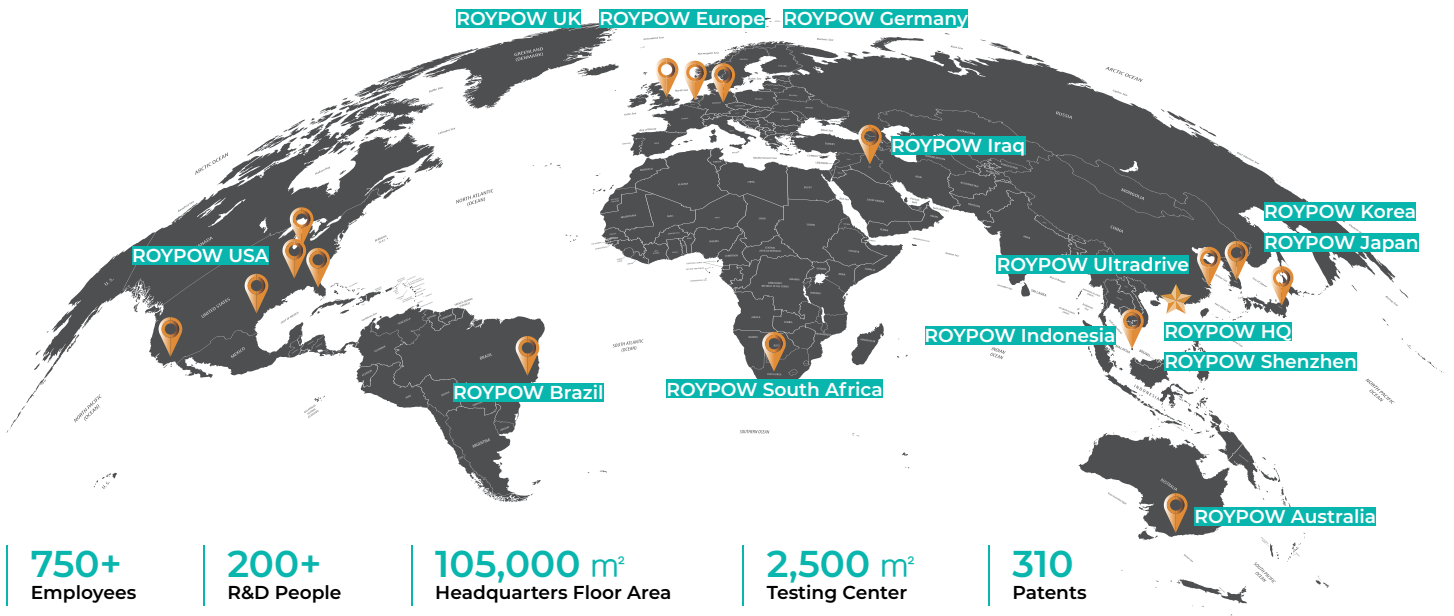
Diesel Generator ESS Solution PowerFusion Series X250KT



The Future of Construction Sites:

Jobsite ESS for Safe, Smart, Flexible Operations





About ROYPOW



Global Presence:

Subsidiaries in USA, Germany, Australia, Japan, and more.



Core Technologies:

In-house PCS, BMS, EMS, and motion control algorithms.



Focus:

R&D and manufacturing of motive power and energy storage systems.



Experience:

20+ years in renewable energy.



Contact Us

Website: [Jobsite Hybrid Energy Storage System](#)

Email: sales@roypow.com

