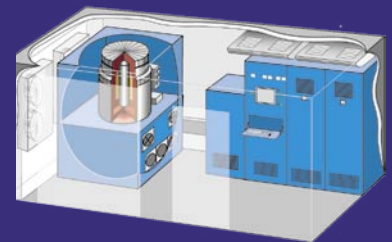


Want more out of your mine?

We can help.



Are you looking to expand your mine site?  
Are you looking to increase your production?  
Does your mine site require more peak power?



**PowerStore**  
giving you the power to  
achieve your goals!

# Dynamic Power Solutions

... giving you the power to achieve your goals.



## Make hay while the sun is shining.

Increasing productivity particularly during times of high commodity prices is common sense. Achieving this is another matter. Whether you want to increase output or reduce production costs, power is a major factor. Peak loads, swinging loads and interruptions cost millions. Now a new device is available to remove the problem.

## What's holding you back?

If you have limitations on your peak power (supply limits) production yields may be cut short. If you have cyclic loads such as winders or crushers produce then your generators will be using more fuel than necessary. If you lose supply to critical plant it can cost you hours of lost production. PowerStore is designed to eliminate these problems.

## If it's power, PowerStore is the solution!

PowerStore is designed to provide real and reactive power support. Conventional voltage support systems only provide reactive power. When the power swing occurs real energy supply and absorption is required to remove the problem. Traditional extra spinning reserve in the power house is an expensive alternative. In 1MW blocks PowerStore is able to move full power in and out in 5msec ramp times! This extraordinary performance is unique to Powercorp's technology.

## Looking to expand and increase production? Powercorp will help!

Running additional generators and paying for extra diesel fuel makes no sense. You want increased production and a stronger bottom line not rising costs. Moving to gas engines and turbines is a sound move. These bring with them power swings but with PowerStore this is no longer a problem. Increasing production without increasing generation has been only a dream until PowerStore.

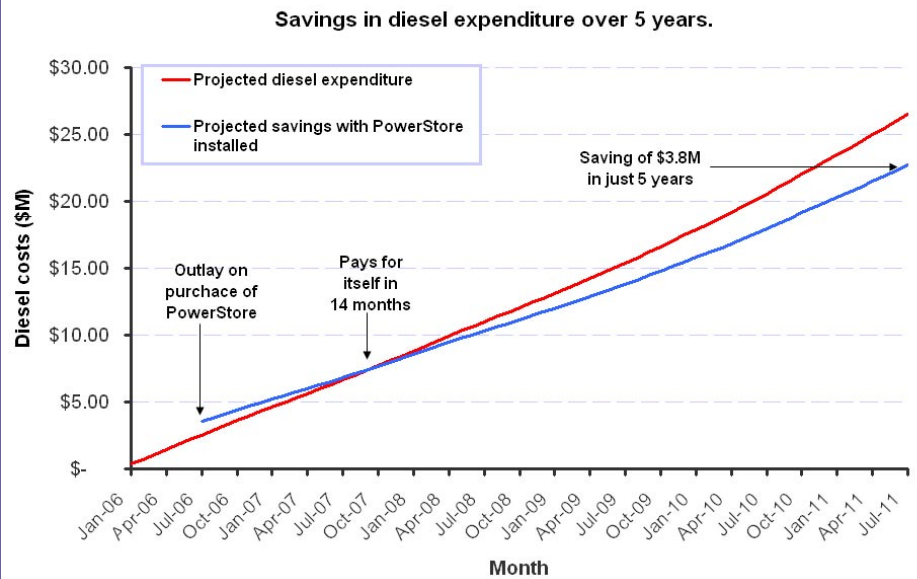
## If it's saving money, Powercorp has the solution!

PowerStore allows you to run your existing generators at optimal performance. You do not run extra sets just for the occasional peak overload situation. Power outages no longer mean plant shut downs as PowerStore will carry the load until alternative generation is on line. You will no longer pay peak load penalties from your electricity supplier.

Saving money is our aim. If capital finance is an issue we can rent you the units month by month. Unhappy with the outcome or changed circumstances? Send it back to us!

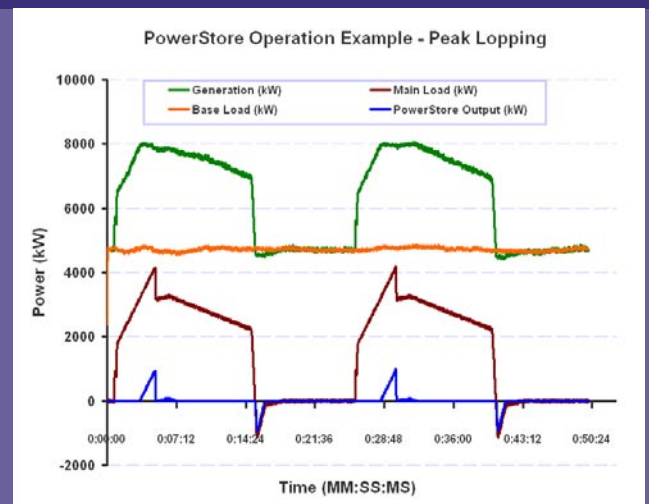
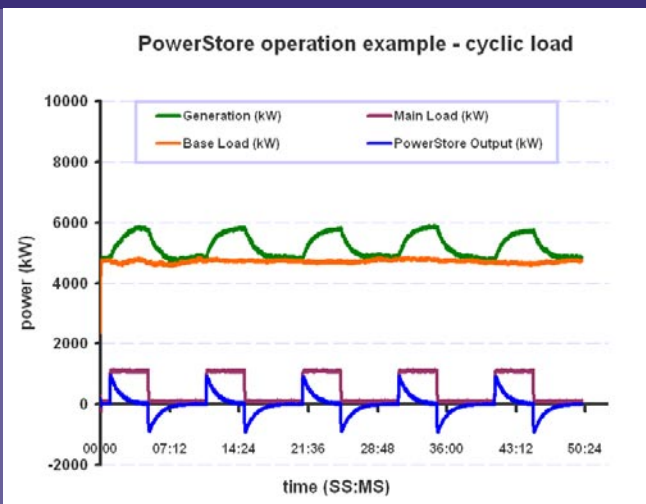
### The solution that makes dollars and sense!

The graph shows cumulative cost of projected diesel expenditure compared against the projected savings with PowerStore installed.



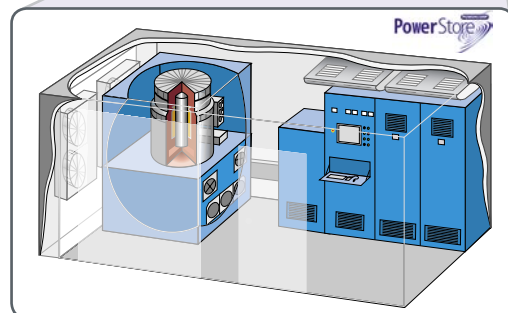
## The PowerStore system:

The PowerStore unit is very adaptable to your requirements. The modular design enables a large number of PowerStore units to be connected in parallel, with the power output of single units ranging from 250kW to 1MW. The containerised solution allows for easy retrofitting to other applications that you may have, reducing logistical nightmares.



## Features

- Smoothes out cyclic and transient loads
- Masks load fluctuations from the power supply
- Voltage support through reactive power injection
- Highly dynamic – response measure in milliseconds
- Enables gas reciprocating and gas turbine generators to be used with fluctuating loads
- Modular design – no limit to the number of units paralleled
- Usable on soft grids
- Very low harmonic content
- System designed as liquid/portable asset
- Financial/leasing options available



## PowerStore system Components:

PowerStore combines: Flywheel Grid Interface Control System, Flywheel Drive Container, Flywheel

## PowerStore MODELS

N.B. Custom models outside this power range scope are made to order.

| PowerStore Model | Power Rating (kVA) | Total Energy Storage (MJ) |
|------------------|--------------------|---------------------------|
| PowerStore 250   | 250                | 16.5                      |
| PowerStore 500   | 500                | 16.5                      |
| PowerStore 750   | 750                | 16.5                      |
| PowerStore 1000  | 1000               | 16.5                      |

### Recharge time (from full discharge – estim.):

|                            |  |
|----------------------------|--|
| 150 kW.....                | 100 s  |
| 250 kW.....                | 60 s   |
| 500 kW.....                | 30 s   |
| 750 kW.....                | 19 s   |
| 1000 kW.....               | 15 s   |
| Voltage supply.....        | 3 ph, 480 V, 60 Hz                                       |
| Input frequency range..... | 40 – 70 Hz   |
| Paralleling of units.....  | Yes  |
| Communication.....         | Ethernet, Mobile GSM/CDMA, PSTN telephone line available |

### MECHANICAL FEATURES:

|             |           |
|-------------|-----------|
| Depth.....  | 6,000mm   |
| Width.....  | 2,400mm   |
| Height..... | 2,900mm   |
| Weight..... | 12, 520kg |

### ENVIRONMENTAL FEATURES:

Env. Temp. range....unit is suitable for various climate conditions  
Noise.....kept within industrial sound standards

### ELECTRICAL FEATURES

Power Delivery (estim.):

|              |       |
|--------------|-------|
| 150 kW.....  | 100 s |
| 250 kW.....  | 60 s  |
| 500 kW.....  | 30 s  |
| 750kW.....   | 19 s  |
| 1000 kW..... | 15 s  |

PowerStore, proudly developed by the Powercorp Group  
*engineering innovative power solutions for a better world.*



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