

CASE STUDIES

START DECARBONISING YOUR PROJECT TODAY

KENNARDS
HIRE

We specialise in creating energy-efficient power solutions tailored to your needs.

In the quest for a sustainable future, reducing reliance on fossil fuels and minimising carbon emissions have become paramount. Diesel generators, while reliable, contribute significantly to air pollution and greenhouse gas emissions, particularly carbon dioxide (CO₂), which drives climate change. This has spurred the development of innovative technologies such as hydrogen generators, hybrid power systems, and battery energy storage systems.

Hydrogen generators offer a clean energy alternative by using hydrogen to produce electricity, emitting only water as a byproduct and eliminating CO₂ emissions.

Battery Energy Storage Systems (BESS) enhance these setups by storing excess renewable energy for use during peak demand, reducing the need for diesel generators to run continuously.

These technologies collectively provide substantial environmental benefits by cutting diesel consumption and CO₂ emissions.

Hybrid power systems integrate renewable energy sources like solar or wind with traditional generators, optimising the use of renewables and decreasing overall fuel consumption and emissions.

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The following case study examples demonstrate various implementations of our hydrogen generator, hybrid power systems (HPS), and battery energy storage systems (BESS), highlighting their impact on creating a more sustainable and cleaner energy landscape available for your next project.



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> INDUSTRY SOLUTIONS > EXPERTISE > EASY >

RUNNING A CONSTRUCTION SITE WITH UP TO 15 SITE BUILDINGS

KEMPS CREEK, NSW

POWER SOURCE

100kVA hydrogen generator unit with 90kVA BESS.

ENVIRONMENTAL BENEFIT

Over 28 days the site reduced CO₂ emissions by **12.2 tonnes**.



4,518L
Diesel saved



12.2T
CO₂ saved



2.6
Cars off the road



RAIL PROJECT SITE AT REMOTE LOCATION

GLOUCESTER, NSW

POWER SOURCE

10kWh BESS unit with solar site shed.

ENVIRONMENTAL BENEFIT

Over 12 weeks the site reduced diesel consumption by **97%**.



2,873L
Diesel saved



7.8T
CO₂ saved



1.7
Cars off the road



RUNNING A LARGE CONSTRUCTION SITE WITH UP TO 35 SITE BUILDINGS

VIC

POWER SOURCE

90kVA BESS unit and 44kW of solar assisting the diesel generator.

ENVIRONMENTAL BENEFIT

Over 9 months the site reduced diesel consumption by **65%**.



30,571L
Diesel saved



83.0T
CO₂ saved



18.0
Cars off the road



All results calculated compared to a traditional diesel generator running 24/7 for the same period. 1L of diesel creates 2.67kg of CO₂ ([Source](#)). A typical passenger vehicle emits about 4.6 metric tons of CO₂ per year ([Source](#)).

TELECOMMUNICATIONS PROJECT AT REMOTE LOCATION WINGEN, NSW

POWER SOURCE

HPS15 provided continuous power to Optus mobile equipment (~1-2kW average load).

ENVIRONMENTAL BENEFIT

Reduced diesel consumption by **81.6%** with the added benefit of less fuel drops.



2,075L
Diesel saved



5.6T
CO₂ saved



1.2
Cars off the road



TRANSMISSION LINE RELOCATION PROJECT YARRAMAN, QLD

POWER SOURCE

HPS 15kVA unit.

ENVIRONMENTAL BENEFIT

Over 12 months the project used **77.9%** less diesel.



10,208L
Diesel saved



27.5T
CO₂ saved



6.0
Cars off the road



RENEWABLE ENERGY TRIAL ON THE WESTERN SYDNEY TUNNEL PROJECT SITE NSW

POWER SOURCE

HPS 45kVA unit running site compounds and container sheds.

ENVIRONMENTAL BENEFIT

Over 4 weeks the site reduced diesel consumption by **91.6%** and CO₂ emissions against a 45kVA diesel generator option.



1,826L
Diesel saved



4.9T
CO₂ saved



1.0
Car off the road



All results calculated compared to a traditional diesel generator running 24/7 for the same period. 1L of diesel creates 2.67kg of CO₂ (Source). A typical passenger vehicle emits about 4.6 metric tons of CO₂ per year (Source).

> CONTACT YOUR LOCAL KENNARDS HIRE TEMPORARY POWER SOLUTIONS EXPERT

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