

SCALABLE POWER.

HYDROGEN POWER MODULE 1.5 MW

Carbon-free, scalable, on-line UPS or primary power system.

Hydrogen Fuel Cell power modules are reliable and deliver a zero carbon footprint when operating, making them well suited to many power services.

Because these power modules have their own Hydrogen fuel as part of the system, they can be installed anywhere, making large scale power available to remote locations minimizing cabling infrastructure.

Primary Power

With a continuous or refilled supply of Hydrogen, the fuel cell power modules can deliver continuous power to your facility. The built-in management system manages the individual cells as needed during the power delivery cycles.

Backup and UPS Power

Hydrogen Fuel Cells are always on-line, requiring no switching and making them ideal for emergency power systems.

Scalable Solutions

Fuel cell modules are scalable and available in a range of standard sizes - 250 kW, 750 kW, and 1.5 MW. (The 1.5 MW module is shown below.)

Alternatively, you can have a custom module(s) system designed to meet your precise needs.

Hydrogen Fuel Cells, each supplying a minimum of 80 kW giving a total of 1.76 MW.

High efficiency heat exchangers and connections to facility exchangers if needed.

Add additional power modules to increase energy capacity.

Inverters to deliver the required power output(s).

720 kWh lithium-ion battery array providing continual power and high efficiencies.

Hydrogen Power Module 1.5 MW

Quick to deploy and scalable to any power requirement, this power module is powered by Hydrogen Fuel Cells with built-in inverters and support battery storage. Connect to your facility for primary, load-shedding or UPS power. Just add Hydrogen you're ready to go.



Data Centers

Fuel cell power modules are ideal for data center UPS power as they are on-line and can be installed externally very quickly or internally if needed and connected to existing HVAC (super-computer cooling systems). They have low to no noise during operation and the stored fuel supply will last indefinitely without degrading.



Commercial

Business offices, warehouse, machinery, airports, etc. can all make good use of fuel cell power modules to provide, carbon-free power.

There is no need to use diesel generators any more for either remote power, UPS systems or peak load supplementation.

They also make great additional on-site power for rapid EV charging.



Retail

Retail stores and retail parks can make good use of fuel cell power to deliver carbon-free energy to all the core facility power needs.

Often there are very large roof spaces that can be used to generate solar electricity which can feed into the energy management system.

Additional Hydrogen Storage

Hydrogen Fuel Cell power modules can run for as long as you can supply them with Hydrogen. You can increase your storage supply of Hydrogen at any time with the addition of extra Hydrogen storage modules.



Once installed there are a number of ways we recommend keeping them full.

First, use on-site Hydrogen generation with green energy sources (like solar, wind, hydro, or thermal). This green Hydrogen is compressed, chilled and fed into your Hydrogen store.

Your second option is to use our transport refueler to deliver green Hydrogen from another generation site and refill your Hydrogen storage units.

Hydrogen Usage Calculator

Based on a continuous load, the fuel cell module will consume the following maximum amounts of Hydrogen fuel over these different periods.

Load	30 min	1 hour	2 hours	6 hours	12 hours	24 hours
1.5 MW (max)	50 kg	100 kg	200 kg	600 kg	1,200 kg	2,400 kg
1 MW	34 kg	67 kg	134 kg	400 kg	800 kg	1600 kg
500 kW	17 kg	34 kg	67 kg	200 kg	400 kg	800 kg
250 kW	9 kg	17 kg	34 kg	100 kg	200 kg	400 kg
100 kW	4 kg	7 kg	14 kg	40 kg	80 kg	160 kg

Power duration with Hydrogen loss

If there is a loss of the Hydrogen supply, the system batteries can run the UPS system at full load for about 30 minutes while the supply is restored.

The Hydrogen powered data center is green on the inside and on the outside too.