



Green Hydrogen at Work

Let Green Hydrogen Power Your Data Center



The Problem: Data Centers need sustainable power provided by easily-permitted solutions that ensure robust, resilient, high-quality power. Diesel can't do that.

Industry is pushing to Eliminate Diesel

Our world runs on shared data that is integral to global transactions of all kinds; we rely on small and large data centers to house and back up all that information. A large data center can use as much electricity as a small town, and when the grid goes down, transactions stop. That's why backup power for data centers is critical. Using diesel generators to provide backup power for data centers is fraught with issues in today's world.

Permitting: emission restrictions

Sustainability: greenhouse gases and particulate matter pollute our living spaces

Reliability: startup challenges due to mechanical issues and fuel degradation

Maintenance: onerous preventive maintenance and fuel polishing requirements

The world's largest companies understand these issues and want to reduce their carbon footprint by seeking more sustainable options. Microsoft, Amazon, Walmart and Google have all announced plans to move to carbon-free energy and they need complete data center solutions that can help get them there.

Decisions made NOW impact corporate and global climate goals. Deploying a 20 year diesel asset does not comply with sustainability regulations.

Microsoft, one of the world's largest data-center operators, announced they will eliminate diesel fuel by 2030.

Google has made a commitment to operate on 24/7 carbon-free energy in all its data centers and campuses worldwide by 2030.

United States to cut its emissions by at least 50% by 2030.

Amazon and Walmart have both announced zero-emissions targets by 2040.

The EU, South Korea and Japan have all committed to being carbon free by 2050.

Superior Performance:

Instantaneous response to grid failure through four seasons of temperature swings in rugged conditions.

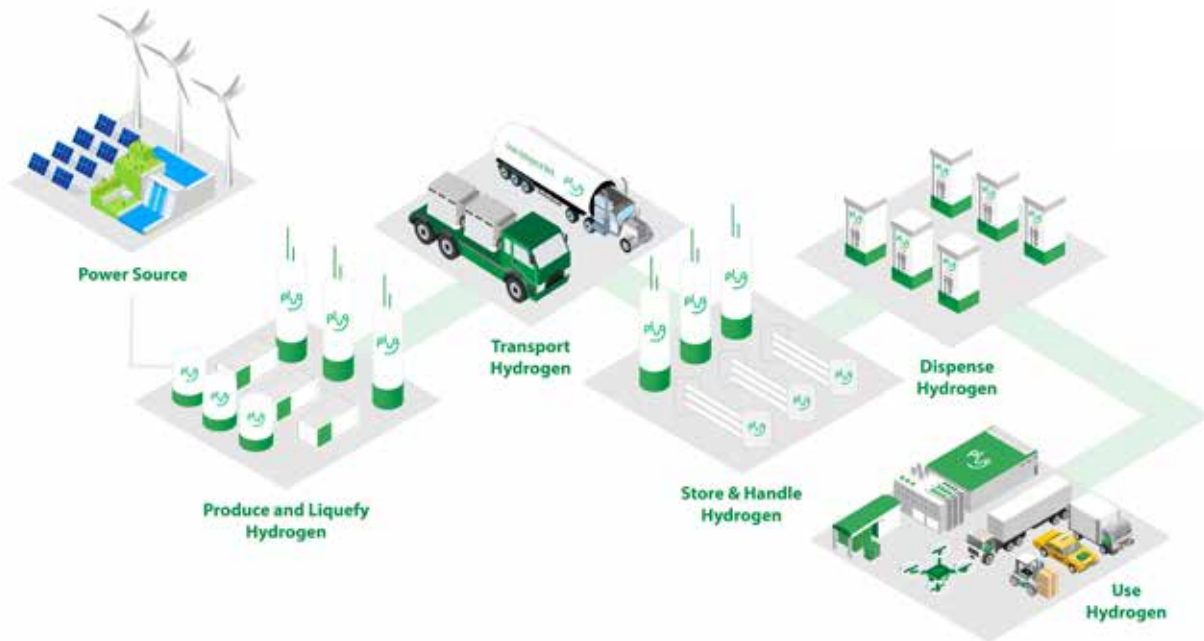
A Proven Platform:

The same fuel cell technology that has run over 735 million hours at Amazon, Walmart, Home Depot and around the world.

Zero-Emission:

Hydrogen is the fuel and with no combustion, only heat and water are generated as by-products.

The Solution: Zero-Emission Fuel Cell Backup Power for Data Centers



The Plug Advantage: A Vertically-Integrated company with turnkey solutions.

Plug is building the global Green Hydrogen Ecosystem and is the only company offering hydrogen production, transportation, storage, and zero-emission fuel cell power to meet your data center needs.

Fuel cells solve a lot of diesel problems. Plug provides scalable, zero-emission, highly-reliable backup power requiring no air quality permitting. The solution is superior to diesel combustion generators, having reliable startup and fuel quality, offering peace of mind that allows our customers to focus on their own business goals without worrying about power.

Complete Fuel Cell System

Plug's fuel cell system includes everything you need for your Stationary Power application, including cooling, integrated energy storage for immediate response and flexibility of different voltage outputs (AC or DC). Plug's solution balances the need for rapid response with operational efficiency and flexibility, while generating no greenhouse gas emissions.

Flexible Architecture and Scalable Power

Our simple design allows for packaging flexibility and scalability from edge to hyperscale facilities, based on a fault-tolerant architecture. The load-following capabilities of PEM (proton exchange membrane) fuel cells meet the variable loads of data centers.

Flexible Green Hydrogen Fueling Solutions

Plug H2 is available Onsite + Accessible 24/7/365 Plug is deploying the world's largest green hydrogen network for your fueling needs.

Hydrogen. Power. Service.

Plug engages at every point - from assessment and sales to operations and service support.

Features

Output			
Maximum Electrical Outlet Power (CONT)	250kW	500kW	1.0MW
Duty Cycle	Backup		
Voltage and Frequency Configurability	480VAC, 3P, 50/60Hz 400 to 700VDC configurable		
Physical			
Footprint- ISO Container	20' / 6m	30' / 9.14m	40' / 12.2m
Protection	NEMA 3R outdoor rated enclosure		
Operational			
Operating Temperature Range*	-30°C to 50°C / -22°F to 122°F		
Water Output	10L / minute @ 1MW		
Noise	<65 dBA at 15m / 49'		
Emissions	Zero Emissions		
Fuel			
Fuel (Full Spec Available on Request)	99.5% Hydrogen		
On-Site Fuel Storage	Low pressure & high pressure gaseous, liquid options available		
Communications	24/7/365 remote monitoring support		
Certifications			
Certifications	CSA-FC1, NFPA 110, Seismic Zone 4, CARB compliant- zero emissions		

