

# Hydrogen Calculator



The world leader in hydrogen fuel cell based power systems and hydrogen integration projects.



**Hydrogen Transport Refueler** 



Mobile Power and **EV Rapid Charging** 



Hydrogen Mobile **Power Generator** 



Rapid EV Charger



**Large Scale Primary** and Backup Power



Hydrogen Storage

All prices quoted are in USD and are approximate based on current market values. Please contact us for more accurate values based on markets and technology developments.

### How much and at what cost?

Some of the most popular questions we hear when considering a hydrogen fuel cell based power system include, 'How much hydrogen do I need?', 'Where do I get it?', and 'How much will it cost?'

To calulate the generalised answers to these questions, you first need to ask the following:

How much power do you need?

How long do you need to run for?

### How much hydrogen do I need?

Power	30 min	1 hour	2 hours	6 hours	12 hours	24 hours
1.5 MW	50 kg	100 kg	200 kg	600 kg	1,200 kg	2,400 kg
1MW	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



## **Hydrogen Delivered**

You can buy green hydrogen from manufacturers and have it delivered when you need it. Contractual supply agreements can provide interuption free supply and act as a Virtual Pipeline (VP).

Quantity	Price Delivered	Price/kg
100 kg	100 kg \$1,000	
500 kg	\$3,500	\$7
2,500 kg	\$12,500	\$6
5,000 kg	\$25,000	\$5

#### **Delivery Vehicle Ownership**

Hydrogen delivery vehicles can be hired or owned outright to reduce the lifetime cost of the fuel.

PRICE (FROM)

\$5 per kg







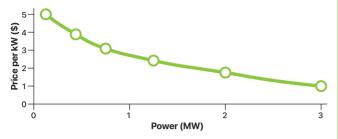




### **Fuel Cell Power System**

Fuel cells fueled by green hydrogen offer large amounts of power with no carbon footprint. They can also be combined together to create a scalable power supply where large amounts of power are difficult to achieve with grid power sources.

Fuel cell power systems can be stationery (indoors or outdoors) or mounted in a range of configurations for portable use.



#### PRICE (FROM)

\$1 per Kilowatt



## **Hydrogen Storage**

Hydrogen powered systems require the best storage facilities for the compressed hydrogen gas. The higher the pressure the more kg of hydrogen that can be contained.

Capacity	Pressure	Cost
100 kg	700 BAR	\$200,000
500 kg	700 BAR	\$1,000,000
1000 kg	700 BAR	\$1,800,000

PRICE (FROM)

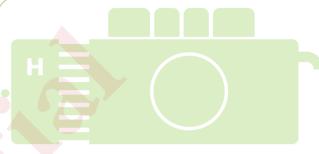
**\$1,800** per kg

#### **Rapid EV Charging**

EV 300kW+

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One of the popular uses for hydrogen power systems is for ultra-fast EV charging. This provides high power in hard to reach or power poor areas.



### **Hydrogen Production**

With a power source from solar, wind, hydro, or geothermal, an electrolyzer system can be used to produce green hydrogen.

These systems often include the capture, compression, and export of the gas ready for storage.

Power	Hydrogen Output*	Water Input*	Running Cost*	
1.1 MW	450 kg	4,050 lt	\$4,2434	
5MW	2,125 kg	31,200 lt	\$20,184	

PRICE (FROM)

\$9.50 per kg

\* Based on 15c per kWh and 7c per litre of water over a 24 hour period.



### Hydrogen at the Pump

From a growing number of public fueling stations you can buy hydrogen gas. These normally supply the hydrogen at 700 BAR for refueling FCEV vehicles.

#### **PRICE**

**\$9.50** per kg