

# Bloom Electrolyzer

## Highly Efficient Hydrogen Production

The Bloom Electrolyzer relies on the same, commercially proven and proprietary solid oxide technology platform used by our Bloom Energy Servers. Highly versatile, it offers distinctive advantages for deployment across a broad variety of hydrogen applications, using varied energy sources including intermittent renewable energy and excess heat. When steam is used as an input, our electrolyzer technology uses even less electricity to produce hydrogen.

The Bloom Electrolyzer has an inherent advantage over alternative electrolyzer technologies thanks to their high temperature operation, cost down curve, and scalability.

- **Highly efficient, cost-effective, zero carbon hydrogen production**
- **Pairs with renewable technologies to store and transport renewable electricity**
- **Superior performance compared to alternative technologies**



### Production Capacity

Leveraging the same supply chain and manufacturing process as the Bloom Energy Server, the Bloom Electrolyzer is ready for large-scale deployments.



### Flexible Deployment Options

Designed to work with intermittent renewables and capable of leveraging water or steam depending on project architecture.



### Highest Efficiency

Solid oxide electrolyzers are more efficient than alternative technologies like PEM and alkaline fuel cells.

Specifications

Product Streams	Steam Input	Water Input
Nominal H <sub>2</sub> Flow (kg/hr)	259.2	226.8
Hydrogen outlet pressure (barg)		up to 0.04
Hydrogen outlet temperature (°C)		100–180
Hydrogen purity (%)		99.99*

Electrical Power	Steam Input	Water Input
Efficiency (kW–hr/kg H <sub>2</sub> ) without compression	39.6+ -2%	46.00+ -2%
Nominal electrical consumption (MW)	10	10
Voltage (kV)		Medium Voltage
Frequency (Hz)		50/60

Operating Conditions	Steam Input	Water Input
Nominal steam/water flow (kg/hr)	2,592	2,268
Input temperature (°C)	>150	>10
Input Pressure (psig)	60-75	30-100
Stack life (years)		>5
Hot start-up time		10 mins
Turndown ratio		5–100%

Physical Attributes	Steam Input	Water Input
Dimensions (sq ft)	<10,000	Configurable

**Additional Notes**

Specifications subject to change. Remotely managed and monitored by Bloom Energy option available.

\* post-drying and compression



Bloom Energy Headquarters  
4353 North First Street  
San Jose, CA 95134 USA

[bloomenergy.com](http://bloomenergy.com)

**Flexible. Future Proof.**

Accelerate your path to a zero-carbon future.