

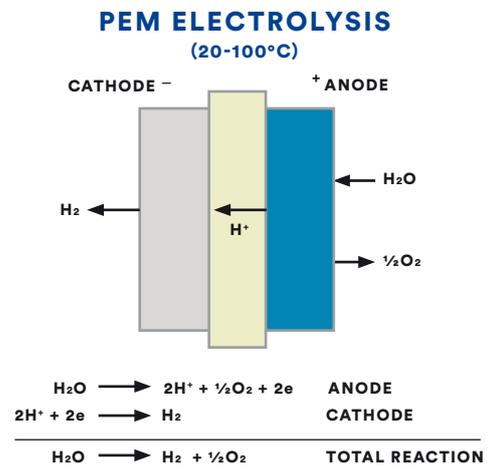


Hydrogen, the way nature intended

[www.ginerelex.com](http://www.ginerelex.com)

# Giner ELX, The World Leader In PEM Electrolysis!

Solid state Proton Exchange Membrane (PEM) electrolysis provides clean, efficient hydrogen generation for use in Power to Power (P2P), Power to Mobility (P2M), and industrial Power to Product (P2X) applications. PEM electrolyzers can be powered by photovoltaic cells, wind mills, or any other source of electric power.



## Giner ELX provides electrolyzer stacks and systems to meet all of your needs!



**1 kg/d**  
**5 kW**



**2.4 kg/d**  
**5.4 kW**



**65 kg/d**  
**150 kW**



**450 kg/d**  
**1 MW**



**2,250 kg/d**  
**5 MW**

### The Benefits of PEM Electrolyzers

- Smaller Footprint
- Faster Response Time
- Higher Pressure
- Lower Maintenance
- Higher Current Density
- Longer Life

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Proudly producing life support oxygen for the US Navy nuclear submarine corps for the past two decades!



# Hydrogen for Power-to-Mobility (P2M) Applications

Hydrogen for P2M applications powers Fuel Cell Electric Vehicles (FCEVs). Use clean PEM technology to generate hydrogen from green energy sources, including wind and solar, ensuring an end-to-end supply of cost-effective carbon-free fuel.



**Giner ELX's modular electrolyzer container systems allow for the production of clean hydrogen at the fueling station. No need to truck in the hydrogen, just produce and sell it!**



## Advantages of PEM P2M™ Electrolyzer Systems



### Collocated Production and Dispensing

No need to transport hydrogen to the dispensing station



### Low Noise

Allows for installation in most locations



### Easy Install and Maintenance

Containers drop into place with minimal hook-ups. Virtually maintenance free stacks



### High Stack Output Pressure

Reduces the number of compression stages helping to reduce capital and operating costs

# Hydrogen for Power-to-Product (P2X) Applications

Hydrogen for P2X applications allows industry to run more efficiently by making hydrogen and oxygen on-site. No more trucking in hydrogen and oxygen to cover production needs. Production rates can be adjusted in milliseconds to track actual demand. Use excess electricity to operate the electrolyzer and reduce operating costs.



**Most industrial plants can easily support Giner ELX's containerized design allowing plug-and-play installation and easy additions as demand grows.**



## Advantages of PEM P2X Electrolyzer Systems



### Collocated Production

No need to transport hydrogen or oxygen to the plant, helping to reduce cost



### Reduced Carbon Footprint

Use renewable energy sources to generate hydrogen and oxygen



### Safe Operation

The system monitors itself and shuts down automatically if a problem is detected

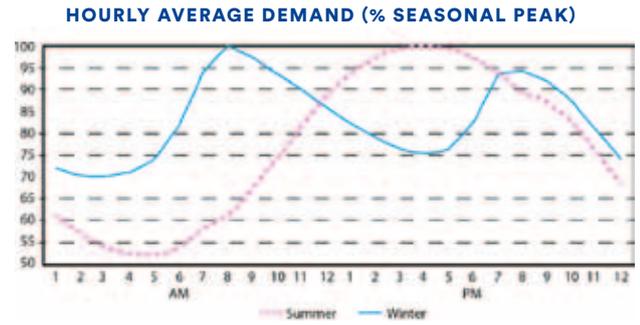


### Easy Capacity Additions

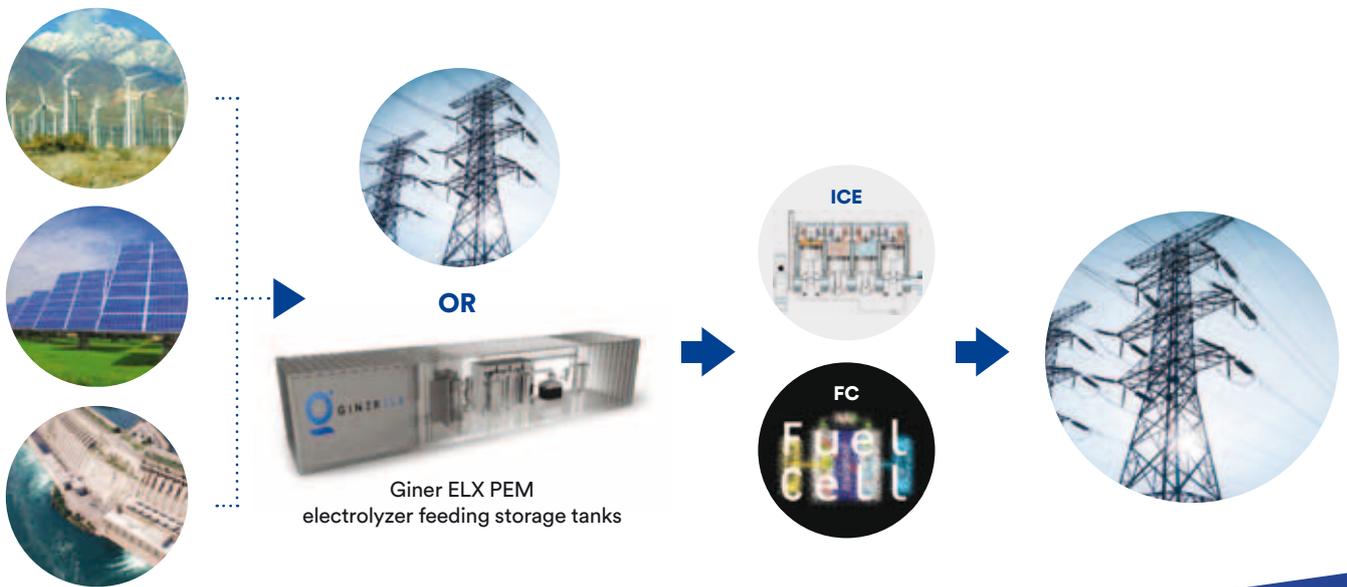
Modularity allows easy capacity additions to meet increased demand

# Hydrogen for Power-to-Power (P2P) Applications

Stop wasting surplus electric power! Convert it to hydrogen and then make electricity when demand peaks and prices are high. Let Giner ELX help you manage your surplus electric power effectively!



**Giner ELX provides high efficiency, kW to multi-MW PEM electrolyzer systems that allow the storage of surplus electric power using a simple plug-and-play container.**



## Advantages of PEM P2P Electrolyzer Systems



### Rapid Response

Instantly follow changes in demand



### Lower Cost Solution

Lower cost than battery storage and a smaller footprint



### Easy Install and Maintenance

Containers drop into place with minimal hook-ups. Virtually maintenance free stacks



### Profit Maximization

By supplying electricity at peak demand, profits increase

# Giner ELX, The World Leader in PEM Electrolysis!

Giner ELX is a team of 20 people based in Newton, MA, with sales agents in Germany, India, and the Netherlands:

- Our advanced PEM electrolyzers generate pure hydrogen from water and electric power at efficiencies approaching 90% (HHV basis);
- Our team is one of the most experienced in the world in PEM electrolysis: most have worked for two decades or more in the field;
- Key individuals hold multiple patents, and have received awards for scientific excellence and solving difficult problems on time-demanding schedules for government and industry;
- Working with key private and public sector partners (the US Department of Energy, General Motors, Parker, NREL and others), we continue to push the boundaries of PEM.

**Giner ELX runs PEM electrolyzers at higher temperatures, higher current densities, and higher pressures for longer than any competitor. This means lower total cost of ownership for our customers!**



## Contact Us



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