

# NUVERA®

**Fuel Cell Power and Hydrogen Supply  
Consider Your Total Cost of Ownership**

# Total Cost of Ownership Considerations

## PRODUCTIVITY

### Elevate your productivity

with increased utilization of your trucks and labor using Nuvera® fuel cell systems. Use of hydrogen fuel cells in materials handling is becoming more prevalent because they offer the benefits of electricity with the convenience of fuel.



## WORKPLACE

### Improve workplace health

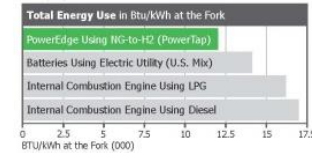
by eliminating chemicals, handling of heavy loads for battery changing, and sulfur and hydrogen off-gassing related to lead-acid battery use, as well as emissions from diesel and propane trucks — all using clean alternatives from Nuvera.



## SUSTAINABILITY

### Advance sustainability initiatives

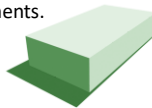
using Nuvera® fuel cell systems with zero emissions, and Nuvera® hydrogen solutions that reduce your environmental footprint.



## SPACE

### Realize space savings.

Implementing Nuvera® fuel cell systems and hydrogen solutions can allow you to remove battery chargers, changing stations, and washing facilities to help reclaim significant square footage inside your facility. Fuel cells also allow you to re-assess electrical capacity, waste management, work flow, logistics, and other operational requirements.



## ENERGY SUPPLY

### Gain control over your energy supply.

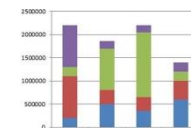
Generating hydrogen on-site from natural gas and water using a Nuvera® hydrogen generator, can significantly reduce your electrical consumption, and help avoid costly peak demand charges. Or, eliminate fuel delivery costs, and simplify related supply contracts and logistics.



## TOTAL COST OF OWNERSHIP

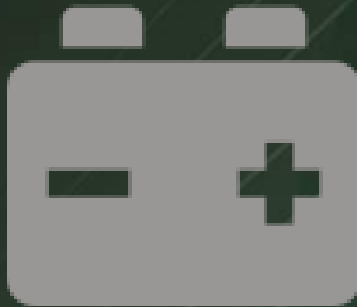
### The bottom line.

If you have a high-throughput, multi-shift operation, running 15 lift trucks or more, why not compare your current power solution with fuel cells? Learn more, to see if you could achieve a lower total cost of ownership.



# General Power Source Cost Comparison

Lead Acid Battery compared to Nuvera® Fuel Cell System



- \$19.5K lifetime spend (\$16K for 3 batteries, and \$3.5K for 1 charger)\*

\*Based on average Class I, 33-inch battery box costs

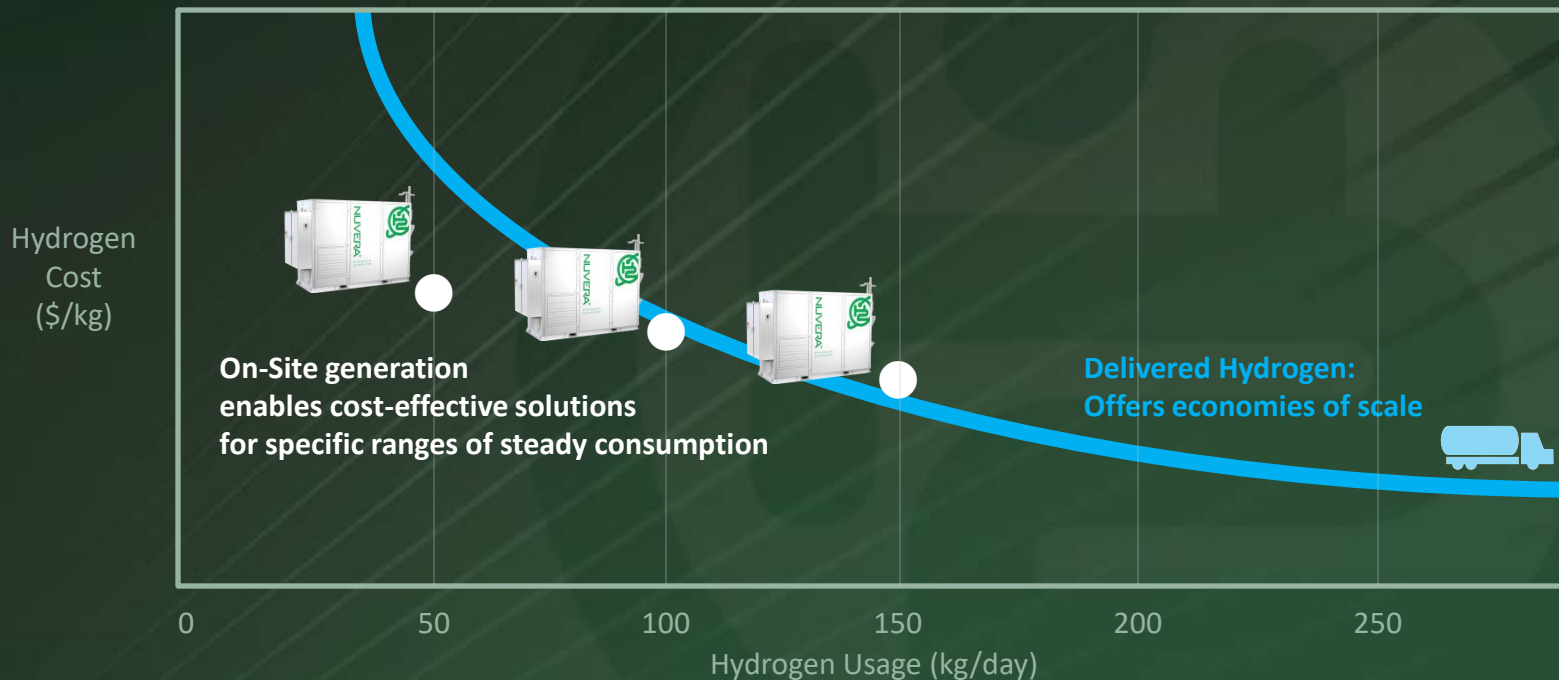


- **Similar acquisition costs when comparing total cost of ownership**
- **Additional lifecycle (energy) opportunity via Nuvera® hydrogen generation equipment**

Please contact Nuvera to learn more about fuel cell, battery and ICE power option comparisons specific to your application.

# General Hydrogen Supply Cost Comparison

Delivered Hydrogen and On-Site Nuvera® Hydrogen Generator Options



● On-site Nuvera® hydrogen generator at 50 kg, 100 kg and 150 kg daily supply

■ Representative range of delivered hydrogen options

## Discover Additional Insights

- Why Hydrogen? Why Now? Hydrogen Addresses Fleet Operating Cost Concerns  
<http://www.forkliftaction.com/news/newsdisplay.aspx?nwid=16097>
- Nuvera Hydrogen Fuel Cells featured in *Purchasing B2B* Supply Chain Solutions  
<http://www.purchasingb2b.ca/features/supply-chain-solutions/>
- Evaluation of the Total Cost of Ownership of Fuel Cell-Powered Material Handling Equipment by the National Renewable Energy Laboratory (NREL)  
[http://www1.eere.energy.gov/hydrogenandfuelcells/pdfs/fuel\\_cell\\_mhe\\_cost.pdf](http://www1.eere.energy.gov/hydrogenandfuelcells/pdfs/fuel_cell_mhe_cost.pdf)

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