

OUTAGES HAPPEN. IS YOUR BACKUP POWER READY?

Upgrade your backup power solution with modern, reliable Altery hydrogen fuel cells

Electricity at substations and telecommunication networks are required to maintain grid operations. Utilities cannot control when weather or other unforeseen events will cause the grid to go down. Because outages do occur, utilities have habitually protected their operation by backing up networks and switching centers with batteries and generators. However, these antiquated solutions are no longer the best solution for the imperative job of keeping critical infrastructure functioning during an outage.

Altery has developed a better solution, using its breakthrough hydrogen fuel cell power systems to deliver clean, sustainable, reliable power, cost-effectively when the grid fails. Altery has provided this extended runtime backup power solution to telecom operations, emergency response, homeland and government applications for almost two decades. These modern clean power solutions allow utilities to replace both batteries and/or generators to backup power to critical infrastructure. These systems feature Altery's revolutionary Freedom Power Technology with extremely robust construction, delivering power conditioning and regulation capabilities that increase efficiency and keep electricity flowing.

With more than 8.3 million watts deployed and 32 million operational hours logged, Altery's hydrogen fuel cell power systems have provided continuous power during grid outages caused by events like Hurricane Sandy, the earthquake in Napa, CA and the most destructive fire in California history in Paradise, CA.

With the largest deployed fleet of hydrogen fuel cells in telecom Altery is the trusted backup power partner since 2001.



Altery's Freedom Power System





The unquestioned workhorse and durability leader

- Meets sustainability and climate change objectives
- Produce power with no greenhouse gas (GHG) emission
- Eliminates performance and replacement issues with batteries and generators
- Low initial capital cost
- Lowest Total Cost of Ownership
- Smallest footprint, highest power density
- Made in USA

Altery's Freedom Power fuel cells provide freedom from:



Better Backup Power with Altery's Fuel Cells

	 VS. 	 VS. 
	Altery Fuel Cells vs. VRLA Batteries	Altery Fuel Cells vs. Diesel Generators
	End the cycle of constantly buying replacement batteries	Eliminate noise and see how clean outperforms dirty
Cost	Altery fuel cells have lower CapEx costs, lower ongoing maintenance costs, and lower total cost of ownership than batteries.	Altery fuel cells have lower CapEx costs, lower ongoing maintenance costs, and lower total cost of ownership than diesel generators.
Space Allocation	Batteries often require conditioned indoor space while fuel cells can operate outside with no enclosures. Fuel cells have a much smaller space requirement.	Toxic and noise emissions limit deployment of generators while fuel cells are clean and extremely quiet. Fuel cells have a much smaller space requirement.
Environmental Impact	Batteries tend to be replaced every few years, and must be disposed of through a heavily regulated process; fuel cells produce clean power and have a design life of more than 20 years.	Generators are gross polluters and face ongoing regulatory restrictions in an effort to decrease noise and greenhouse gas emissions, and address climate change; Altery fuel cells are CARB-certified to produce zero emissions.
Durability	Heat, other environmental conditions, and discharge cycles decrease battery performance and lifespan; Altery fuel cells maintain their performance in extreme hot or cold temperatures and have provided uninterrupted power where legacy battery systems have failed.	Strenuous start cycles, extreme temperatures, prolonged periods of inactivity, and extended continuous runtime can degrade diesel generator performance; Altery fuel cells maintain their performance in extreme hot or cold temperatures and have provided uninterrupted power where legacy systems have failed.
Runtime	Batteries typically deliver two to four hours of performance, insufficient runtimes to adequately back-up critical systems for the required 8 to 72 hrs.	Altery fuel cells can provide from hours to months of continuous runtime on a single fuel fill-up.
Maintenance	Batteries require constant charging and field maintenance conducted by skilled technicians; while the primary maintenance required for Altery fuel cells is replacing air filters once a year.	No complex maintenance schedules, fuel filtering or expensive replacement parts; mostly simply replacing air filters about once a year.

www.altery.com
 Tel: 916.458.8590
 Email: info@altery.com

