FUEL CELLS 2000
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Stationary Fuel Cells at Retail and Grocery Sites

Customer	Type	Location	Status	Fuel Cell Manuf.	Fuel Cell	Configuration	Benefits	Image
United States								
Albertsons	Grocery store	San Diego, CA	2010-present	UTC Power	PureCell® Model 400 PAFC (400 kW)	CHP - generates nearly 90% of the store's power; byproduct heat used to warm water, heat the store when necessary and power a chiller to help cool the refrigerated food; overall energy efficiency of approximately 60%; configured for grid-independent operation if the power fails.	The project is estimated to cut carbon dioxide emissions by 478 metric tons each year compared to California non-baseload power plants.	
Cabela's	Sporting goods retailer	East Hartford, CT	2008-present	UTC Power	PureCell® PAFC (800 kW)	Power - delivers approximately 100% of the required building power, running continuously in conjunction with the utility supply, also capable of providing emergency power to keep the store operational if the power grid fails.	N/a	
Fresh & Easy	Grocery store	San Francisco, CA	2012	ClearEdge Power	6 ClearEdge5 PEM (5 kW) units	CHP – 30 kW of fuel cells provide 25% to 30% of the energy used in the store	N/a	
McDonald's	Fast food	Deer Park, NY	2002-decommissioned	Plug Power	GenSys 5CS PEM (5 kW)	Power – delivered partial power to the restaurant.	N/a	
McDonald's	Fast food	Portland, OR	2009-present	ClearEdge Power	ClearEdge5 PEM (5 kW)	N/a	N/a	
Price Chopper	Grocery store	Colonie, NY	2010-present	UTC Power	PureCell® Model 400 PAFC (400 kW)	CHP - meets 60-70% of the store's energy needs in summer and 100% in winter, uses thermal energy for heating and cooling, configured for grid-independent operation if the power fails.	Reduces the building's carbon footprint by 71 tons, saves more than 4 million gallons of water/yr.	
Price Chopper	Grocery store	Glenville, NY	2011-present	UTC Power	PureCell® Model 400 PAFC (400 kW)	The fuel cell is configured to provide partial backup power in case of grid failure. Waste heat is captured in a CHP configuration and used for space heating and hot water.	NOx emissions are being reduced Chopper by almost 3 metric tons per year.	
Price Chopper	Grocery store	Eastern New York	Planned	UTC Power	PureCell® Model 400 PAFC (400 kW)	A fleet demonstration project will be performed consisting of 5 fuel cell installations at 5 different stores. The fuel cells will operate in combined heat and power mode and will provide backup power to provide chilling during grid outages.	N/a	

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Price Chopper	Grocery store	Middletown, CT	Planned	UTC Power	PureCell® Model 400 PAFC (400 kW)	The fuel cell system is set up to send excess electricity production back to the grid.	N/a	
Safeway	Grocery store	Santa Cruz, CA	2009-present	Bloom Energy	Bloom Energy Server SOFC (200 kW)	Power-- serves 20% of the building's energy load.	N/a	
Staples	Retail distribution center	Ontario, CA	2008-present	Bloom Energy	Bloom Energy Server SOFC (300 kW)	Power - delivers electricity to the store (no further details available).	In the first year, the fuel cell generated over 2 million kWh of power, which resulted in a reduction of 2.5 million pounds of CO_2. Fuel cell availability has been above 99%.	
Star Market	Grocery store	Chestnut Hill, MA	2009-present	UTC Power	PureCell® Model 400 PAFC (400 kW)	CHP - provides electricity and thermal energy in the form of chilled water and hot water. The chilled water supplies refrigeration system sub-coolers, predominately for space conditioning and cold storage areas. The hot water produced is used for space conditioning, desiccant regeneration, and for making domestic hot water.	N/a	
Stop & Shop	Grocery store	East Torrington, CT	2010-present	UTC Power	PureCell® Model 400 PAFC (400 kW)	CHP - generates 95% of the store's total electric energy requirement, uses thermal energy for heating and cooling.	From Jun 2010-Jan 2011 the fuel cell produced over 1.7 million kWh of electricity and reduced the total electric and natural gas utility bills by roughly 50%.	
Wal-Mart	Retail store	Lancaster, CA	2009-present	Bloom Energy	Bloom Energy server SOFC (400 kW)	Power - delivers electricity to the store (no further details available).	N/a	
Wal-Mart	Retail store	Hemet, CA	2010-present	Bloom Energy	Bloom Energy Server SOFC (400 kW)	Power - delivers electricity to the store (no further details available).	N/a	
Wal-Mart	Retail stores	17 sites in California		Bloom Energy		N/a	N/a	
Whole Foods Market	First grocery store to deploy a fuel cell	Glastonbury, CT	2008-present	UTC Power	PureCell® Model 200 PAFC (200 kW)	CHP - generates 50% of store's electricity and nearly 100% of store's hot water, configured for grid-independent operation if the power fails.	Total electrical and heat energy costs were 30% lower after the first year than a comparable, conventionally powered store in West Hartford, CT.	
Whole Foods Market	Grocery store	Dedham, MA	2009-present	UTC Power	PureCell® Model 400 PAFC (400 kW)	CHP - generates approximately 90% of electricity and nearly 100 percent of store's hot water.	N/a	

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Whole Foods Market	Grocery store	San Jose, CA	2010-present	UTC Power	PureCell® Model 400 PAFC (400 kW)	CHP - generates 90% of electricity, byproduct thermal energy is used for heating, cooling and refrigeration	By generating most of its power on-site with a fuel cell, the store will prevent the release of more than 370 metric tons of carbon dioxide annually.	
Whole Foods Market	Grocery store	Fairfield, CT	2011-present	UTC Power	PureCell® Model 400 PAFC (400 kW)	CHP - will generate 90% of the power and meet all of the store's hot water needs.	Provides 90% of the store's power, byproduct thermal energy used for store heating, cooling and refrigeration, will prevent the release of more than 847 metric tons of CO2 annually.	
International								
John Lewis	Department store	UK	Planned	AFC Energy	Alkaline fuel cell (AFC)	Note: Fuel cell forklifts may be added to additional John Lewis stores and to Waitrose super-markets.	N/a	
Many retail and grocery stores are also employing fuel cell-powered forklifts at their distribution centers. See Fuel Cell 2000's fuel cell forklift chart at http://www.fuelcells.org/wp-content/uploads/2012/02/forklifts.pdf								