Fuel Cells for Supermarkets

Cleaner Energy with Fuel Cell Combined Heat and Power Systems
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Price Chopper Supermarkets, Schenectady NY
Who is Price Chopper?


- We are privately owned.

- By incorporating cutting edge technology we strive to effectively reduce our carbon footprint.
WHY FUEL CELLS?
Electricity Costs are a Factor
Incentives and Grants are Available

- Partnership with NYSERDA has yielded opportunities to reduce grid dependence
Operates 24 Hours a Day/7 Days a Week

- Continuous heat and power demands
- Standby ability
Experts in the Field

- UTC experience
- NYSERDA support
- First site converted
- First Field Connected UTC 400Kw cell
Supermarket Installation – Thermal Utilization
Energy Productivity, Security, Responsibility

Fuel Cell

DHW Tank

AHU

Heating Coil

Desiccant Regen Coil

Munters or Seasons Four Style Unit

AC Coil

AHU

Supply

Return

LG Hot Water

HG Hot Water

Hot Water Absorber

Chilled Water

Cooling Tower

Refrigeration System Sub-Coolers
MT & LT Systems
Green Initiative

- Building Construction
- Refrigeration System
- Energy Production
- Lighting
First Installation – Colonie NY
Current Installation in Progress – Glenville NY
Lessons Learned

- Thoroughly analyze electric rates.
- Obtain interconnect approvals in advance.
- Engineering team and fuel supplier need to meet in the beginning of the process.
- Obtain fuel cell deliverables in writing.
- Determine service programs and levels from manufacturer early on.
Results

- Initial install is operating at 92% uptime.
- Still analyzing payback and return on investment. Generally it is five years or less.
- Optimizing use of heat is an evolving process.
Questions?