

A faint, light gray wireframe illustration of a shopping cart is positioned on the left side of the slide, extending from the top left towards the bottom left.

Fuel Cells for Supermarkets

***Cleaner Energy with Fuel Cell
Combined Heat and Power
Systems***



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growinggreener

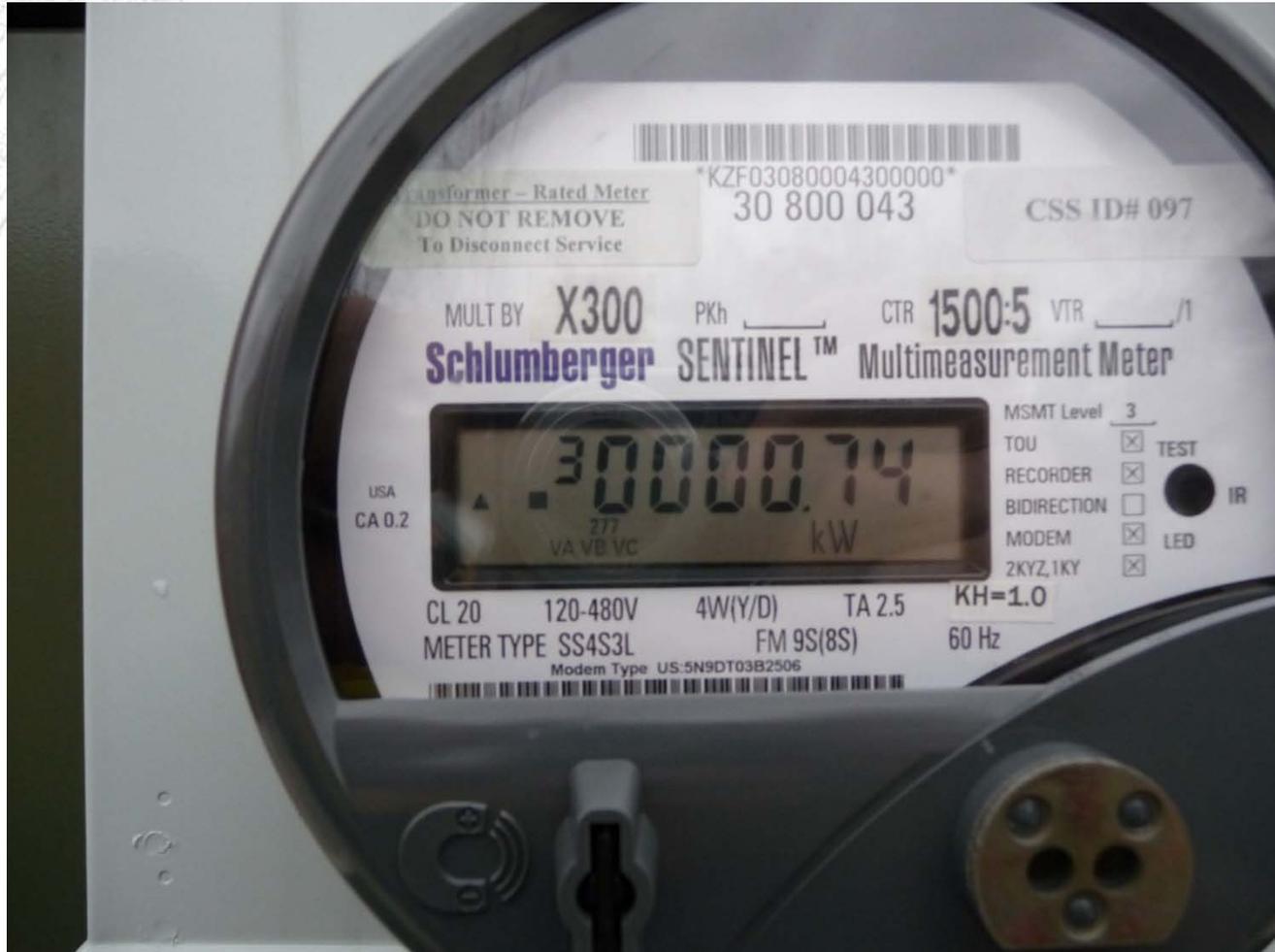
Who is Price Chopper?

- Price Chopper owns & operates 128 supermarkets throughout New York, Vermont, Massachusetts, Connecticut, New Hampshire and Pennsylvania.
- 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

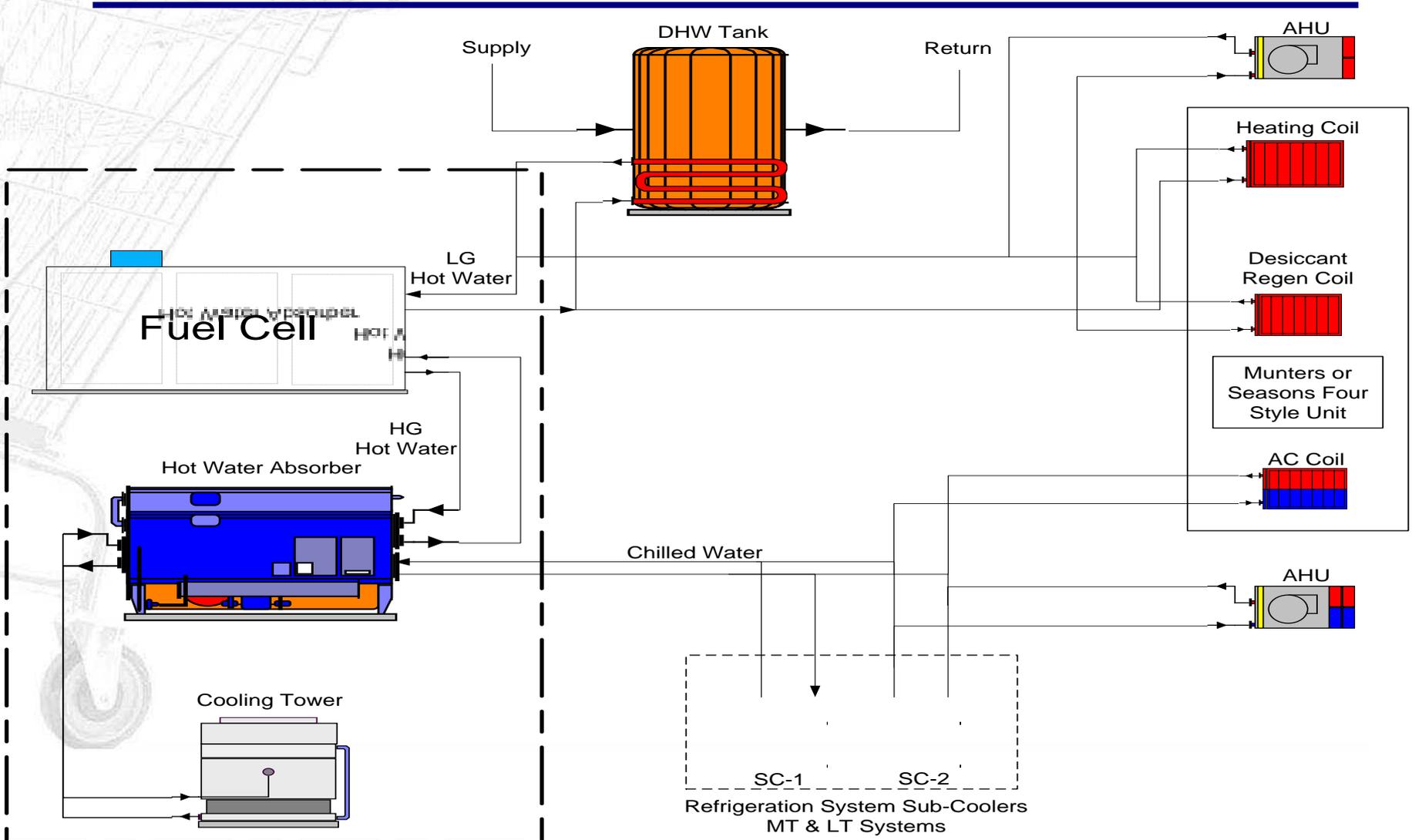
Experts in the Field

- UTC experience
- NYSERDA support
- First site converted
- First Field Connected UTC 400Kw cell

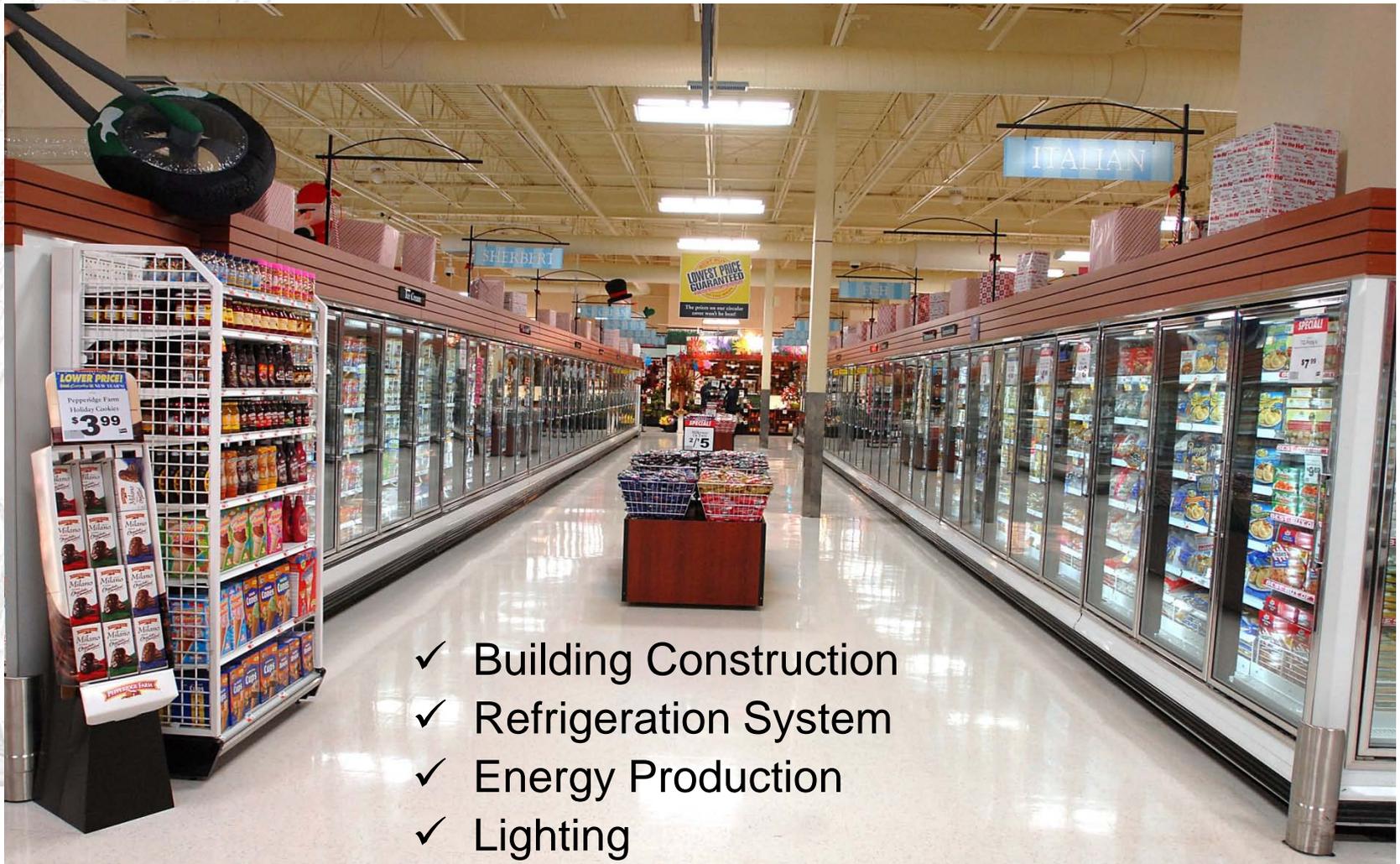


Supermarket Installation – Thermal Utilization

Energy Productivity, Security, Responsibility



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?