

Supermarket
HVAC&R
Design and
Installation



Presented by:

Jon Perry Facility Manager of Farm Fresh &
Keilly Witman of GreenChill



Jonathan Perry –Facility Manager for Farm Fresh

18 years working for Farm Fresh in Energy, Maintenance, Design, Mechanical Installation, Building Automation Systems, and Central Monitoring

- GreenChill Best Practices Guideline*
- FMI Technical Committee and have spoken on many topics including:*
 - Central Monitoring*
 - Technician Shortages*
 - HVAC Design (Climate Keeper)*
 - Hydrogen Leak Testing*
- Recently Spoke at HARDI International & HVACWeek*
- HVAC&R Master , NATE, RSES – CM*
- Certified Test and Balance Engineer*



Farm Fresh - a division of Supervalu

- *Supervalu is the 3rd largest super market wholesaler and retailer in Nation*
- *Distributes to 4500 stores*
- *Operates many retailers:*
 - *Jewel-Osco* - *Shoppers*
 - *Cubs Food* - *Albertsons*
 - *Hornbacher* - *Shop'n Save*
 - *Save-a-Lot* - *Shaws*



Farm Fresh - a division of Supervalu

- *43 Supermarkets*
- *We focus on:*
 - *Superior Service*
 - *Quality Products*
 - *Cleanliness*
 - *Exciting Variety*
- *Located in Eastern VA and NC*



Farm Fresh Engineering

- *We are a Class A General Contractor*
- *27 years as a department*
- *70 to 85% of maintenance work in-house*



Farm Fresh Engineering

- *9 HVAC&R Technicians*
 - *6 master tradesmen*
 - *2 Nate Certified*
- *2 Electricians*
- *3 General Technicians*
- *2 Deli / Bakery Technicians*



Supermarket Industry 2010

- *36,149 + Supermarkets selling more than \$2 million per year*
- *Totaling \$562 Billion per year*
- *Making 0.98% after tax net profits*
- *Median 46,000 sq ft per store*
- *Employing 3.4 Million people*
- *Median sales \$466,011 per week*



- *(FMI Website)*

Standard Supermarket Construction Costs

- *Industry 125 \$/Sq ft*
- *Typical \$5 to \$7 million per store*
- *Mechanical, Electrical, Controls,
and HVAC about 20%*



Maintenance Costs

- *Most likely 1.50 -3.00 \$/ sq ft*
- *65,000 to 130,000 \$ for an average 45,000 Sq Ft per Year*



Supermarket Electrical Costs

- *\$15,000 to \$30,000 average per month electric bills*
- *300 to 500 KW demand*
- *0.06 to 0.12 \$/KWH*
- *Approximately 50%-65% HVAC&R*
- *15 to 20% lighting*



Refrigerant Leak Rates and Charge

- *Approximately 3500 to 4000 lb charges per store historically*
- *Average leak rate per year 25%*
- *Average refrigerant cost 7.50\$/lb*
- *Yearly expense of refrigerant \$7500*
- *Best Leak Rate in GreenChill*
 - *9.9% for 2007 Giant Eagle and Harris Teeter*
 - *7.8% for 2008 Giant Eagle*
 - *6.9% for 2009 Giant Eagle and Sprouts*
 - *6.5% for 2010 Spouts*



Frank Davis, Sprouts Farmers Market; Keilly Witman, EPA; Jerry Stutler, Sprouts.