



## *GreenChill Advanced Refrigeration Partnership*



**EPA & the Supermarket Industry:**  
*Partners in Ozone Layer Protection*

# GreenChill Projects 2008

- ▶ **Best practices**
  - ▶ Retrofit guidelines
  - ▶ Advanced refrigeration technology guidelines
- ▶ **Reporting/partner goals/benchmarking**
  - ▶ Supermarket emissions data
  - ▶ Equipment manufacturer leak tightness
  - ▶ HCFC-22 reclamation
- ▶ **Research**
  - ▶ Energy efficiency theoretical study
  - ▶ Pilot projects
- ▶ **Marketing/Recruiting**



# Retrofit Best Practice Guidelines

- ▶ **Retrofits = most widespread strategy to prepare for HCFC-22 phaseout in existing stores**
- ▶ **Opportunity to reduce leaks**
- ▶ **GreenChill Retrofit Best Practices Guidelines**
  - ▶ **Leak tightness improvements during retrofits**
  - ▶ **Conversion checklists**
  - ▶ **Best practices for handling recovered HCFC-22**
  - ▶ **Case studies**



# Best Practices Guidelines

## Advanced Refrigeration Technology

- ▶ **Describes and explains alternatives to conventional DX systems**
- ▶ **Factors to consider when selecting an advanced refrigeration option**
- ▶ **Best practices to reduce refrigerant charge**
- ▶ **Best practices for leak tightness at production and installation**
- ▶ **Service and maintenance best practices for leak tightness**
- ▶ **Case studies**



# Benchmarking to Measure Progress

- ▶ **Compare leak rates to previous years**
- ▶ **Compare leak rates to GreenChill average**
- ▶ **Compare leak rates to nationwide average**



# Equipment Manufacturing Partner Data Reporting

- ▶ **Equipment leak tightness at production**
- ▶ **Equipment leak tightness at installation**
- ▶ **Shipments of DX systems vs. advanced refrigeration systems**
- ▶ **Refrigerant used in all refrigeration systems shipped**



# Chemical Manufacturing Partner Data Reporting

- ▶ **Baseline year and annual reporting of supermarket HCFC-22 and HFC recovery and reclamation**
- ▶ **Annual goal to increase supermarket HCFC-22 and HFC recovery and reclamation**
  - ▶ **Best practices for recovery and reclamation**
  - ▶ **Chemical manufacturer “Corporate Recovery & Reclamation Plan”**
  - ▶ **HCFC-22 end-of-life guidelines**
  - ▶ **Safety information**



# HCFC-22 Reclamation

- ▶ Increase R-22 and HFC reclamation
- ▶ Best practices for recovery
- ▶ Best practices for reclamation
- ▶ Chemical manufacturer “corporate recovery & reclamation plan”
- ▶ R-22 end-of-life guidelines
- ▶ Safety information





# Energy Efficiency Theoretical Study

- ▶ **Hurdle: supermarket industry fears advanced refrigeration technology uses more energy**
- ▶ **EPA theoretical study compared energy consumption of advanced refrigeration technologies to baseline DX technology**
- ▶ **Draft to be peer reviewed**
- ▶ **Publication as EPA document later in 2008**



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