

Food Retailer Certification Standards for Advanced Refrigeration Technology



Webinar Agenda

- ►2:00 2:20 Intro & explanation of the certification program Keilly
- ► 2:20 2:40 Advanced refrigeration technology and GreenChill's certification standards OEMs
- ►2:40 3:00 Q&A

GreenChill Certification

- Sets standards for store recognition for "GreenChill Certified" advanced refrigeration technology
 - Gold Level Certification & Silver Level Certification
 - Reduced Refrigerant Charge (lbs. of refrigerant p. 1000 BTUs/hr.)
 - ▶ Low Emissions Rate
 - ▶ No Ozone-Depleting Refrigerants
 - Only allowed to use refrigerants found acceptable for retrofits by EPA's SNAP Program
- More details at http://www.epa.gov/greenchill/certcenter.html

Gold-Level Certification

- ► Two ways to qualify
- ► Meet all the criteria under A <u>or</u> meet all the criteria under B
- ► Criteria under A are for HFC-Based Refrigeration Systems
- ► Criteria under B are for Refrigeration
 Systems using Low-GWP Refrigerants

A. HFC-Based Refrigeration Systems

- ► The store's refrigeration systems must use refrigerants with zero ozone-depleting potential
- ► The store's refrigeration systems must use refrigerants that have been found acceptable by EPA's Significant New Alternatives Policy Program (SNAP) for use in retail food refrigeration end-uses
- The store must achieve an average HFC refrigerant charge ≤ 1.25 lbs. of refrigerant per 1000 BTU/hr. total evaporator cooling load
- ► The store must achieve a store-wide annual emissions rate of no more than 15%

B. Refrigeration Systems using Low-GWP Refrigerants

- ► The store's refrigeration systems must use refrigerants with zero ozone-depleting potential
- The store's refrigeration systems must use refrigerants that have been found acceptable by EPA's Significant New Alternatives Policy Program (SNAP) for use in retail food refrigeration end-uses
- ► All refrigerants used in the store must have global warming potentials lower than 150

Silver-Level Certification

- One way to qualify; one set of criteria
- ► The store's refrigeration systems must use refrigerants with zero ozone-depleting potential
- ► The store's refrigeration systems must use refrigerants that have been found acceptable by EPA's Significant New Alternatives Policy Program (SNAP) for use in retail food refrigeration end-uses
- The store must achieve an average HFC refrigerant charge ≤ 1.75 lbs of refrigerant per 1000 BTU/hr. total evaporator cooling load
- ► The store must achieve a store-wide annual emissions rate of no more than 15%

- Forms will be available on line
- Step-by-step instructions for newly constructed stores and stores that have been fully operational for 12 months



- Applies only to a store's commercial refrigeration system
- ▶ Does not apply to the store's HVAC system (split systems or self contained).
- ►BTUs/hr. of the HVAC system may not be included in the refrigerant charge calculations

| Included equipment | BTU Calc. | Refrigerant leaked | Refrigerant Stocked | Non-ozone- depleting Refrigerant | Snap approved refrigerant |
|--|--------------|--------------------|------------------------|--|---------------------------------|
| Self contained Commercial refrigeration equipment | no | yes | yes | yes | yes |
| Remote commercial refrigeration equipment | yes | yes | yes | yes SGREENC | yes |
| HVAC Equipment | no | no | no 🔩 | yes | yes |

► For the list of acceptable SNAP alternatives for retail food refrigeration see http://www.epa.gov/ozone/snap/refrigerants/



- ► The lbs. of refrigerant per 1000 BTU/hr. criteria is based upon adding the store's total remote commercial refrigeration evaporator heat load, including food merchandisers, food prep rooms, and food storage rooms
- Note: It is not the rack rating or compressor capacity, which is typically larger than the calculated load

► Each and every store applying for GreenChill certification must achieve an annual emissions rate of no more than 15%. The emissions rate is calculated as follows:

[(amount of refrigerant emitted over the period of one year the refrigerant stock) x 100] = % annual emissions rate



- ► The amount of refrigerant emitted over the period of one year is equal to the amount of refrigerant lost from
 - ► the store's self contained commercial refrigeration equipment
 - remote commercial refrigeration equipment

- GreenChill certification may be re-earned annually
 - store must meet the certification criteria on an annual basis
- A store that achieves certification for several years may receive "continued excellence" awards.

- ► A store that is unable to achieve the certification criteria in a particular year will lose its certification for that year
- If that store is able to meet the certification criteria in a subsequent year, it will be recertified for that year and each of the following years that it is able to meet the criteria

- ► GreenChill reserves the right to verify the information submitted by a store for certification, including, but not limited to:
 - ▶inspection of the store
 - requesting third party certification
 - ▶ and/or requesting copies of store records related to the certification criteria

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For More Info

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