



GreenChill Store Certification Protocol for Condensing Units

For the purposes of applying for GreenChill Store Certification, the following document describes the application requirements and protocol used to determine the refrigerant charge and total load of stores that use one or more condensing units to meet their cooling needs.

Leak Tightness Testing at Installation

Condensing units are considered a type of remote commercial refrigeration equipment. Therefore, all newly constructed store certification applications must include verification that the condensing units installed at the store were tested for leaks according to [GreenChill's Installation Leak Tightness Guidelines](#).

How to Report Your Store's Total Refrigerant Charge:

A store's refrigerant charge is the total pounds of refrigerant that are charged into the store's commercial refrigeration equipment. If condensing units are used in lieu of or in addition to a parallel system, the refrigerant charge contained within each condensing unit **SHALL be included** in the store's total refrigerant charge.

How to Report Your Store's Total Load (MBTU/hr.):

As described in the [GreenChill Store Certification Program Guidance](#), a store's total load shall include all BTUs associated with refrigeration. Therefore, the total load associated with condensing units **SHALL be included** in the store's total load. (*Note: The total load is not the condensing unit capacity, which is typically larger than the total load*).

Loads cooled by condensing units typically are reported as a BTU/hr. value for the maximum operating time of the condensing unit. Condensing units are typically designed with a maximum operating time of 22 hours. The load calculations used by the GreenChill Store Certification Program are based on parallel system ratings. For consistency, any load that has a condensing unit rating **SHALL be converted** to a 24-hour parallel system rating. To adjust the load, please use the following calculation:¹

$$\left[\text{Total load associated with condensing units} * \frac{22}{24} \right] = \text{Adjusted load associated with condensing units}$$

Please direct any questions to GreenChill@epa.gov.

¹ Although the design maximum operating time for condensing units vary, for the purposes of the GreenChill Store Certification Program, a correction factor of 22/24 or 0.9167 must be applied to the total load associated with condensing units.