LEED O+M: Existing Buildings | v4 - LEED v4

Fundamental refrigerant management

Required

Intent

To reduce stratospheric ozone depletion.

Requirements

Establishment

Do not use chlorofluorocarbon (CFC)-based refrigerants in heating, ventilating, air-conditioning, and refrigeration (HVAC&R) systems unless a third-party audit shows that system replacement or conversion is not economically feasible or unless a phase-out plan for CFC-based refrigerants is in place.

The replacement or conversion of HVAC&R equipment is considered not economically feasible if the simple payback of the replacement or conversion is greater than 10 years. Perform the following economic analysis:

$$\text{Simple payback} = \frac{\text{Cost of replacement or conversion}}{\text{Resulting annual energy cost difference} + \text{Resulting annual maintenance and refrigerant cost difference}} > 10$$

If CFC-based refrigerants are maintained in the building, reduce annual leakage to 5% or less using the procedures in the Clean Air Act, Title VI, Rule 608, governing refrigerant management and reporting (or a local equivalent for projects outside the U.S.), and reduce the total leakage over the remaining life of the unit to less than 30% of its refrigerant charge.

Small HVAC&R units (defined as containing less than 0.5 pound (225 grams) of refrigerant), standard refrigerators, small water coolers, and any other cooling equipment that contains less than 0.5 pound (225 grams) of refrigerant are exempt.

Performance

None.