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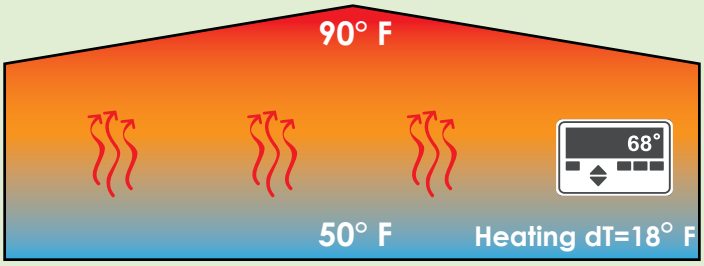
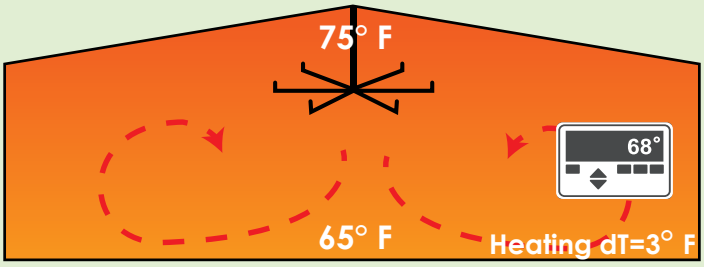
DESTRATIFICATION TECHNIQUES HELP YOU SAVE

A naturally occurring process of stratification happens in all buildings: Warm air rises and becomes trapped at ceiling height or is leaked through the roof to the outside. During heating season, HVAC equipment must continuously run to keep up with the demand for warm air at the occupant level. A significant amount of energy is wasted as the warm air accumulates at the top of the facility and is not utilized for warming the occupancy level. For high-bay spaces, temperature differences between the floor and ceiling could be as much as 20-50 degrees. Even in warm months when the HVAC system is delivering cool air, stratification occurs resulting in varying indoor temperatures.

Alternatively, thermal destratification is a process in which warm air is redistributed to occupied levels, thereby equalizing the temperature differential



Stratification in a Building
Warm air rises and escapes through the ceiling, leaving the occupied working area cold



Destratification in a Building
Warm air at ceiling level is recirculated to the occupied level, equalizing temperatures

dT = differential temperature

Because you can never save too much.

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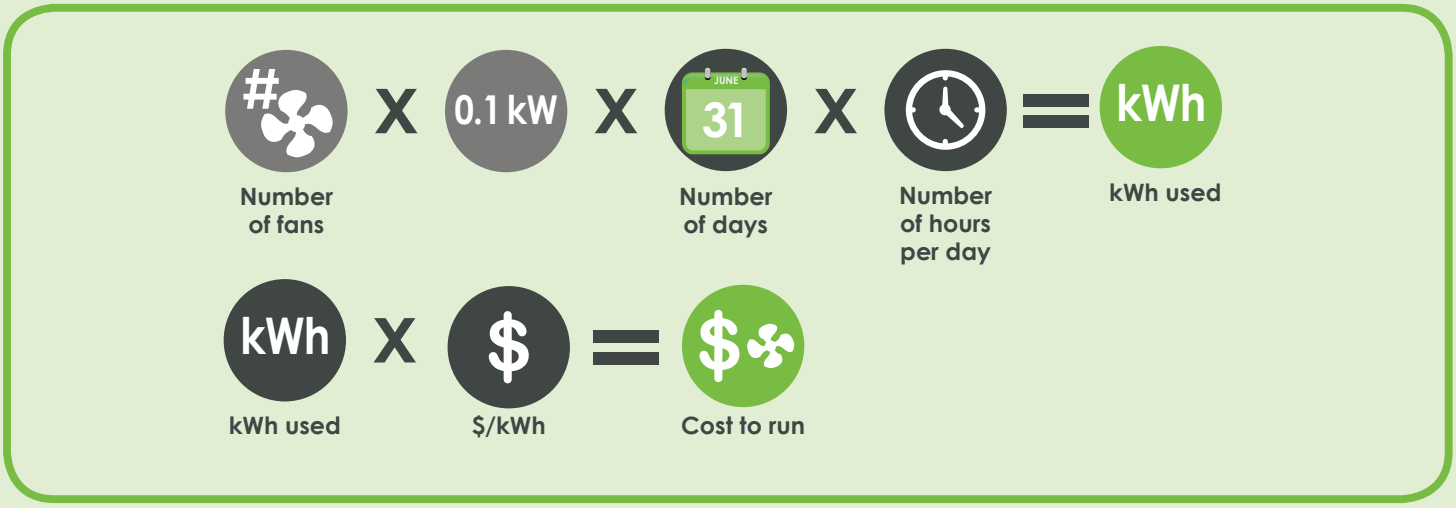
normally occurring between the floor and ceiling. The HVAC system doesn't need to work overtime with destratification, which reduces energy consumption. When heating a facility, warm air is recirculated from where it accumulated at the ceiling.

Implementing destratification is especially important for buildings with high ceilings, like warehouses and churches, and for those with specific temperature requirements for employees, goods or equipment. After destratification, temperature differences between the floor and ceiling could decrease significantly to 1-3 degrees.

Destratification is typically achieved by installing paddle, box, ducted or axial turbine ceiling fans.

These low-speed, energy-efficient fans operate quietly and continually. Some fans use as little as 0.1 kilowatt of power to operate. A simple calculation of cost to run destratification fans is shown below.

Destratification is a simple energy reduction initiative that can be installed in both existing facilities and new construction. The fans offer significant energy and cost savings, help to optimize HVAC system demand and improve occupant comfort. While adding destratification fans at your site may reduce your overall energy bill, typically offer a short payback and provide a more comfortable work space, NV Energy does not currently offer incentives for this measure.



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