



# Warehouse Facility Improvement Best Practices Checklist

Use the following checklist of best practices to identify opportunities, assign responsibility and track progress toward goals at your facility. Please note that each warehouse facility is unique; therefore, this checklist is only meant to be a guide. Best practices change depending on warehouse location, refrigeration capabilities, automation, goods stored, and many other factors. Find the opportunities that make the most sense for your facility. For more information on benchmarking and energy management in warehouse space, visit [energystar.gov/buildings](http://energystar.gov/buildings).

Current ENERGY STAR score =		Target ENERGY STAR Score =			
Best Practice Measure	Opportunity Exists?	Who is Responsible?	Target Date for Completion	Actual Completion Date	Notes
<b>LOW- AND NO- COST OPPORTUNITIES</b>					
Consider de-lamping where lighting power density is higher than needed					
Implement a lighting scheduling strategy or review existing strategy for potential improvements					
Implement a routine lighting maintenance schedule, including cleaning fixtures to reduce degradation of lighting quality					
Replace or repair caulking/weather stripping around doors, windows, and other openings to the outside of the building					
Ensure regular maintenance of HVAC systems, including replacement of filters					
Review temperature setpoints and make seasonal adjustments					
Control outside air intake and avoid heating/cooling outside air when the building is unoccupied					
Ensure that exhaust fans are shut off when the building is unoccupied					
Confirm that bay doors are closed when not in use.					
Program defrost cycle to run when needed, rather than relying on timers					
<b>LIGHTING</b>					
Replace metal halide and/or T12 fluorescent lighting with T5 or Super T8 linear fluorescent fixtures and high-efficiency ballasts					
If metal halide lighting is used (e.g., unconditioned warehouses with extreme temperatures), emphasize the use of ceramic metal halide bulbs with electronic ballasts					
Use LED lamps for parking lot, loading dock, security, and exit signs.					
Install occupancy sensors to limit illumination of unoccupied areas					
Install controls to allow dimming or bi-level switching of lights					
Install photosensors to control outdoor lighting					
Investigate opportunities for skylighting to reduce artificial lighting requirements					

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<b>BUILDING ENVELOPE</b>					
Install dock seals or dock shelters to reduce outside air infiltration					
Insulate doors to the outside					
Ensure that wall and roof insulation is appropriate for local climate					
Install ENERGY STAR qualified roofing products or explore other "cool roof" strategies					
Consider window placement to allow passive solar heating (during new construction)					
<b>SPACE CONDITIONING</b>					
Install economizer controls to regulate intake of outdoor air based on temperature					
Condition office and warehouse space separately. In warehouse, use radiant heating where staff are most commonly working, instead of heating the entire warehouse to a constant temperature					
Install destratification fans or diffusers to circulate conditioned air and/or move warmer air downward during heating season					
Use natural ventilation to let warmer air escape during the cooling season					
Recover exhaust heat from mechanical equipment to supplement space heating					
Install ENERGY STAR qualified HVAC equipment and variable frequency drives. When installing new equipment, ensure that the system is not over-sized for the building's heating and cooling needs (especially if prior efficiency measures have been implemented)					
For packaged rooftop units, consider retrofitting with advanced controllers or even replacing with new, high-efficiency models.					
Consider demand ventilation strategies, such as the use of CO sensors to control ventilation fans					
<b>REFRIGERATION</b>					
Ensure appropriate insulation of refrigerators and freezers					
Use variable frequency drives and high-efficiency motors on compressors and evaporator fans					
Recover waste heat from condenser coils to heat domestic hot water					
<b>MATERIALS HANDLING</b>					
Install conveyor system controls and run only when needed					
Install high-efficiency motors for conveyor systems					