



Industrial HVAC Energy Optimization Checklist 2026

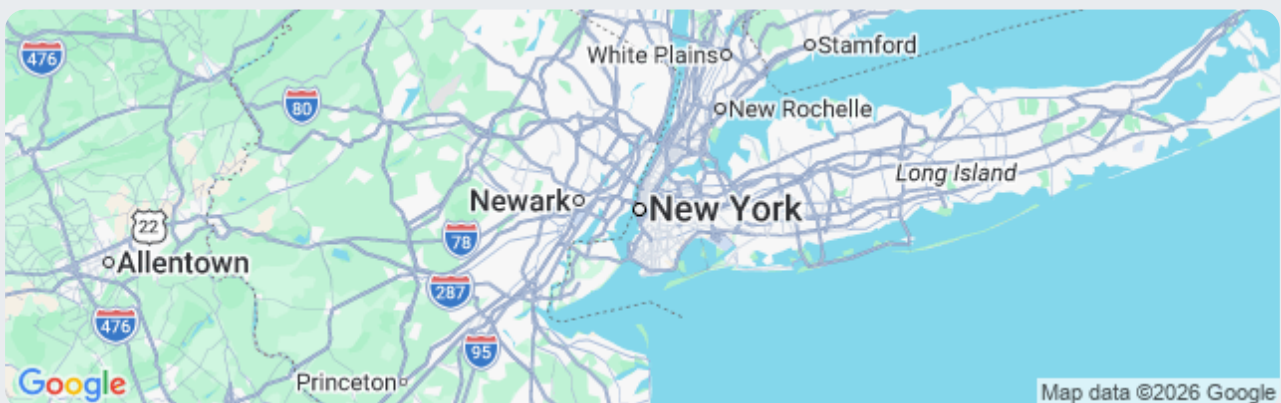
Pre-Audit Equipment Inventory & Documentation

Verification of all HVAC assets, including age, capacity, maintenance logs, and current energy consumption data.

Audit Date

Facility/Site Location

 [Set My Current Location](#)



Equipment Asset ID/Tag Number

Write something...

Equipment Type

- ☐ Chiller
- ☐ Air Handling Unit (AHU)
- ☐ Boiler
- ☐ Cooling Tower
- ☐ RTU (Rooftop Unit)
- ☐ Exhaust Fan

Installation Year

Enter a number...

Maintenance Log/Manual Upload

 Upload File

Current Equipment Condition Notes

Write something...

Auditor Signature

Thermostat & Control System Configuration

Audit of temperature setpoints, scheduling accuracy, sensor calibration, and occupancy-based control logic.

Last Calibration Date

Controller Type

- ☐ Programmable Thermostat
- ☐ Smart/IoT Controller
- ☐ BMS-Integrated Controller
- ☐ Manual Analog Controller

Standard Temperature Setpoint (°C/°F)

Active Control Features

- ☐ Occupancy Sensors
- ☐ Humidity Control
- ☐ CO2 Monitoring
- ☐ Time-of-Use Scheduling
- ☐ Remote Access/Cloud Control

Configuration Discrepancies & Observations

Write something...

Controller Wiring Diagram or Manual

 Upload File

Technician Verification

Air Distribution & Filtration Efficiency

Inspection of air handling units (AHUs), filter cleanliness, belt tension, duct integrity, and airflow balancing.

Filter Condition Status

- ☐ Clean
- ☐ Partially Clogged
- ☐ Needs Immediate Replacement
- ☐ Critical Failure

Airflow Measurement (CFM)

Enter a number...

Last Filter Replacement Date

Enter date...

Inspected Components

- ☐ Supply Air Ducts
- ☐ Return Air Ducts
- ☐ Air Handling Unit (AHU) Belts
- ☐ Dampers & Louvers
- ☐ Diffusers & Grilles

Ductwork Leakage or Damage Observations

Write something...

Photographic Evidence of Filter/Duct Condition

 Upload File

Chiller & Cooling Tower Optimization

Evaluation of refrigerant levels, condenser coil cleanliness, cooling tower water treatment, and chiller sequencing efficiency.

Inspection Date

Enter date...

Chiller Operational Status

- ☐ Operational
- ☐ Degraded Performance
- ☐ Maintenance Required
- ☐ Out of Service

Measured Approach Temperature (°C)

Enter a number...

Completed Maintenance Tasks

- ☐ Condenser Coil Cleaning
- ☐ Refrigerant Leak Test
- ☐ Cooling Tower Water Treatment
- ☐ Pump Lubrication
- ☐ Sensor Calibration

Observed Anomalies or Leakage Details

Write something...

Chiller Performance Report / Photos

 Upload File

Technician Verification

Boiler & Heating System Performance

Assessment of burner combustion efficiency, heat exchanger scaling, insulation integrity, and condensate return optimization.

Inspection Date

Enter date...

Boiler Combustion Efficiency (%)

Enter a number...

Burner Operational Status

- ☐ Optimal
- ☐ Sub-optimal
- ☐ Requires Immediate Repair

Heat Exchanger Scale/Corrosion Observations

Write something...

Insulation Integrity Checkpoints

- ☐ Steam Pipes
- ☐ Hot Water Lines
- ☐ Valve Jacketing
- ☐ Flanges & Fittings

Boiler Maintenance Log Photo/Document

 Upload File

Technician Verification

Ventilation & Air Exchange Rates

Monitoring of outdoor air intake, damper functionality, and-demand controlled ventilation (DCV) performance.

Damper Operational Status

- ☐ Fully Functional
- ☐ Partial Obstruction
- ☐ Malfunctioning/Stuck
- ☐ Requires Immediate Repair

Measured Outdoor Air Flow Rate (CFM)

Enter a number...

Ventilation Inspection Points Covered

- ☐ Intake Louvers
- ☐ Exhaust Fans
- ☐ Supply Air Ducts
- ☐ Return Air Grilles
- ☐ CO2 Sensors

Observation Notes on Air Leakage or Leakage Points

Write something...

Photos of Airflow Sensors or Damper Mechanism

 Upload File

Last Calibration Date of Air Quality Sensors

Enter date...

Variable Frequency Drive (VFD) & Motor Inspection

Verification of motor speeds, VFD operational status, and synchronization with load requirements.

VFD Operational Status

- ☐ Operational
- ☐ Fault/Error Code Detected
- ☐ Maintenance Required
- ☐ Non-Functional

Current Motor Operating Frequency (Hz)

Enter a number...

Measured Motor Amperage (A)

Enter a number...

Visual Inspection Checklist

- ☐ No visible overheating or discoloration
- ☐ No abnormal vibration or noise
- ☐ Conduit and wiring are secure
- ☐ Cooling fans/heatsinks are clean

VFD Error Log & Fault History Notes

Write something...

Thermal Imaging/Thermography Report

 Upload File

Technician Verification

Building Envelope & Thermal Integrity

Inspection of thermal leakage points, window seals, and insulation effectiveness around HVAC-connected zones.

Window & Glazing Condition

- ☐ Excellent (No leaks/fogging)
- ☐ Fair (Minor seal degradation)
- ☐ Poor (Significant thermal leakage)

Insulation Defect Observations

Write something...

Identified Leakage Points

- ☐ Door Seals
- ☐ Window Frames
- ☐ Wall Penetrations
- ☐ Roof/Attic Access
- ☐ Ceiling Tiles

Estimated Thermal Leakage Rate (BTU/hr)

Enter a number...

Thermal Imaging Photos

 Upload File

Inspector Verification

Energy Monitoring & Data Integration

Validation of sub-metering accuracy, real-time energy dashboard connectivity, and automated alert systems.

Data Extraction Date

Enter date...

Current Energy Meter Reading (kWh)

Enter a number...

Sub-metering Integration Status

- ☐ Fully Integrated
- ☐ Partial Integration
- ☐ Manual Logging Required
- ☐ No Metering Available

Monitored Parameters

- ☐ Temperature
- ☐ Humidity
- ☐ Airflow (CFM)
- ☐ Pressure Drop
- ☐ Power Factor

Data Discrepancy Observations

Write something...

Energy Usage Report (CSV/PDF)

 Upload File

Auditor Verification

Post-Optimization Action Plan

Summary of identified energy waste, prioritized maintenance tasks, and ROI projection for 2026 budget planning.

Summary of Identified Energy Waste

Write something...

Priority Maintenance Tasks

- ☐ Immediate Repair Required
- ☐ Scheduled Maintenance
- ☐ Equipment Replacement Recommended
- ☐ Sensor Calibration Needed
- ☐ Software/Firmware Update

Estimated Annual Cost Savings (USD)

Enter a number...

Implementation Deadline

Enter date...

ROI Calculation Report



Upload File

Facility Manager Approval

< Previous

> Next

🏁 Finish



Generate Sample Report