GWT 2 ENERGY
CONSULTING SERVICES

PRACTICAL PORTFOLIO CHECKLIST

# Energy Waste Field Guide

A practical checklist for multi-site restaurant and retail operators

Find schedule drift, abnormal runtime, utility outliers, and operational issues before they become routine costs.

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# How to use this guide

Energy waste rarely begins with one major equipment failure. More often, it develops through schedule drift, unnecessary runtime, incorrect setpoints, simultaneous heating and cooling, water leaks, billing errors, and equipment problems that go unnoticed across multiple locations.

Use this guide to screen a representative group of locations, identify repeatable issues, and decide where a closer review is justified. It is not a substitute for an engineering study or formal energy audit.

**A sensible starting point**

Select five representative locations. Include different climates, formats, operating hours, and performance levels. Review one full operating week before deciding whether an issue is isolated or portfolio-wide.

## Nine review areas

| | | |
|---|---|---|
| 1. Building schedules | 2. HVAC and comfort | 3. Lighting controls |
| 4. Refrigeration and loads | 5. Water and gas | 6. Utility bills |
| 7. Portfolio outliers | 8. Action planning | 9. Project review |

# 1. Start with the building schedule

Operating schedules are one of the most common - and most preventable - sources of energy waste. HVAC, lighting, and other equipment can run unnecessarily for hours without creating an obvious complaint.

## What to check

- ☐ HVAC schedules reflect actual operating hours.
- ☐ Equipment starts early enough to reach temperature, but not hours before employees arrive.
- ☐ HVAC returns to an unoccupied setting after closing.
- ☐ Exterior, parking, signage, and landscape lighting follow appropriate schedules.
- ☐ Holiday and seasonal schedules are current.
- ☐ Temporary overrides expire automatically.
- ☐ Overnight and weekend operation is reviewed.
- ☐ Remodeled or reopened locations have returned to normal schedules.

## Warning signs

- HVAC runs continuously overnight.
- Exterior lighting remains on after sunrise.
- Employees routinely use permanent overrides.
- Every location uses the same schedule despite different hours.
- Schedule changes require a site visit.
- Equipment starts at the same fixed time year-round.

### Practical check

Compare actual equipment operation with business hours for one full week at five representative locations. If several schedules are wrong, treat it as a portfolio issue.

# 2. Review HVAC operation and comfort

HVAC is often one of the largest controllable building loads. The goal is not reduced comfort; it is appropriate runtime and earlier detection of abnormal behavior.

## What to check

☐ Occupied heating and cooling setpoints fit the operation.
☐ Unoccupied setpoints provide a reasonable setback.
☐ Heating and cooling setpoints maintain adequate separation.
☐ Units serving the same area are not heating and cooling simultaneously.
☐ Fans do not run continuously unless requirements call for it.
☐ Supply-air temperatures are reasonable during active operation.
☐ Sensors are away from doors, kitchens, sunlight, and misleading heat sources.
☐ Filters, returns, belts, and dampers are maintained.
☐ Repeated complaints are investigated instead of handled only with setpoint changes.
☐ Runtime and alarm histories are reviewed where available.

## Warning signs

- One unit runs much longer than similar units.
- The space misses setpoint despite continuous runtime.
- Heating and cooling calls overlap.
- Employees cover or manipulate sensors.
- The same location repeatedly reports comfort issues.
- Usage rises without a matching weather or operating change.

### Useful operating principle

A comfort complaint is not always a setpoint problem. Repeated overrides can indicate failed equipment, poor airflow, a bad sensor, an incorrect schedule, or a building-envelope issue.

# 3. Inspect lighting and controls

Efficient fixtures still waste energy when they operate unnecessarily. Separate zones and reliable control logic matter as much as fixture type.

## What to check

- ☐ Interior lighting follows occupancy and operating schedules.
- ☐ Exterior and parking lighting responds to sunrise and sunset.
- ☐ Signage and window lighting have separate schedules where appropriate.
- ☐ Intermittently used spaces have working occupancy controls.
- ☐ Daylight sensors are clean, placed correctly, and calibrated.
- ☐ Manual switches do not defeat automated controls.
- ☐ Emergency and life-safety requirements remain protected.
- ☐ Schedules have been reviewed since operating hours last changed.

## Warning signs

- Exterior lights remain on during daylight.
- Interior lights are on when the location is closed.
- Employees do not understand the controls.
- A failed timeclock or photocell has been bypassed.
- Different lighting needs share one control zone.
- Decorative or window lighting runs overnight without a business reason.

### Quick calculation

Annual avoidable cost = connected load (kW) x unnecessary hours x electricity rate.

A 10 kW load running two extra hours daily at $0.14/kWh costs about $1,022 per year. Across 100 locations, the same issue is about $102,200 per year. This is an illustration, not a savings guarantee.

# 4. Check refrigeration and other major loads

In restaurants, convenience stores, and food retail, refrigeration problems can increase energy use well before equipment fails completely.

## What to check

- ☐ Walk-in and reach-in door gaskets seal properly.
- ☐ Doors close completely and are not routinely propped open.
- ☐ Condenser and evaporator coils are clean.
- ☐ Refrigeration setpoints match operational requirements.
- ☐ Defrost schedules are appropriate.
- ☐ Ice buildup, short cycling, and unusual runtime are investigated.
- ☐ Temperature alarms are active and routed to someone who can respond.
- ☐ Anti-sweat and heated-frame loads operate only as needed where controls permit.
- ☐ Kitchen exhaust and make-up air schedules match cooking operations.
- ☐ Water heaters avoid full-temperature operation during long unoccupied periods unless required.

## Warning signs

- A system runs continuously but struggles to maintain temperature.
- Temperature alarms recur without a documented repair.
- Ice buildup returns shortly after removal.
- Walk-in doors are frequently left open.
- Kitchen exhaust runs long before preparation or after closing.
- Similar locations have substantially different overnight demand.

> **Maintenance comes first**
>
> A dirty coil, refrigerant issue, failed sensor, damaged gasket, or poor airflow may require repair before it becomes an energy project. Monitoring is valuable because it can identify these conditions earlier.

# 5. Review water and natural gas use

Water and gas waste can remain hidden because it may not immediately affect comfort or daily operations.

## What to check

- ☐ Overnight water use is reviewed while the location is closed.
- ☐ Toilets, faucets, sprayers, and irrigation are checked for leaks.
- ☐ Ice machines, filtration, and water-treatment equipment are inspected.
- ☐ Irrigation schedules account for season and weather.
- ☐ Water use is compared across similar locations.
- ☐ Sewer charges and meter classifications are reviewed where material.
- ☐ Gas use is compared with weather and operating hours.
- ☐ Water-heating temperatures and schedules are appropriate.
- ☐ Kitchen equipment is not left operating unnecessarily.
- ☐ Gas accounts, meter numbers, and service addresses are correct.

## Warning signs

- Significant water use continues overnight.
- Consumption increases without a sales or operating change.
- One location uses materially more water than peers.
- Gas use remains unusually high in mild weather.
- Sewer charges use an incorrect meter or classification.
- A closed location continues to receive normal bills.

### What the bill cannot tell you

A total monthly increase may reflect consumption, rates, billing days, or an account correction. Overnight and interval data, where available, can help distinguish operational waste from billing effects.

# 6. Look beyond the total utility bill

A higher bill does not necessarily mean the location used more energy. The cause could be higher consumption, rate changes, demand, an estimated read, billing-period length, or an account error.

## What to check

- ☐ Usage is compared - not just total cost.
- ☐ Billing periods contain a similar number of days.
- ☐ Actual and estimated meter readings are identified.
- ☐ Demand charges are reviewed where applicable.
- ☐ Rate classes and tariff assignments are correct.
- ☐ Contract supply prices match the bill.
- ☐ Late fees, deposits, taxes, and adjustments are separated.
- ☐ Duplicate accounts and overlapping service dates are investigated.
- ☐ Openings and closures are handled correctly in portfolio comparisons.
- ☐ Weather, hours, and material business changes are considered.

## Warning signs

- Cost increases while usage is flat.
- Usage jumps after an estimated read.
- Demand rises without a clear operating change.
- A meter or service address does not match the location.
- The same anomaly appears across several accounts.

### Eight questions to ask

Did consumption increase? Did the rate change? Was the period longer? Was the meter read or estimated? Did demand increase? Did hours, weather, equipment, or production change? Is the bill for the correct meter? Is the increase isolated or portfolio-wide?

# 7. Use portfolio data to find outliers

The largest opportunity is not always at the site with the highest total cost. Large stores, high-volume restaurants, and extreme climates may reasonably use more. The better question is: Which locations perform differently from comparable locations, and why?

## Useful comparisons

- Energy use and utility cost per square foot
- Usage per operating hour
- Usage per transaction or sales volume, where appropriate
- Overnight electrical demand
- Weather-normalized HVAC use
- Water use per operating day
- Performance against the same location's historical baseline
- Performance before and after a controls or equipment change

## Create comparable groups

Group sites by building type, climate, square footage, operating hours, concept, major equipment, drive-through format, and freestanding versus shopping-center location. Then identify the highest and lowest performers in each group.

> **Keep the conclusion disciplined**
>
> An outlier is a reason to investigate, not proof of waste. The first comparison tells you where to look; it does not establish the cause.

# 8. Build a short action list

Trying to correct every issue at once usually slows the program down. Start with problems that are measurable, repeatable, and operationally realistic.

## Priority 1 - Correct immediately

- Equipment running while a location is closed
- Active water leaks
- Simultaneous heating and cooling
- Failed lighting schedules
- Incorrect accounts or duplicate charges
- Safety, food-quality, or equipment-protection concerns

## Priority 2 - Investigate

- Abnormal overnight demand
- Repeated comfort complaints
- Unusual water or gas base loads
- Large differences among comparable locations
- Recurring refrigeration alarms
- Unexpected changes in demand charges

## Priority 3 - Plan and budget

- Control-system upgrades, submetering, or monitoring
- HVAC, lighting, refrigeration, or building-envelope work
- Broader utility-data and reporting improvements

**For every item, record**

Location | observed issue | estimated exposure | responsible party | required action | target date | method for verifying the result

# 9. Before approving an energy project

A credible proposal should answer more than, “How much will this save?”

- ☐ What baseline period was used?
- ☐ Are savings measured, engineered, or based on a general rule of thumb?
- ☐ Were weather, hours, openings, closures, and material changes considered?
- ☐ Which utility-rate assumptions were used?
- ☐ Does the estimate include maintenance savings or only utility savings?
- ☐ Who owns installation, monitoring, and corrective action?
- ☐ What happens if site conditions differ from the assumptions?
- ☐ How will results be measured after implementation?
- ☐ Are software, cellular, maintenance, and subscription costs included?
- ☐ Can the solution scale without unnecessary operational complexity?

### A short payback still needs a sound foundation

Baseline, assumptions, implementation cost, ongoing fees, and the measurement method should all be clear before approval.

# Final portfolio check

If you answer “no” or “not sure” to several of these questions, a more detailed portfolio review may be warranted.

- ☐ We can access complete electric, gas, and water data for each location.
- ☐ We can identify unusual changes without waiting for a store complaint.
- ☐ HVAC and lighting schedules reflect actual operating hours.
- ☐ Temporary overrides expire automatically.
- ☐ We know which locations use the most energy relative to peers.
- ☐ We review overnight electricity and water use.
- ☐ We can separate rate increases from consumption increases.
- ☐ We have a consistent process for investigating utility outliers.
- ☐ We verify whether completed projects deliver the expected result.
- ☐ Facilities, operations, and finance work from the same information.

### Do not confuse completeness with usefulness

A portfolio does not need perfect data before work can begin. It does need enough consistent information to distinguish likely operational issues from rate, weather, and business effects.

# Need help identifying the highest-priority locations?

GWT2Energy helps multi-site restaurant and retail organizations evaluate utility data, building controls, procurement, monitoring, and ongoing operating performance.

## Our review is designed to answer three practical questions:

1. Where is abnormal cost or consumption occurring?
2. What is most likely causing it?
3. Which actions are worth pursuing first?

The objective is not to recommend equipment at every location. It is to identify issues that are measurable, financially meaningful, and practical to correct.

**REQUEST A PORTFOLIO ENERGY REVIEW**

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Energy Management for Restaurants and Retail Brands
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Important note
This guide provides general operational information and is not an engineering study, utility-bill audit, financial guarantee, or site-specific savings estimate. Actual opportunities and results depend on building conditions, equipment, operating practices, utility rates, weather, and the quality of available data.