

# Operational Intelligence for Commercial Real Estate

Transparency from the boardroom to the boiler room



Enertiv is Deployed Across

100M+ sq ft

Total Asset Value of Client Base

\$1 Trillion

Enertiv has been in Business for

10+ Years

Hours of Real-time Data Collected

17+ Billion

Office



Multifamily



Industrial / Data Centers / Retail



Investors



# The Enertiv Platform

## Modules

- Software Only, 2 Week Lead Time
- Streamlines Processes, 100–200% ROI



Enertiv One



Maintenance



Energy & ESG



Tenant Billing



Capital Planning

## Power Ups

- Real-time Data, 3 Month Lead Time
- Actionable Insights, 300–500% ROI



Equipment Monitoring



Environmental Monitoring



Integrations

# Detailed Features & Solutions

## Digitization

Asset Tagging

Equipment Inventory

Meter Inventory

Files

Activity Feed

BI Dashboards

## Maintenance

Actions

Actions Dashboard

Notifications

Remote Operations

## Energy & ESG

Utility Management

ESG Reporting

Energy Dashboard

ESG Dashboard

## Tenant Billing

Meter Readings

Analytics

Stacking Plan

Automated Billing

Tenant Portal

## Capital Planning

Capital Planning

Vendor Management

## Equipment Monitoring

Runtime Hours

Fault Detection

Insights

Predictive  
Maintenance

## Environmental Monitoring

Indoor Air Quality

Leak Detection

Occupancy

Temperature

## Integrations

Building Management  
Systems

Utility Meters

Tenant Submeters

Energy & ESG  
Reporting

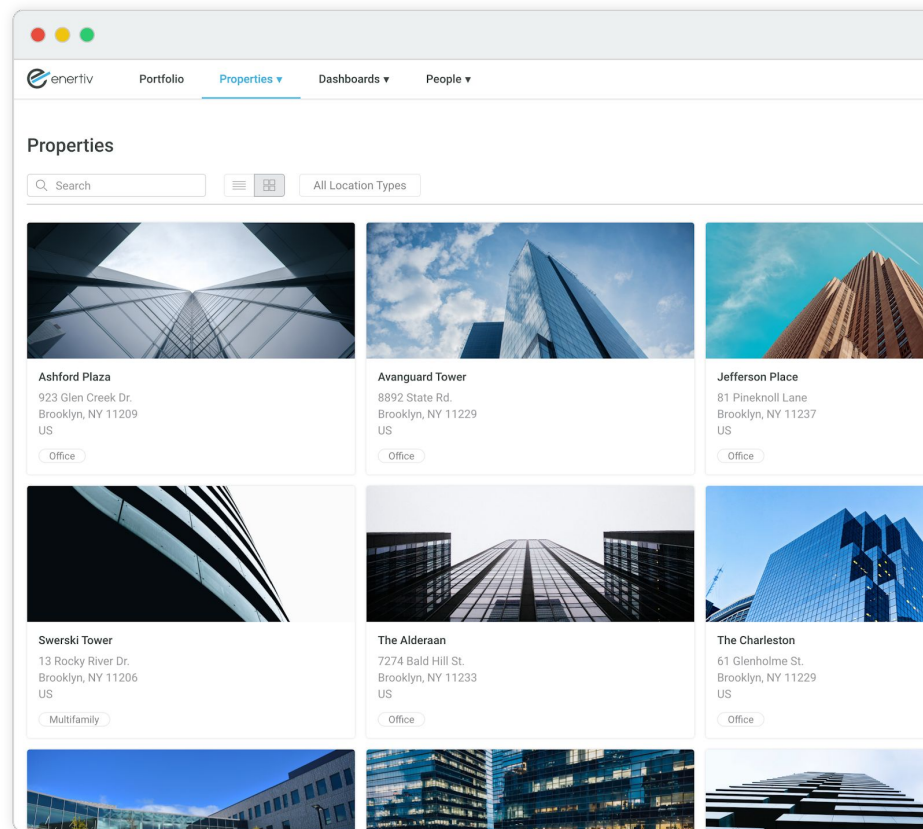
Property Management

Custom API

# Digitization Overview

The first step of every Enertiv deployment is basic digitization with asset tagging to bring equipment inventories, static documentation and vendor contacts into the cloud.

Enertiv performs on-site surveys to make the digitization process turnkey.



# Equipment Inventory

## Digitization

Easily track equipment across the portfolio.

- Survey images
- Documentation
- Monitoring status
- Nameplate details
- Date installed and expected replacement date

The screenshot displays the 'enertiv' software interface. The top navigation bar includes 'Portfolio', 'Properties', 'Dashboards', and 'People'. The left sidebar shows a navigation menu with options like 'Dashboard', 'Tenant Billing', 'Notifications', 'Actions', 'Work Orders', 'Preventative Maintenance', 'Equipment' (highlighted), 'Meters', 'Files', 'Activity Feed', 'Insights', and 'Analysis'. The main content area is titled 'Cooling Tower 1' and shows a breadcrumb trail: 'Properties / Vanguard Tower / Equipment / Cooling Tower 1'. Below the title are several images, including a nameplate for 'NC SERIES COOLING TOWER' and a maintenance schedule. A search bar and a dropdown menu for 'Cooling Tower' are visible. The bottom section is a table with the following data:

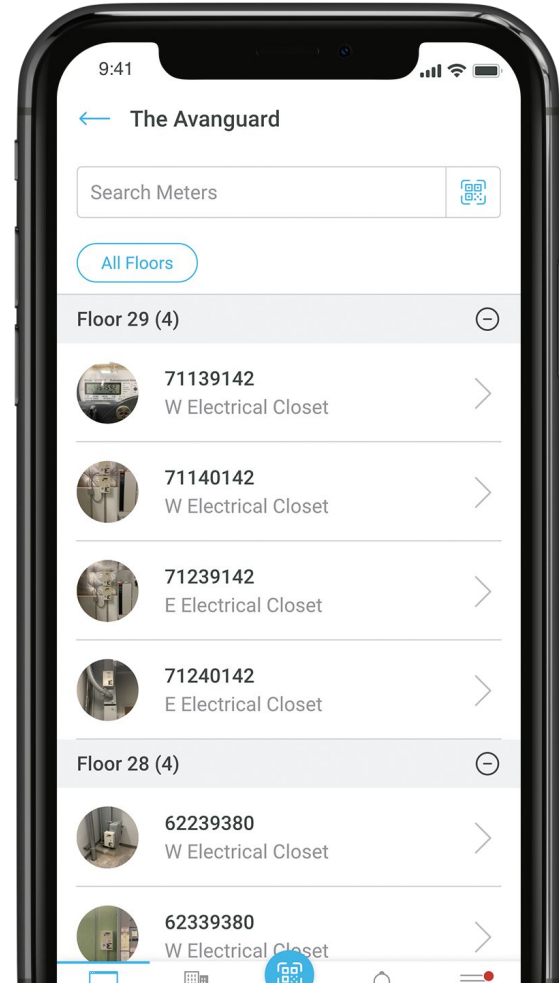
Nameplate	Additional Info
Equipment Primary Type	Cooling Tower Load
Equipment Number	CT-1
Service	Chiller
Location	Roof
Type	Induced Draft
Capacity	800 EA <sub>Tons</sub>
Flow Rate GPM	1600 gpm
Water - E.W.T °F	100 °F
Water - Summer E.W.T °F	85 °F

# Meter Inventory

## Digitization

Up-to-date digital inventory of meters portfolio-wide

- Meter types
- Locations
- Tenants connected to
- Status

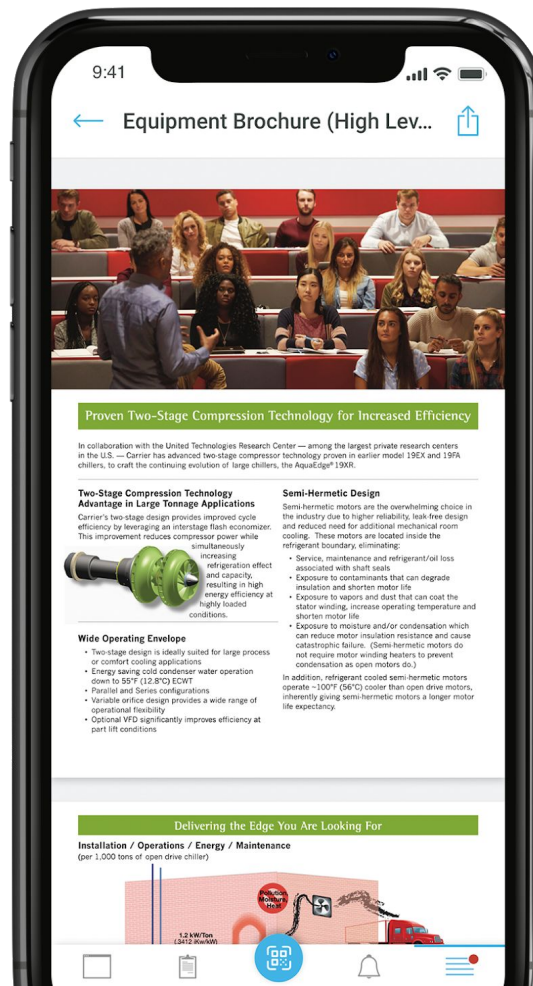


# Files

## Digitization

Central repository of operations & maintenance support information (OMSI):

- Drawings & spec sheets
- Asset inventory
- O&M binders & maintenance manuals
- Manufacturer info & nameplates
- Single line & riser diagrams
- Vendor contact info
- etc.





# Asset Tagging

## Digitization

QR codes make information accessible on-the-fly

- Documents related to asset
- Vendor contacts
- Related components
- Maintenance logs

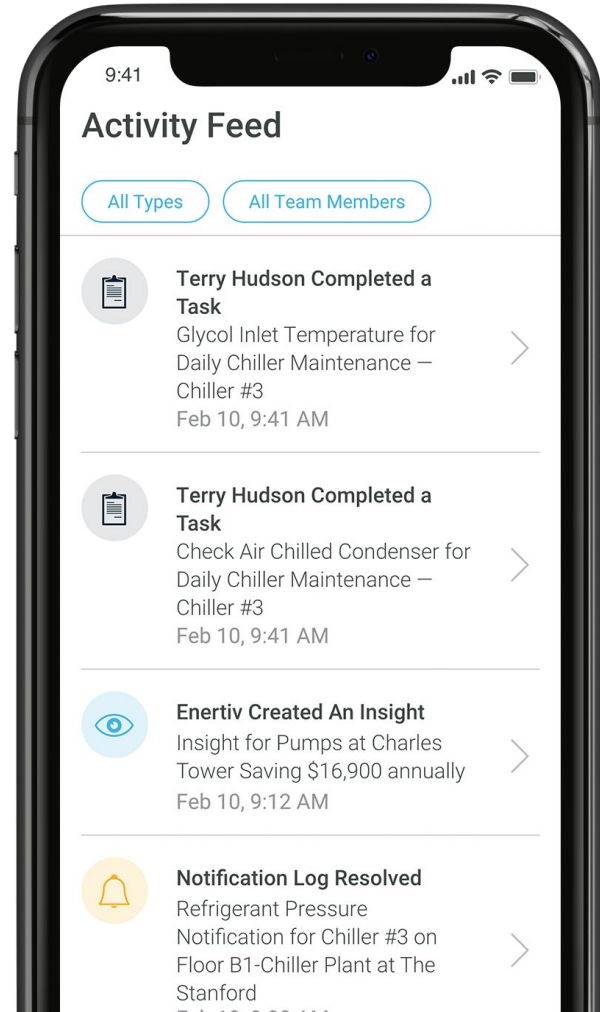


# Activity Feed

## Digitization

The activity feed improves communications between siloed teams and gets everyone on the same page about what's happening on site

- Portfolio updates
- Property activity
- Vendor management
- Live chat between teams or with Enertiv's client success team



# Maintenance Module Overview



Enertiv's Maintenance module digitizes routine rounds and preventative maintenance and provides transparency to work performed on site and adherence to schedules.

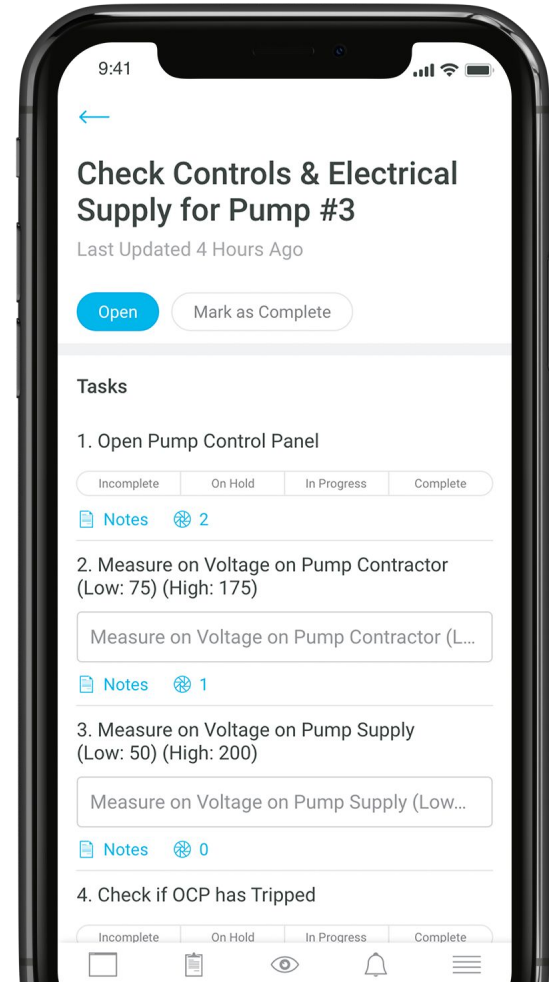
With Maintenance Plus, Enertiv will create a digital twin-lite with 360 scans of mechanical rooms so assets can be visualized and accessed from anywhere.

# Actions

## Maintenance Module

Import existing or utilize Enertiv's library of templates to digitize rounds and preventative maintenance

- Schedule routine maintenance activities
- Automatically create maintenance logs
- Add new cadences at any time
- Unlimited users

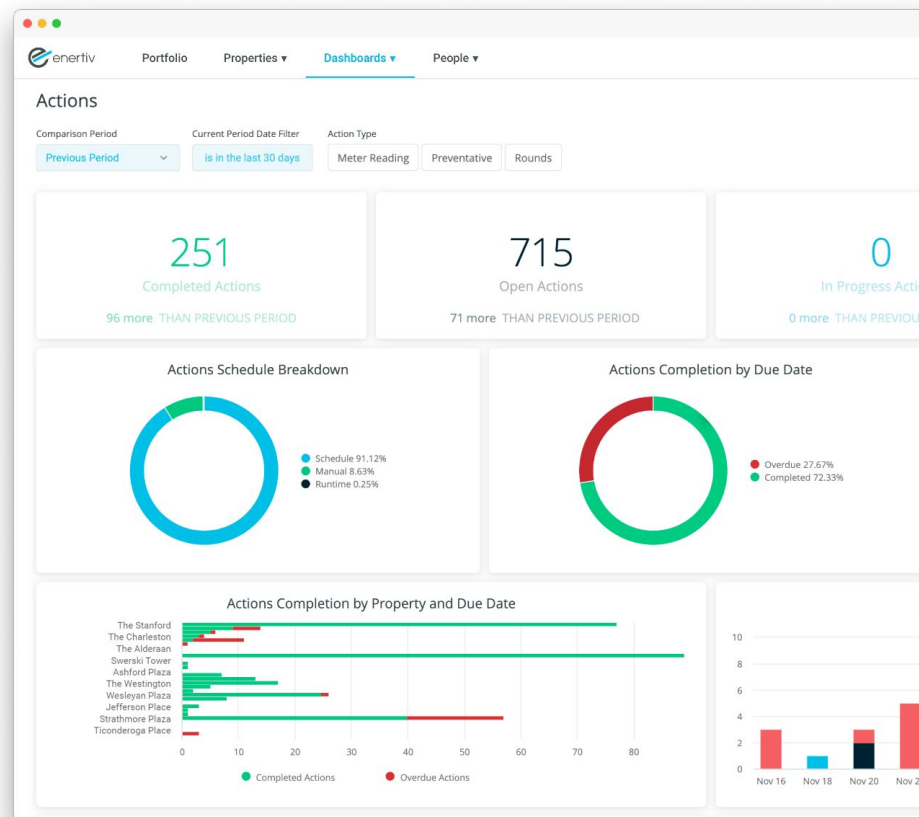


# Actions Dashboard

## Maintenance Module

The Actions Dashboard gives unprecedented transparency into who is doing what and when

- Completed activities
- Overdue Activities
- Actions by Type
- Actions by Property
- Actions by Individual Operators



# Remote Operations

## Maintenance Plus

Detailed digital scans provide a Google Streetview experience for mechanical rooms

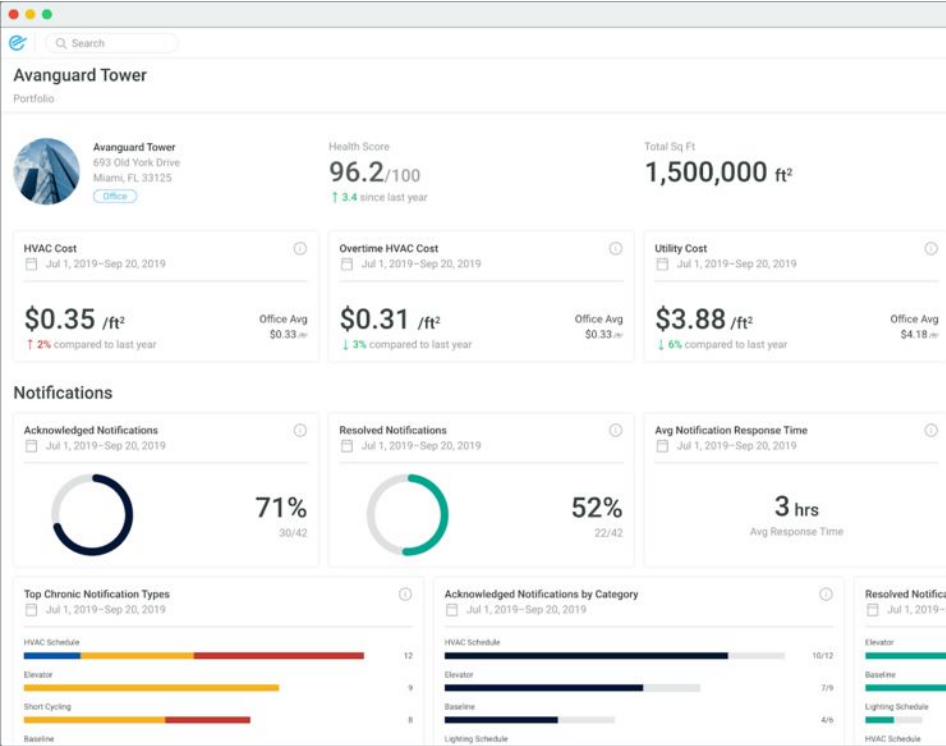
- Access from anywhere
- Navigate via floor plans or riser diagrams
- Embedded equipment data and integrations
- Easily search for any document for any equipment
- Facilitate remote operations
- Reduce training periods for new operators



# Energy & ESG Module Overview

Enertiv's Energy & ESG module streamlines routine utility management, benchmarking, and reporting across a portfolio.

With Energy & ESG Plus, Enertiv will provide annual energy budgeting and forecasting services.

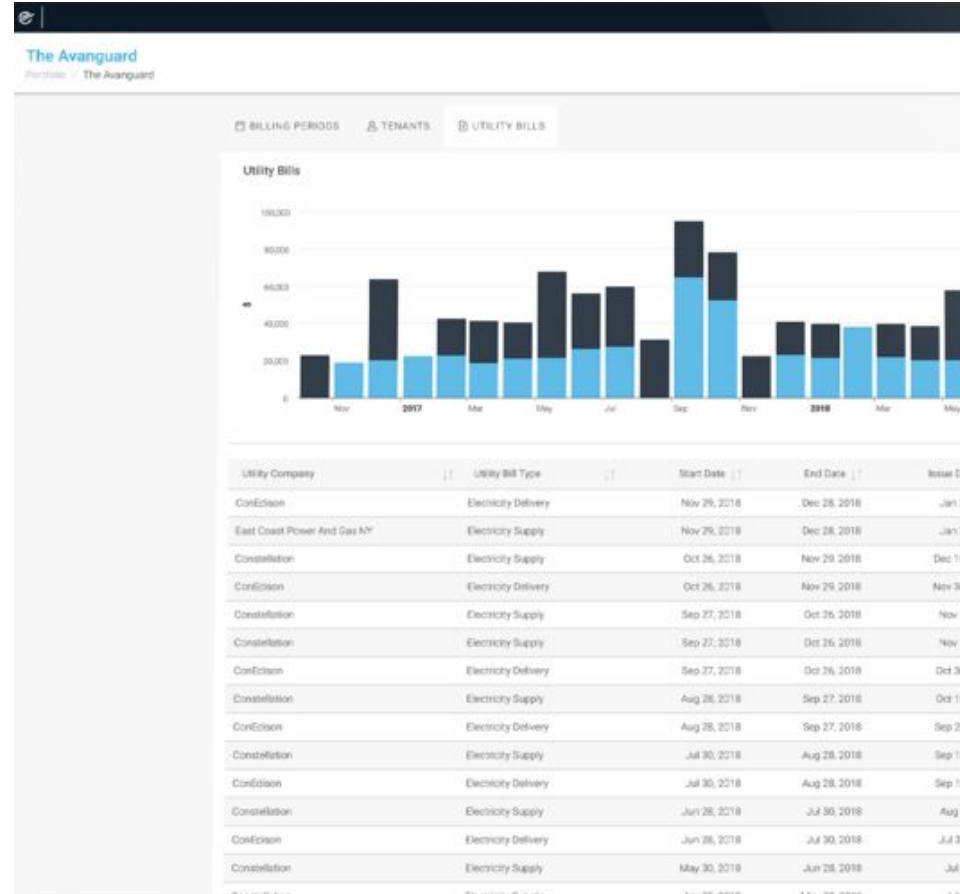


# Utility Management

## Energy & ESG Module

Enertiv automatically pulls in and archives utility bills as soon as they are generated

- Broken out by utility type
- Cost and consumption data
- Download instantly
- Archived indefinitely



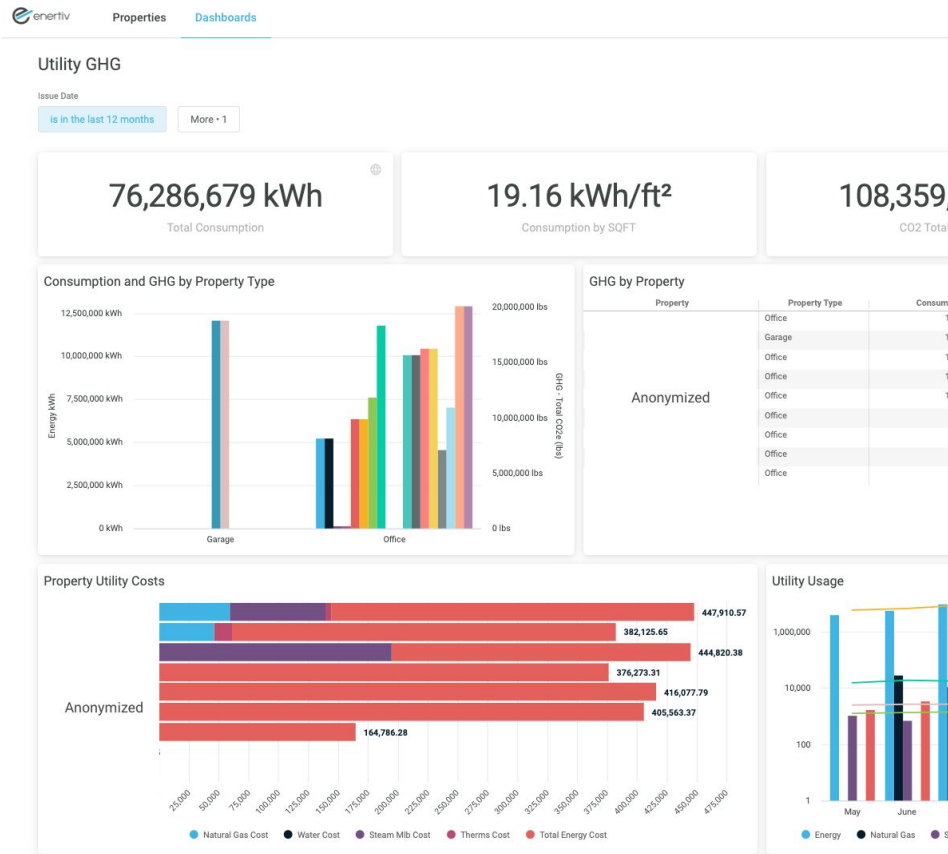


# ESG Reporting

## Energy & ESG Module

Report on utility data faster and more easily

- Two-way sync between both Energy Star and GRESB
- Custom dashboards for internal and external reporting
- Scheduling cadence options
- Benchmark against other Enertiv clients

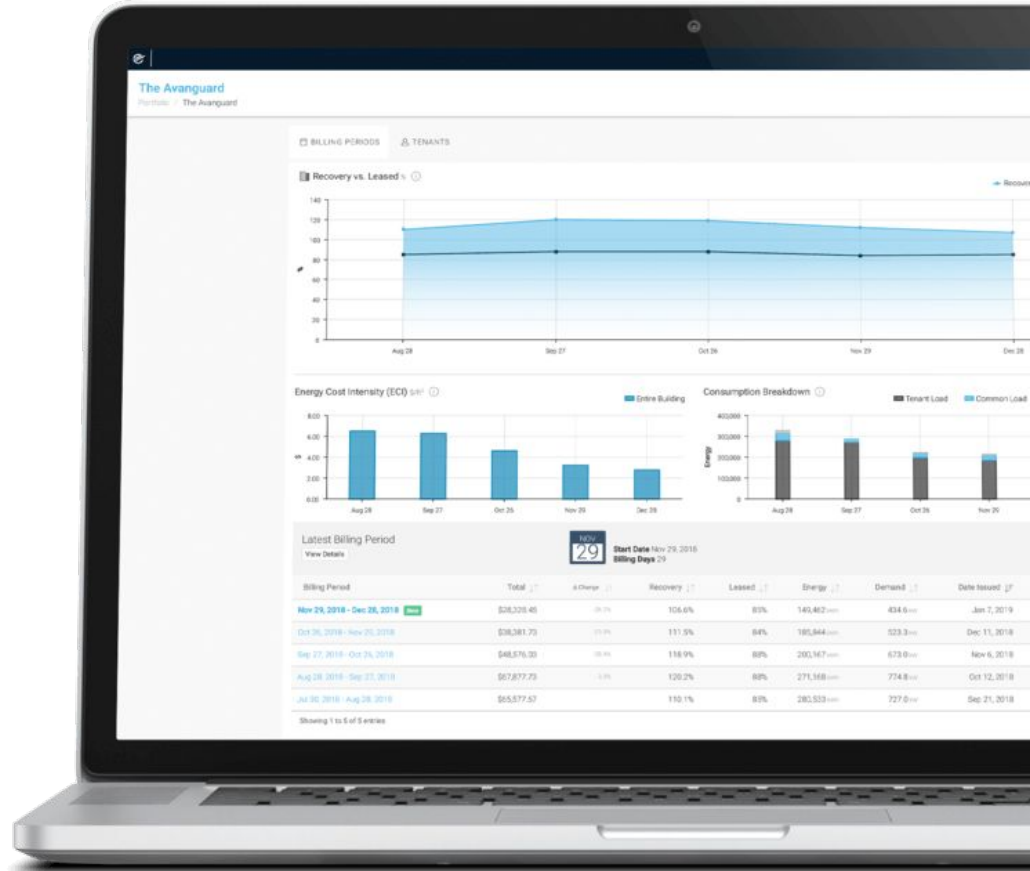


# Energy Budgeting

## Energy & ESG Plus

Outsource annual energy budgeting

- Take advantage of Enertiv's sustainability team and data scientists
- Get data-driven forecasts of expected spend
- Save time
- Applicable for any utility type or regulatory environment



# Tenant Billing Module Overview

The Enertiv App's Tenant Billing module streamlines meter readings and automates bill generation.

With Tenant Billing Plus, tenants can gain unprecedented transparency into their consumption with a dedicated tenant billing portal.

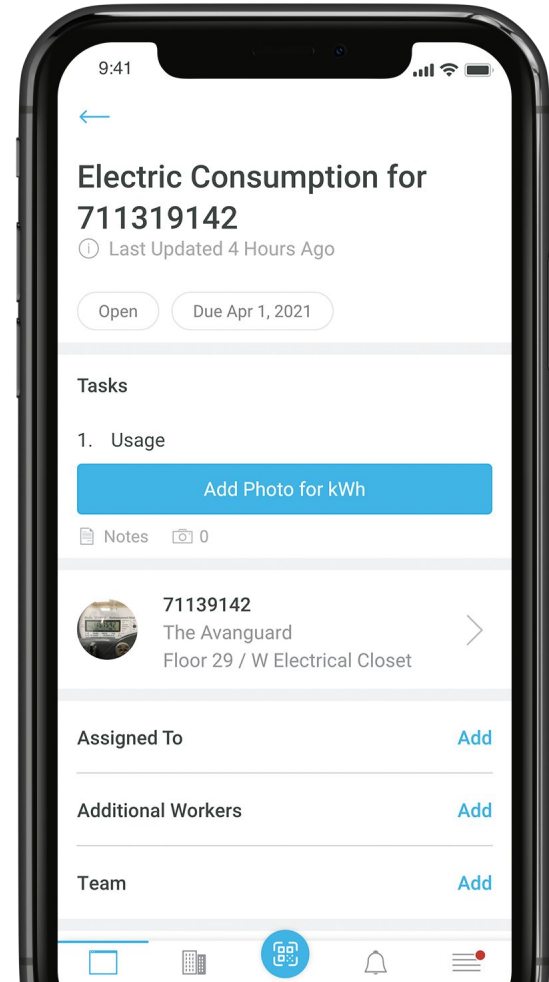


# Meter Readings

## Tenant Billing Module

Input manual readings directly into a digital database

- Reduce errors
- Eliminate manual transcription
- Real-time data validation
- Pictures for verification

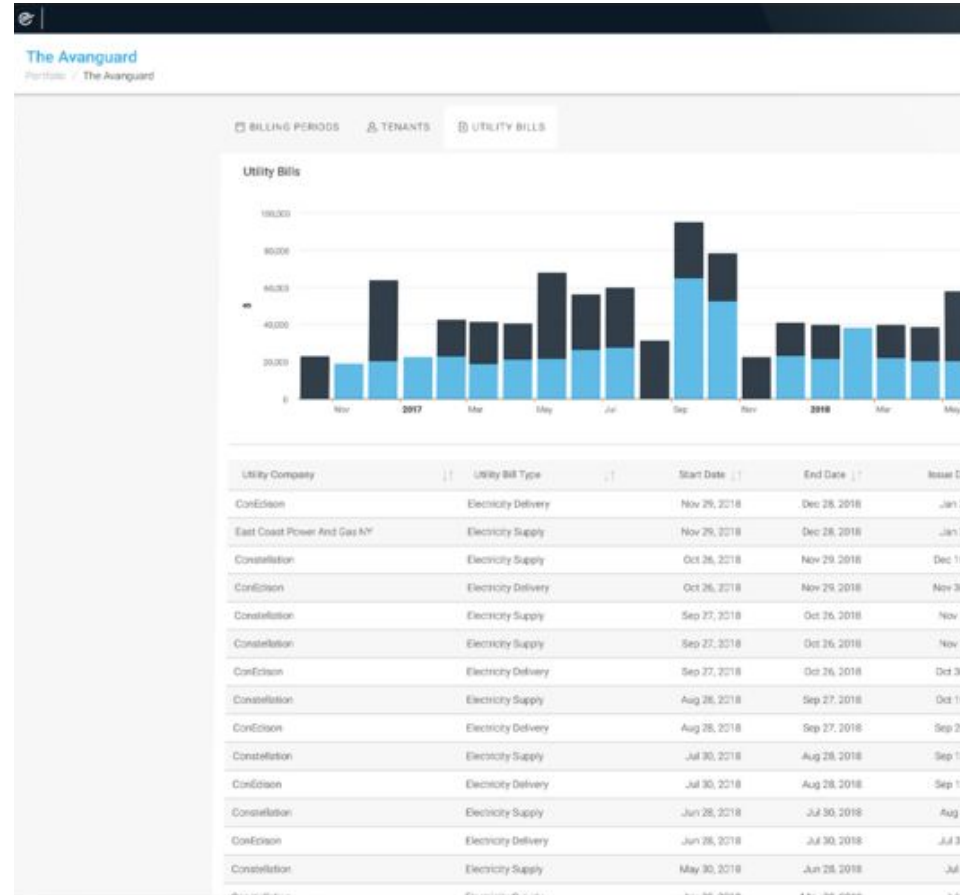


# Utility Bill Integration

## Tenant Billing Module

Enertiv automatically pulls in and archives utility bills as soon as they are generated

- Broken out by utility type
- Download instantly
- Archived indefinitely
- Weather normalization report



# Automated Billing

## Tenant Billing Module

Generated as soon as the billing period ends

- Highly accurate bills vetted by a team of Utility Billing Analysts
- Actively analyzed to maximize recovery
- Alerts of submeter failures
- Eliminate errors during transcription
- Maintain historic repository of bills


The screenshot shows a digital billing statement from enertiv. At the top left is the enertiv logo. The main heading is "Bills Generated for ERM Realty". Below this, the address "155 W 32th St, New York, NY 10018" and the date "Generated Sep 22, 2018" are displayed. A horizontal line separates this header from the billing period information. The billing period is "Aug 16, 2018–Sep 14, 2018", with a calendar icon to the left. Below the period, it states "Utilities Uploaded: Sep 20, 2018" and "Bill Days: 29 • Bill Delay: 2 Days". The charges section is titled "Charges" and lists three items: "Billables" for \$51,318.64, "Utilities" for \$40,367.57, and "Recovery" for 127%. Each item is separated by a horizontal line. At the bottom of the charges section is a blue button labeled "Download Bills". The footer contains the contact information: "info@enertiv.com • 646.350.3525" and "320 W 37th Street, Floor 15, New York, NY 10018".

enertiv

### Bills Generated for ERM Realty

155 W 32th St, New York, NY 10018  
Generated Sep 22, 2018

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 **Aug 16, 2018–Sep 14, 2018**  
Utilities Uploaded: Sep 20, 2018  
Bill Days: 29 • Bill Delay: 2 Days

Charges	
Billables	<b>\$51,318.64</b>
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Recovery	<b>127%</b>

[Download Bills](#)

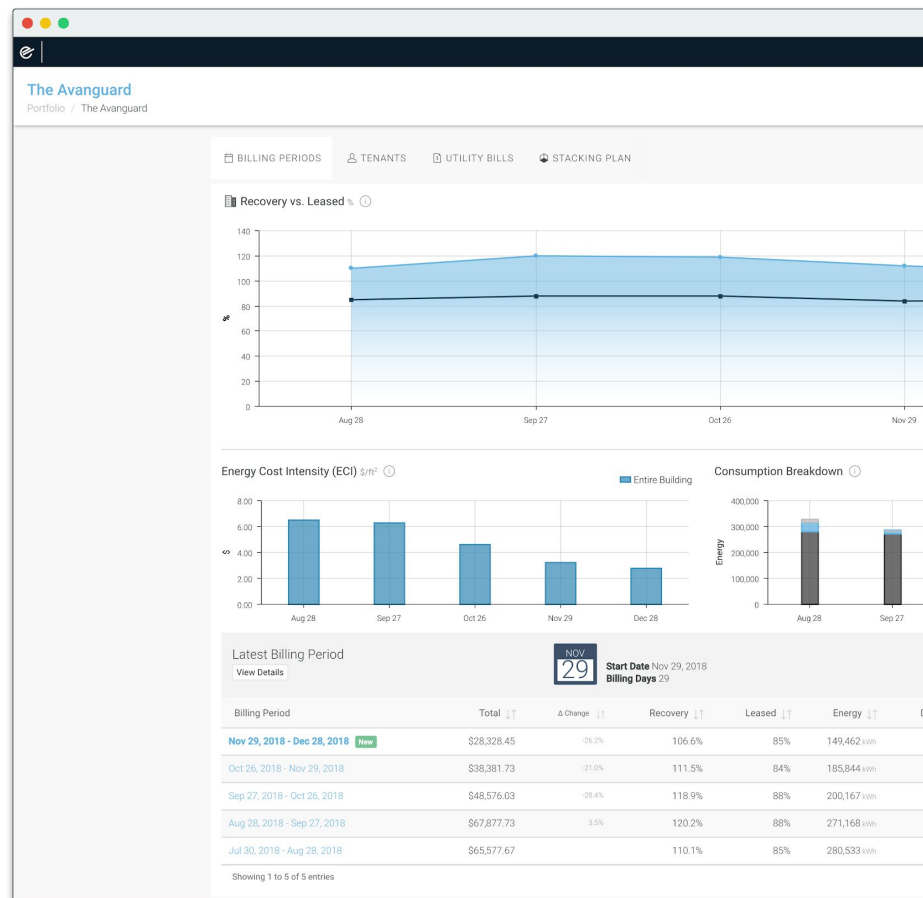
info@enertiv.com • 646.350.3525  
320 W 37th Street, Floor 15, New York, NY 10018

# Analytics

## Tenant Billing Module

Get unprecedented transparency into costs and recovery

- Dive into specific properties, billing periods and tenants
- Download costs and consumption data
- View analytics such as energy cost intensity (ECI)
- Track and predict recovery rates
- Get an up-to-date stacking plan, with consumption information

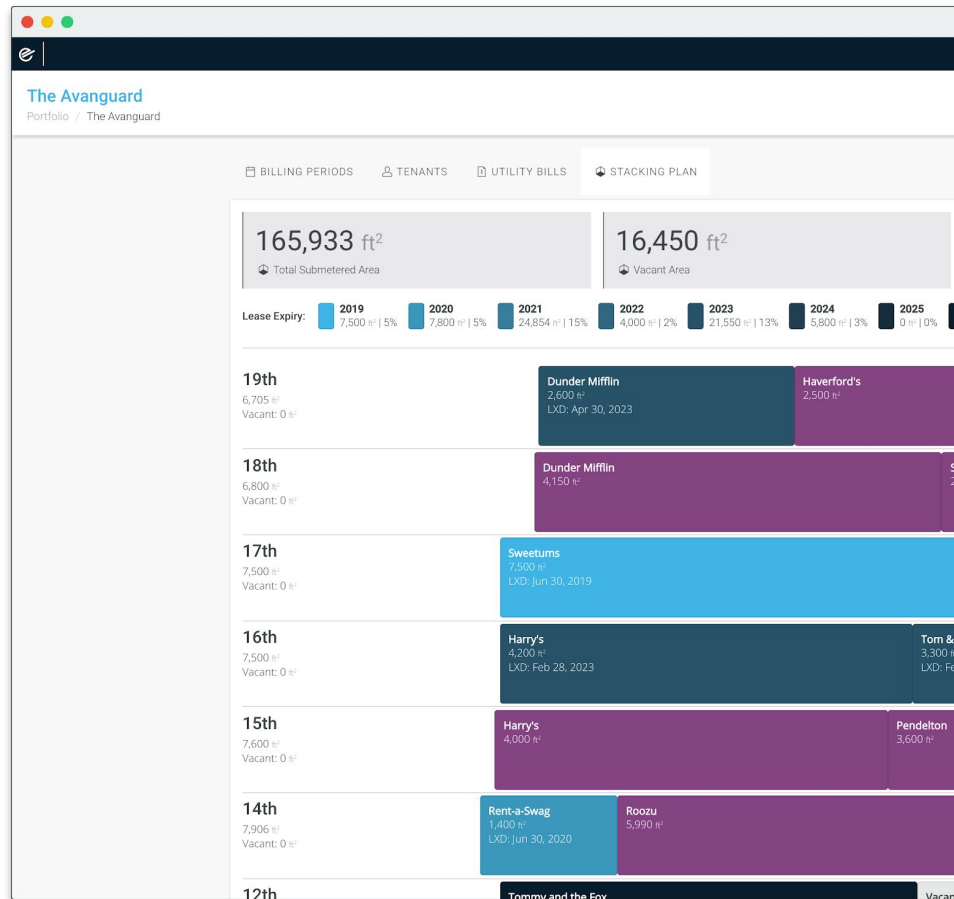


# Stacking Plan

## Enertiv App – Tenant Billing

Visualize tenant submetering like a rent roll

- Filter by utility type
- Sort stacking plan by lease dates or consumption data
- Export anytime



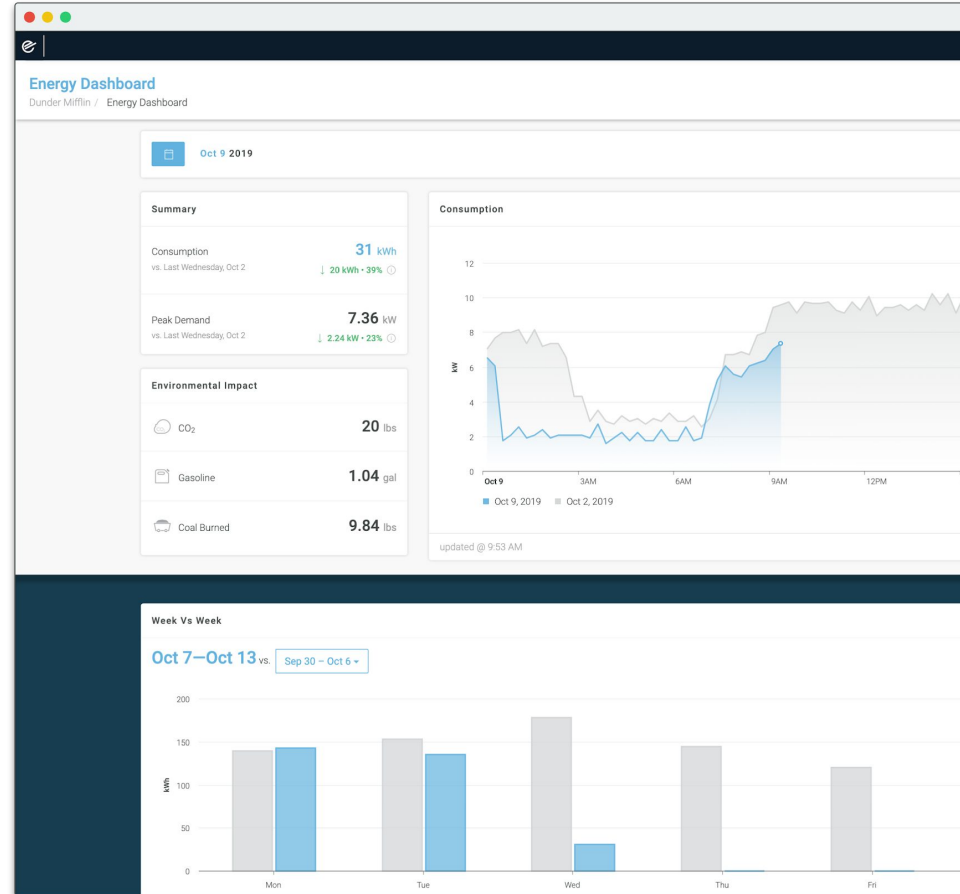


# Tenant Portal

## Tenant Billing Plus

Provide real-time transparency to tenants around submetering costs

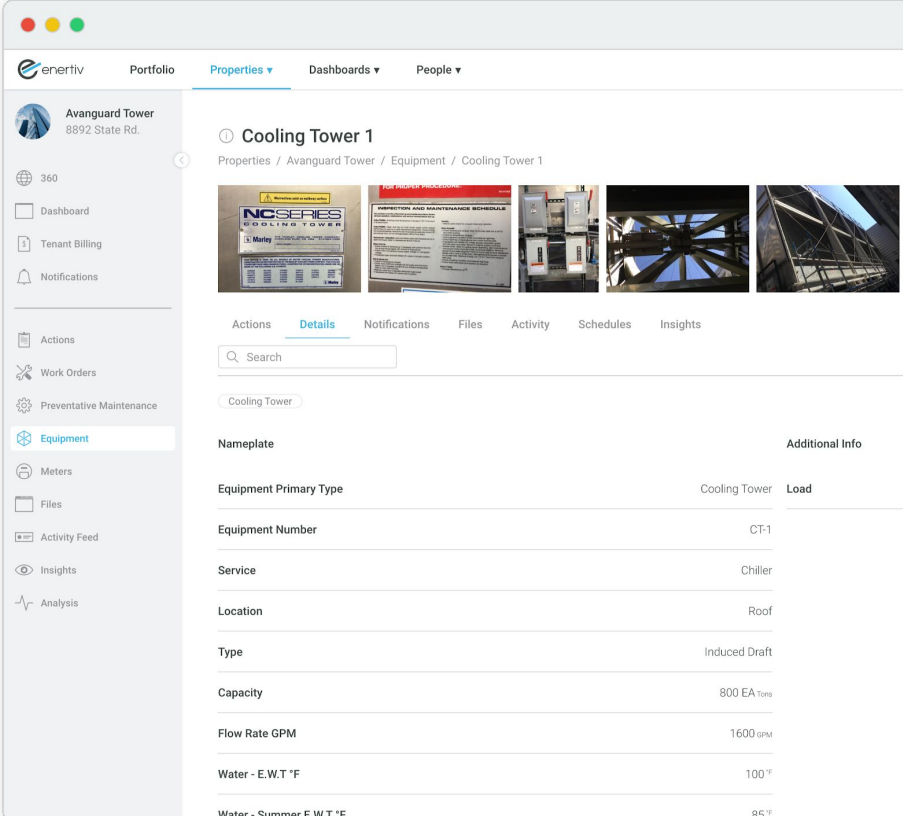
- Help drive tenant behavior change
- Streamline move-in / move-outs
- Sell a premium service
- Reduce disputes with tenants



# Capital Planning Module

Enertiv's Capital Planning module brings the budgeting process for capital expenditures out of spreadsheets and into software, whether originally driven by third party property condition assessments, or in-house reports.

Over time, integrate maintenance and energy data to inform decisions and support ESG goals.



The screenshot displays the Enertiv software interface for the Capital Planning Module. The top navigation bar includes 'enertiv', 'Portfolio', 'Properties', 'Dashboards', and 'People'. The left sidebar shows a navigation menu for 'Avanguard Tower' (8892 State Rd.) with options like '360', 'Dashboard', 'Tenant Billing', 'Notifications', 'Actions', 'Work Orders', 'Preventative Maintenance', 'Equipment' (highlighted), 'Meters', 'Files', 'Activity Feed', 'Insights', and 'Analysis'. The main content area is titled 'Cooling Tower 1' and shows a breadcrumb trail: 'Properties / Avanguard Tower / Equipment / Cooling Tower 1'. Below the title are several images, including a 'NO SERIES COOLING TOWER' nameplate and an 'INSPECTION AND MAINTENANCE SCHEDULES' document. A search bar and a 'Cooling Tower' filter are present. The bottom section is a table with the following data:

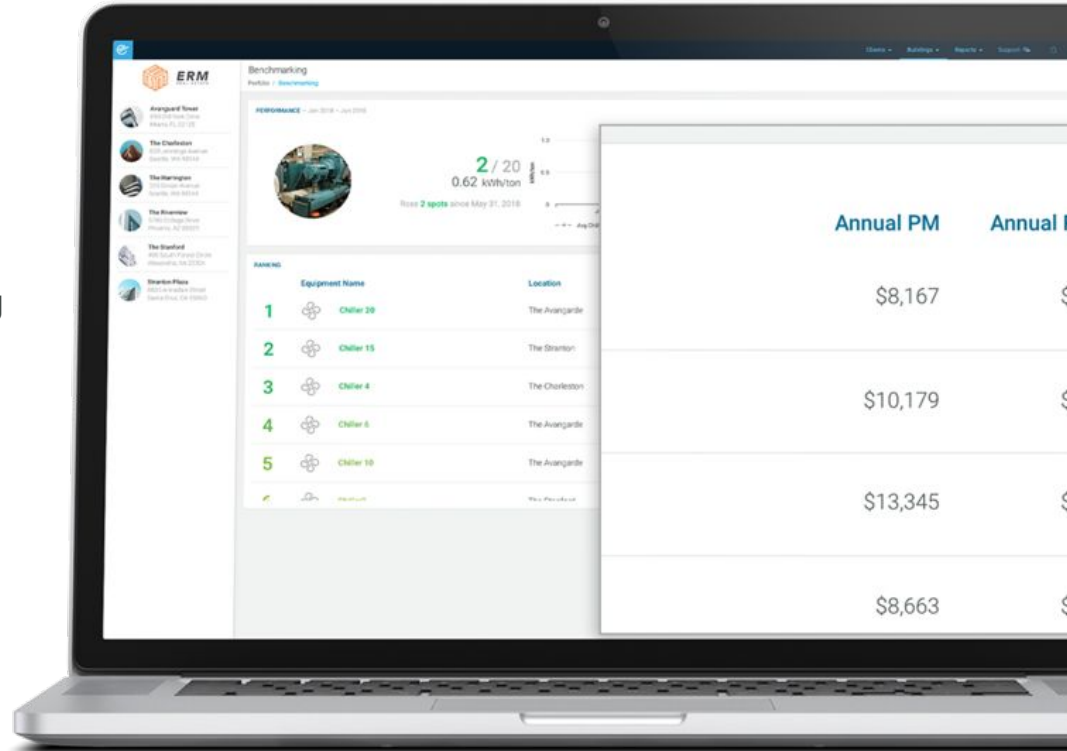
Nameplate	Additional Info
Equipment Primary Type	Cooling Tower Load
Equipment Number	CT-1
Service	Chiller
Location	Roof
Type	Induced Draft
Capacity	800 EA <sub>Tons</sub>
Flow Rate GPM	1600 gpm
Water - E.W.T °F	100 °F
Water - Summer E.W.T °F	85 °F

# Capital Plans

## Capital Planning Module

Easily track equipment replacements, costs and contracts across a portfolio

- Improve resource allocation and decision making
- Integrate latest property condition assessment
- Instantly export
- Benchmark specific makes and models
- Eliminate spreadsheets and paper-based reports



# Equipment Monitoring Overview

Power Up



Evertiv is the only company capable of affordably capturing equipment-level performance data without relying on a BMS. This unique capability, combined with the industry's largest library of insights, delivers a high-ROI solution for any asset type.

Common equipment monitored:

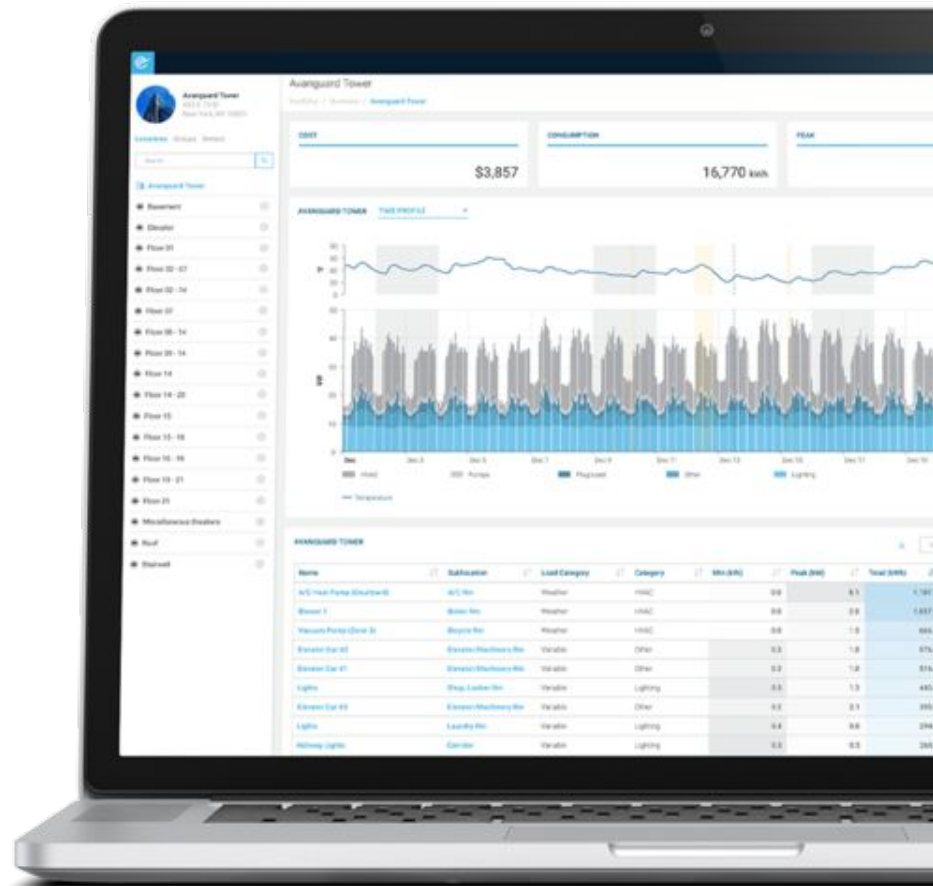
- Chillers
- Boilers
- Elevators
- Air Handling Units
- Pumps
- Exhaust Fans
- Lighting

# Analysis

## Equipment Monitoring Power Up

Real-time data for every piece of critical equipment

- Energy consumption and cost data
- Runtime hours
- Export anytime
- Custom grouping, filtering, stacking and visualizations

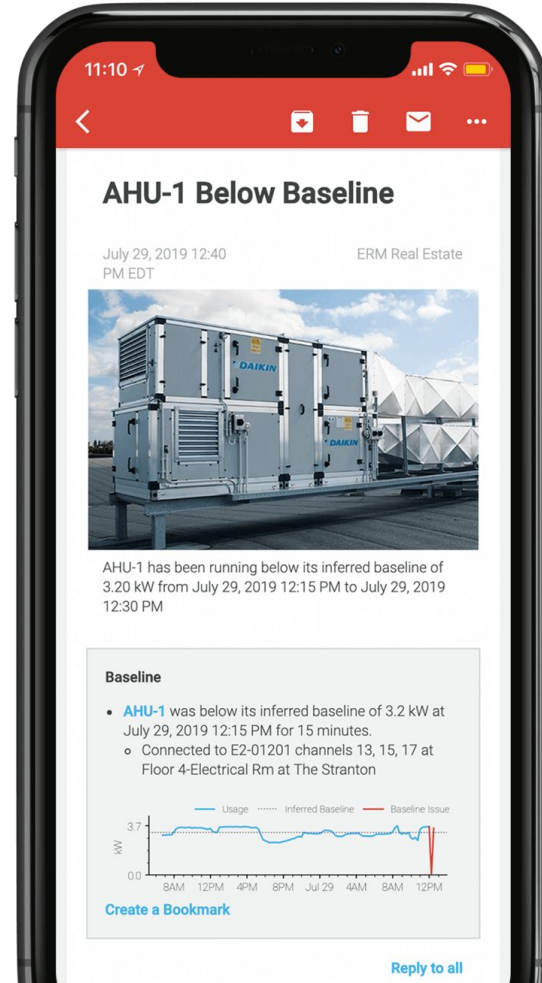


# Notifications

## Power Up: Equipment Monitoring

Operators and/or maintenance vendors are alerted in real time when equipment breaks down

- Fully automated
- Strict rules to avoid false positives
- Track mean time to repair (MTTR)
- Implement repairs before tenants notice
- Extend equipment life
- Automatically generate work orders for vendors
- Predictive maintenance when breakdowns are impending

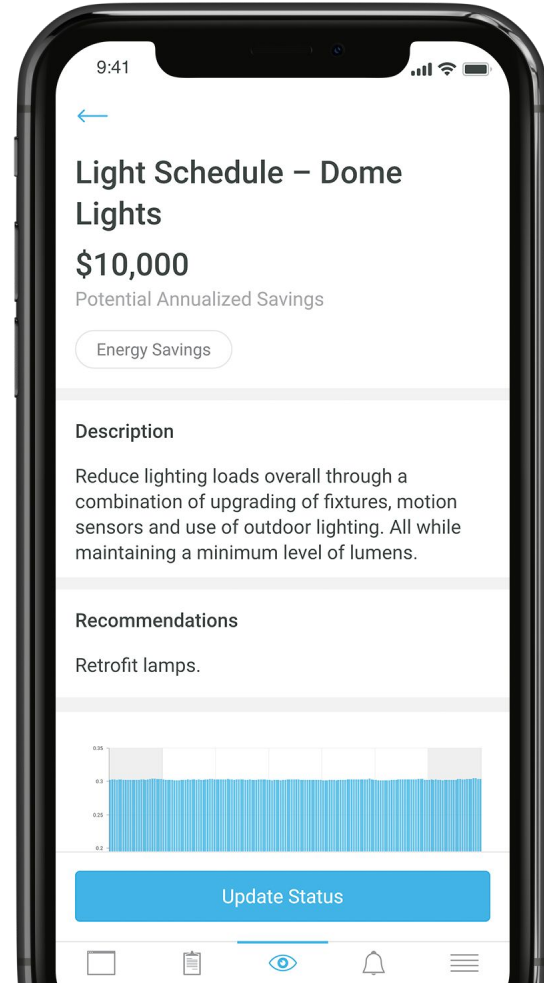


# Insights

## Equipment Monitoring Power Up

Enertiv delivers prescriptive recommendations to reduce costs

- No-cost optimizations
- Retrofit opportunities
- Pulled from industry's largest library of insights
- Track potential and implemented savings
- Curated by Enertiv's client success team

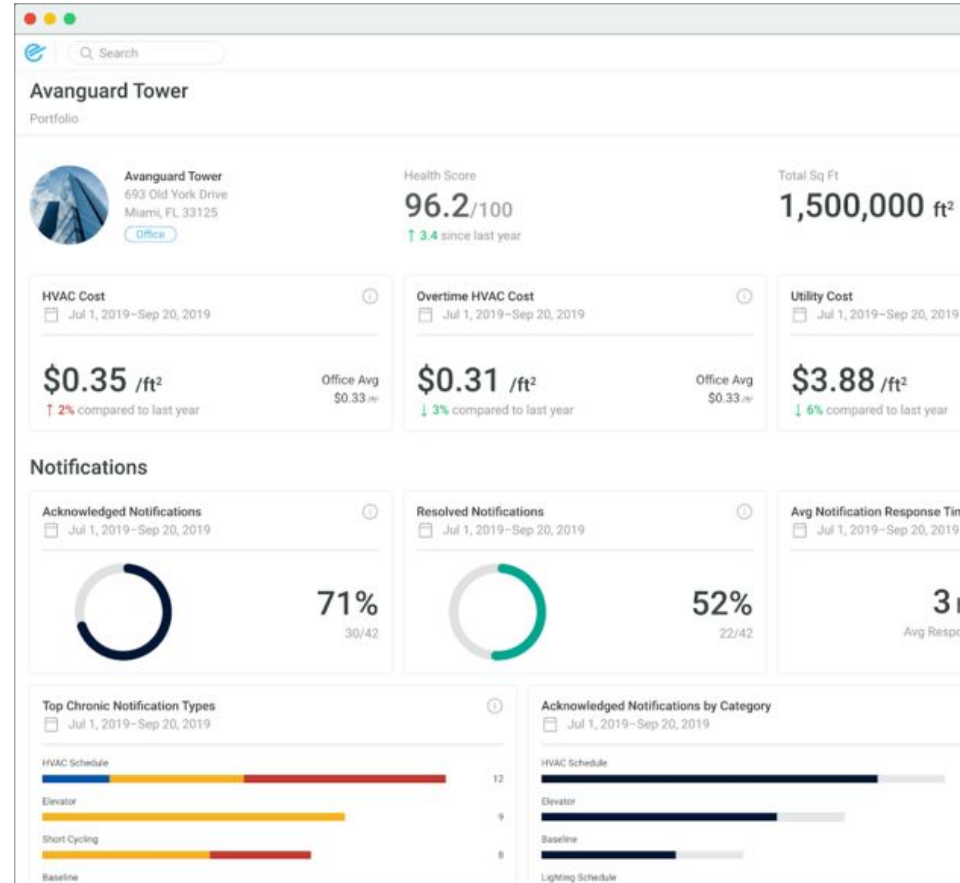


# Enertiv One Dashboard

## Equipment Monitoring Power Up

Convert granular data into high-level transparency

- 0-100 Building Scores, based on:
  - Maintenance conformance
  - Energy use intensity
  - Mean time to repair
  - Insights identified vs implemented
  - etc





# Environmental Monitoring Overview

EnerTiv sources, installs and networks a range of sensors to track indoor environmental quality and notify operators of issues as they occur.

As importantly, each new sensor type feeds into the same platform so that adding capabilities doesn't require adding more vendors and software.

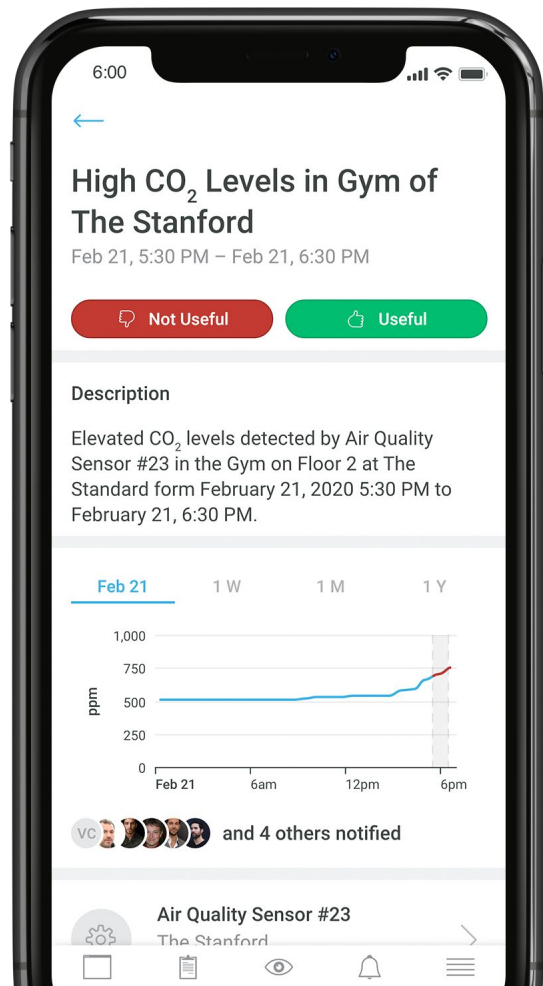


# Indoor Air Quality

## Environmental Monitoring Power Up

Granular indoor air quality monitoring for tenant spaces and common areas

- CO<sub>2</sub> Levels
- Humidity
- Carbon Monoxide
- VOCs
- Particulates (PM 2.5)
- Temperature

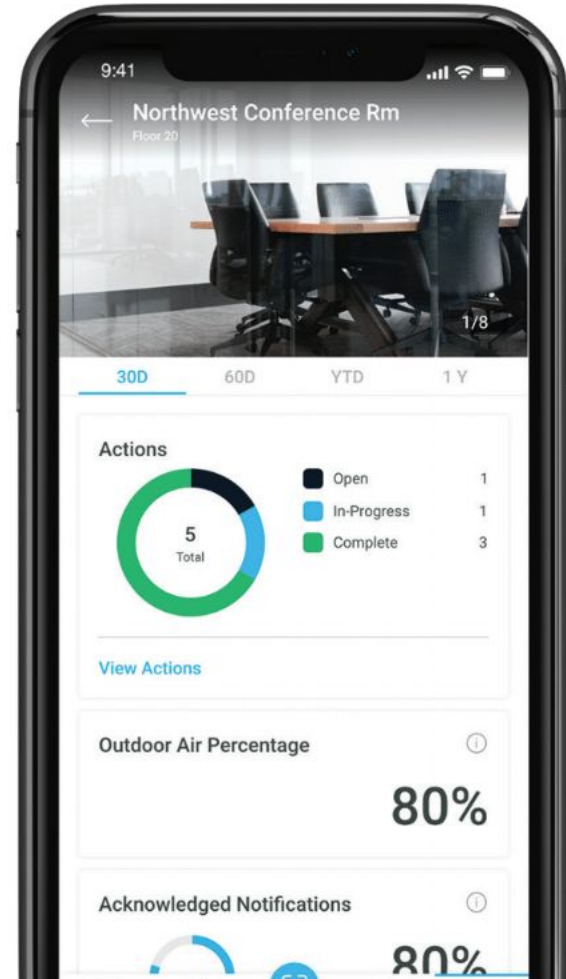


# Ventilation Rates

## Environmental Monitoring Power Up

Affordable option to calculate air turnovers in specific building zones

- Real-time outdoor air percentage
- Tenant-facing dashboard option
- Immediate alerts to operators

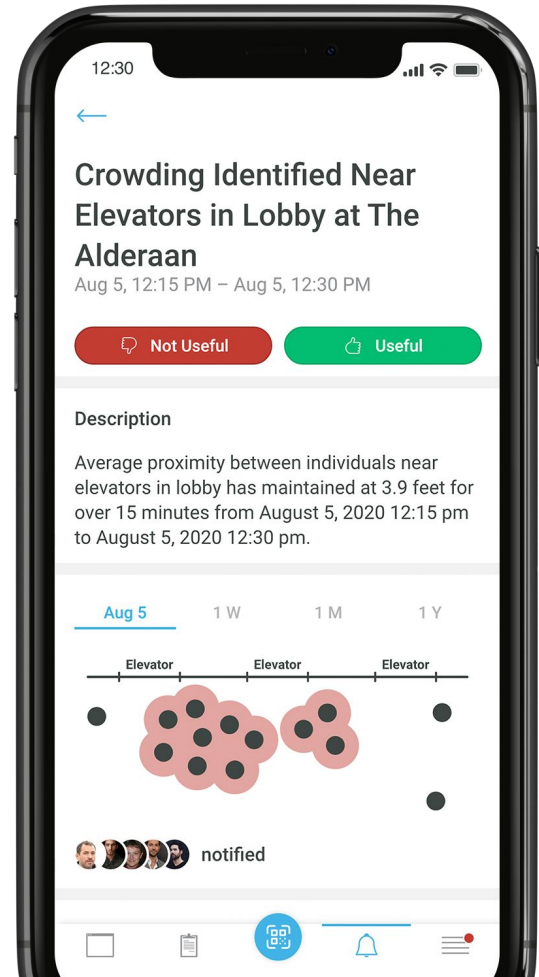


# Occupancy Tracking

## Environmental Monitoring Power Up

Track people flow throughout a building and at critical choke points

- Occupancy count
- Queue lengths
- Dwell time
- Zone counts

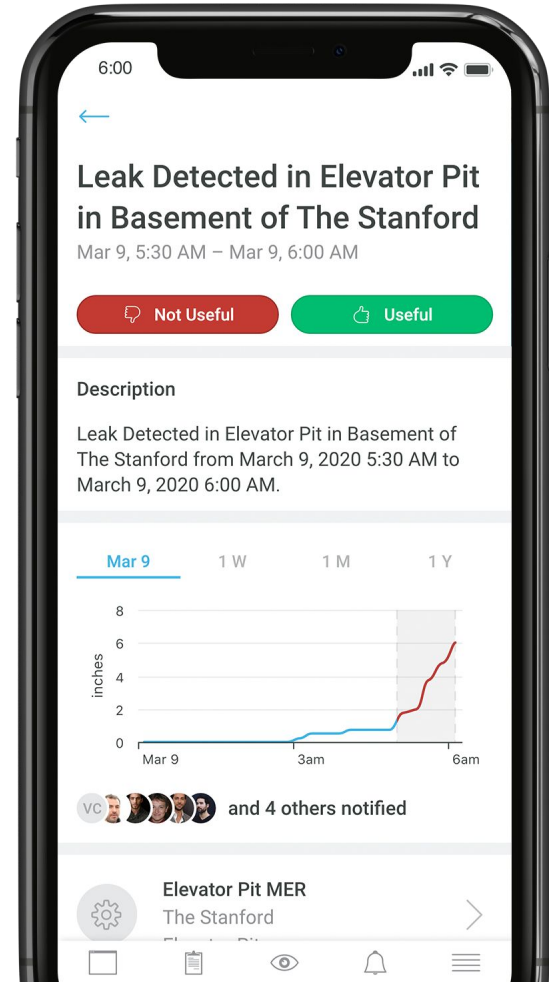


# Leak Detection

## Environmental Monitoring Power Up

Get notified as soon as leaks occur to avoid significant damage to infrastructure and tenant spaces

- Wireless sensors can be placed anywhere in building
- Reduce risk and insurance premiums
- Track notification acknowledgement and resolutions

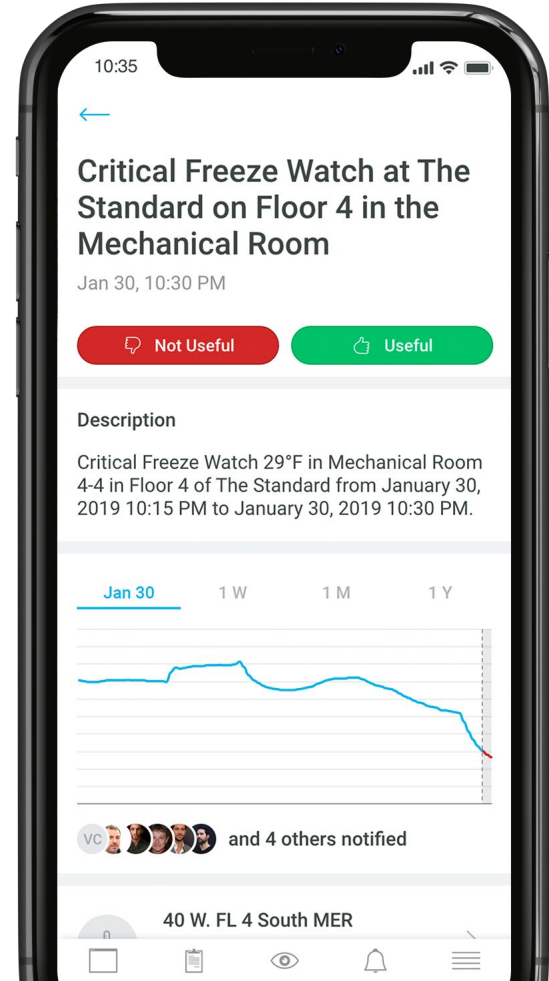


# Temperature Monitoring

## Environmental Monitoring Power Up

Get notified of temperature issues in tenant space or around mechanical or plumbing infrastructure

- Alerts sent directly to operators and managers
- Reduce risk and overtime pay
- Ensure a healthy and safe environment
- Avoid frozen pipes and resulting damage

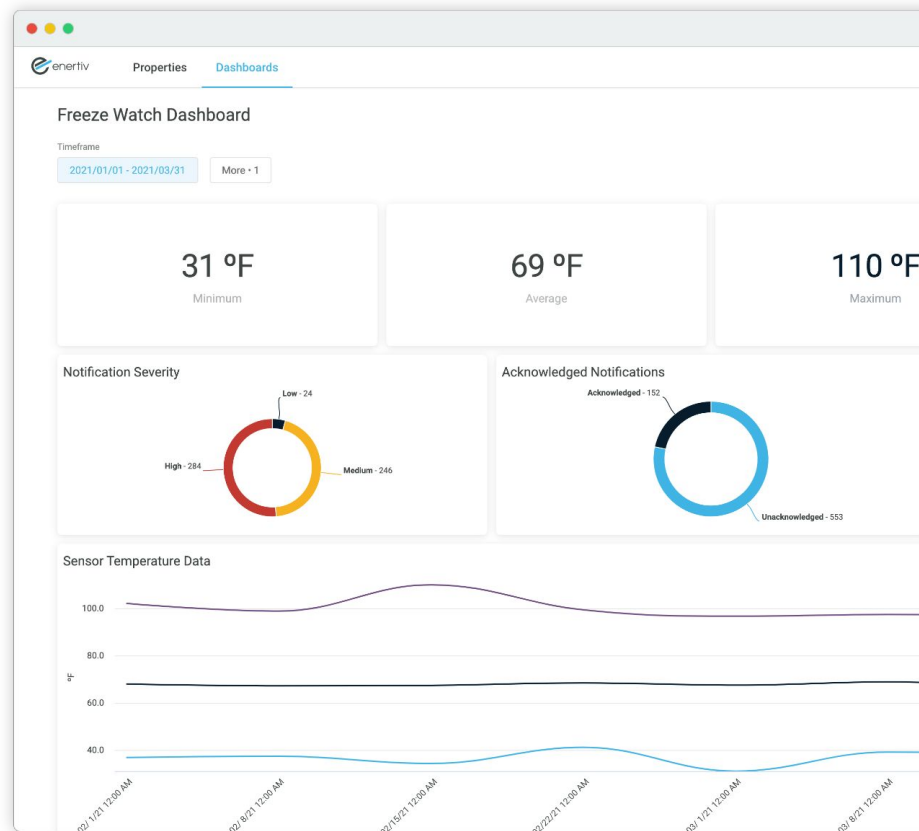


# Notification Dashboard

## Environmental Monitoring Power Up

Track the status of alerts across a portfolio

- Notifications and resolutions
- Get high-level overview and dive down into specific properties and rooms
- Ensure issues are being resolved immediately

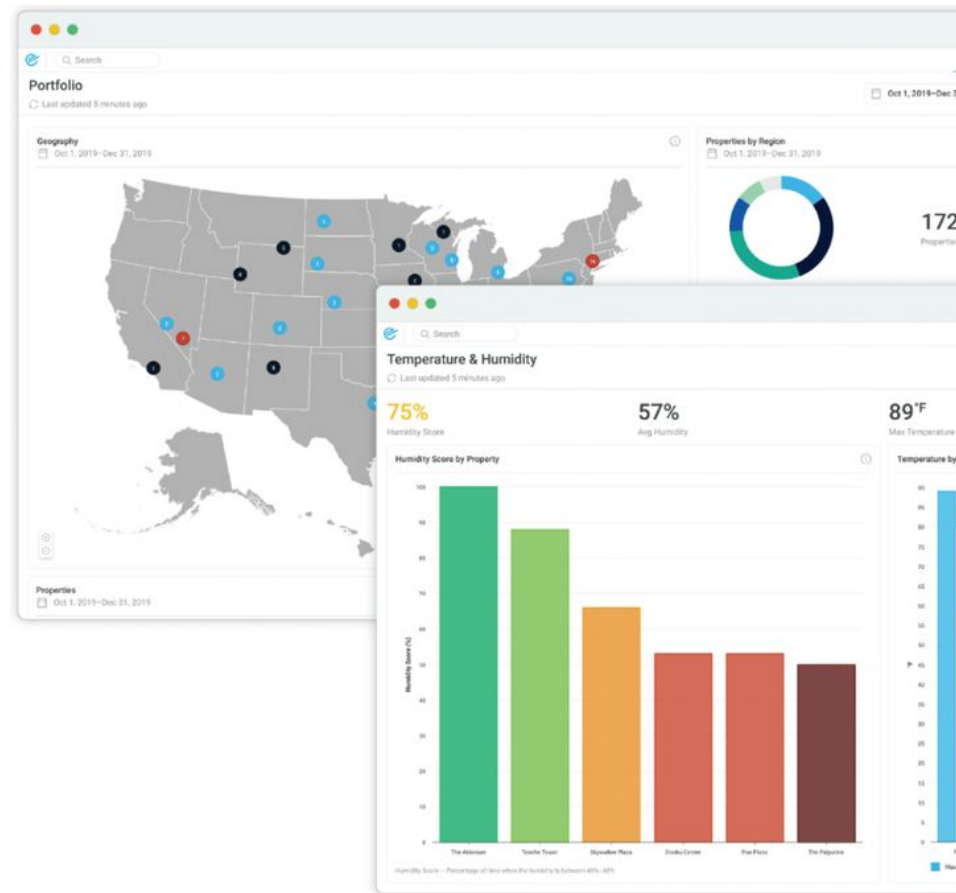


# Air Quality Dashboards

## Power Up: Environmental Monitoring

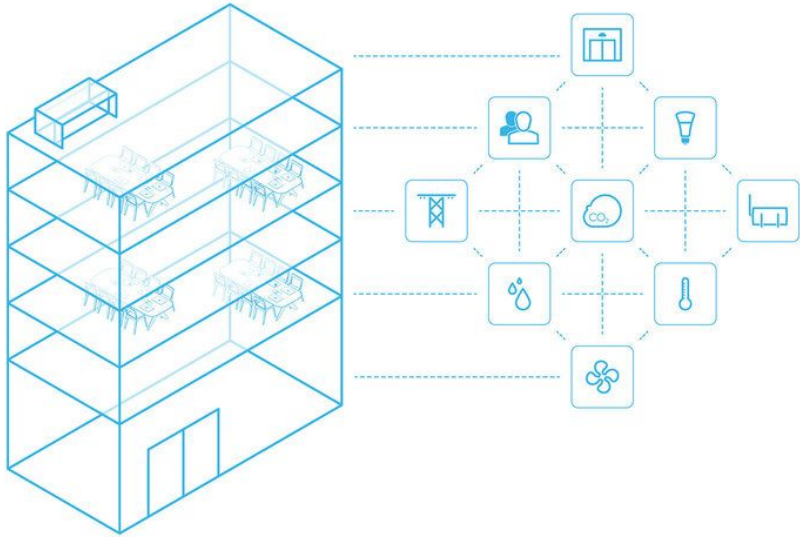
Environmental data helps monitor the health and wellness of a portfolio

- IEQ scores
- Alerts and resolutions
- Option for tenant-facing dashboards
- Prove that buildings are safe to return to





# Integration Overview



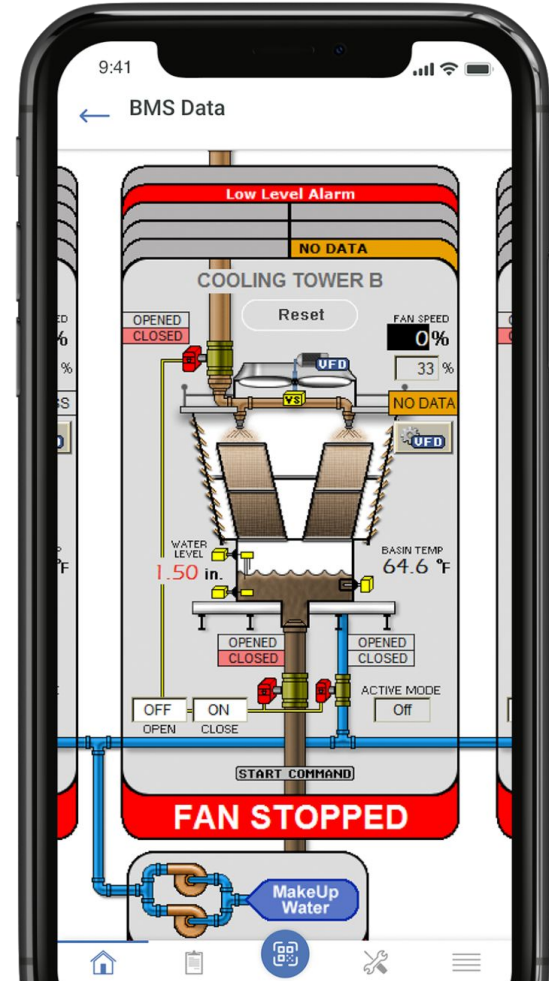
The Enertiv Platform is designed to push and pull data from other hardware and software systems to utilize data that is already available.

# Building Management Systems

## Power Up: Integrations

Enertiv leverages as much data as possible from the BMS before deploying equipment monitoring

- Analysis, Notifications and Insights just like equipment monitoring
- Trend BMS data over time
- Access the BMS from anywhere



# Utility Meters

## Integrations Power Up

Digitize utility data for real-time reporting

- Pulse outputs for electricity, gas, water and steam
- Integrate into dashboards
- Real-time reporting
- Get high-level insights
- Improve benchmarking
- Weather normalize budgeting



# Automated Tenant Submetering

## Integrations Power Up

Enertiv can integrate with existing digital submeters or provide turnkey installation of new devices

- Real-time tenant consumption data
- Advanced analytics
- Automate the submetering process front to back



# Property Management & TenX

## Integrations Power Up

Enertiv can integrate with most property management and work order ticketing systems

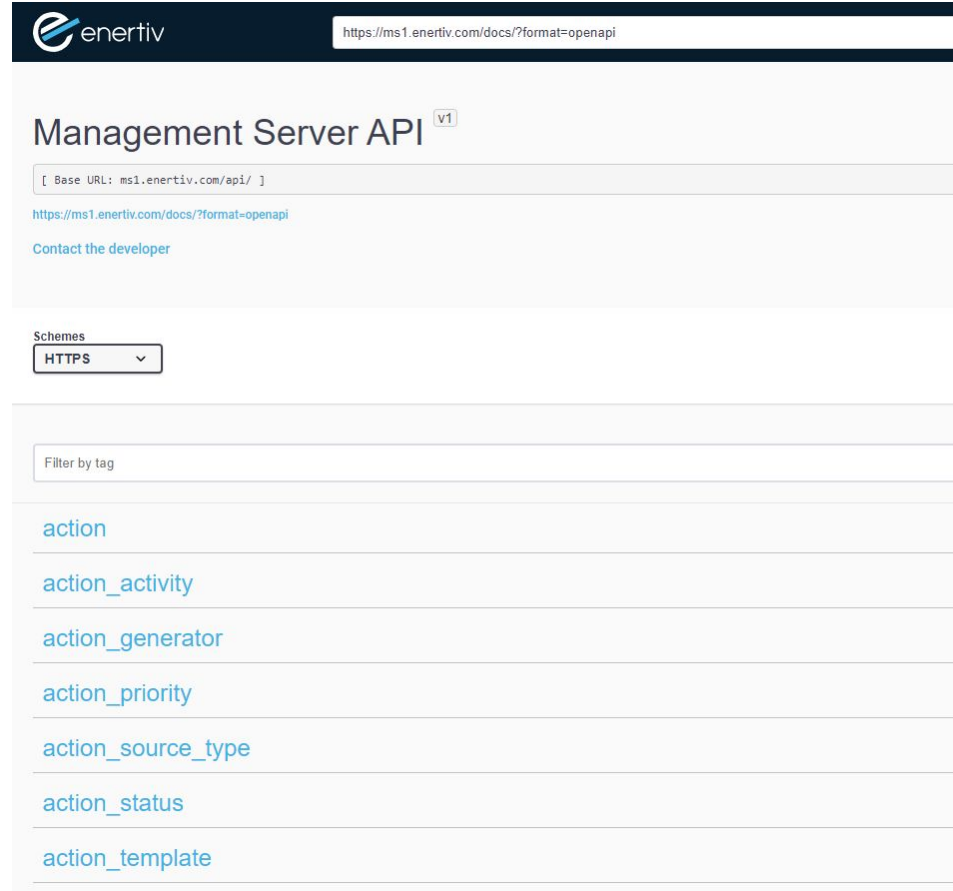
- Generate tickets automatically when notifications fire
- Track metrics such as mean time to repair (MTTR)
- Pull in monthly tenant submetering bill data



# Custom APIs

## Integrations Power Up

The Enertiv Platform is built off of a RESTful API to make it easy to push and pull data from other systems.



The screenshot shows the Enertiv Management Server API documentation page. At the top, there is a dark blue header with the Enertiv logo on the left and the URL `https://ms1.enertiv.com/docs/?format=openapi` on the right. Below the header, the main title is "Management Server API" with a "v1" version indicator. Underneath the title, there is a text box containing the base URL: `[ Base URL: ms1.enertiv.com/api/ ]`. Below this, there is a link to the documentation: `https://ms1.enertiv.com/docs/?format=openapi`, and a link to "Contact the developer". A "Schemes" dropdown menu is set to "HTTPS". Below the dropdown, there is a "Filter by tag" input field. The main content area lists several API endpoints, each on a separate line with a horizontal separator below it: `action`, `action_activity`, `action_generator`, `action_priority`, `action_source_type`, `action_status`, and `action_template`.