



energy analysis dashboard

- ▶ Providing business with information on energy efficiency, cost, waste and return on investment

> energy analysis

One of the most important areas of energy management is analysis. Many companies fail to properly analyse energy use and therefore cannot physically see/quantify what energy savings are being made.

> t-mac's Energy Analysis Dashboard (EAD) is designed to provide business with information on energy efficiency, cost, waste and return on investment (ROI).

> The EAD shows live data and statistics instantly, whilst at the same time quantifying activities thereby identifying energy costs per site/equipment.

> The EAD is particularly useful for business that wishes to showcase energy consumption patterns /targets and have this information on permanent display. *EG: ideal for providing live display of energy use, reduction targets, benchmarking or efficiency practices to stakeholders on a corporate website or for a reception plasma screen viewed by clients/ customers.*

> EAD is a perfect aid to boost Corporate Social Responsibility (CSR) practices.

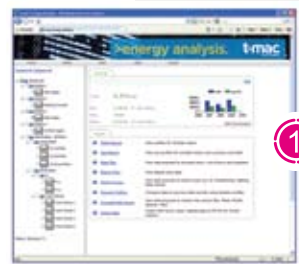
This datasheet provides a brief overview of the reports and functionality of the EAD.





1. MAIN PAGE DETAILING METERS AND AVAILABLE REPORTS

Logging into the online Energy Analysis Dashboard, users immediately view live and historic meter readings from all mains and sub-metering points across single or multiple sites. Automatic reports can be pulled up at the touch of a button to view, compare, contrast, analyse and report on energy consumption as kWh or currency values.



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2. IN/OUT OF HOURS REPORTS

In/out-of-hours report shows a view of energy consumption by each sub-metering point. This report provides the user with an indication of consumption, by equipment, in accordance with operating hours. Therefore helping to identify areas of waste/excess consumption lies.



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3. ENERGY AND COST PROFILE

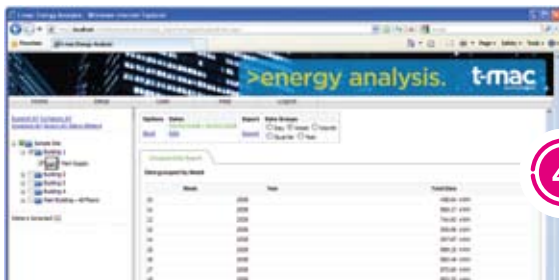
Shows a typical electrical energy consumption profile. This report allows clear visual identification of live and historical energy profiles, problems such as high base loads and also enables overnight/weekend consumption to be easily identified.



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4. SUMMARY CONSUMPTION TABLE

Shows energy consumption in tabular format, grouped by hour, day, week, month, quarterly or annually providing a like-for-like comparison on the total energy consumption for each period.



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5. ADDITIONAL REPORTS AND ENERGY ANALYSIS ACTIVITIES INCLUDE...

Dynamic Profiling

Used to analyse energy profiles, a sample of data is chosen as a benchmark and further data is then compared against this benchmark profile.

EG: A user wants to see if the previous month's energy profile has any anomalies. Once the benchmark is defined (*i.e. previous 6-months*) the data is averaged, to remove any 'out of the ordinary' peaks or troughs, and becomes the '*dynamic profile data*'. The previous month's data is then overlaid on this dynamic profile. An '*acceptable range of variance*' is subsequently defined, and consumption that exceeds the *dynamic profile* by the aforementioned *acceptable range of variance*, is highlighted for further investigation.

Dynamic profiling is a valuable tool as it allows data to be compared like for like rather than comparing data against generic, estimated benchmarks.

Cusum Analysis

A CUSUM chart provides a plot of cumulative sequential differences between each data point, and provides a process average over time. This technique removes 'random scatter' to enable users to detect changes in the energy consumption patterns obtained from the monitoring period.

CUSUM is ideal for detecting small changes in energy consumption than standard control charts; it provides an early indication of whether improvement efforts in reducing energy consumption and costs are successful or not.

Degree Days

Demand for energy varies according to external temperatures and hence how cold the weather is therefore making energy consumption seasonally variable and in essence hard to manage as, for example, it is possible for one month to be a different temperature to the same month in a previous year. Using degree days for energy analysis will enable business to accurately compare consumption patterns year on year as this factor is taken into account during the analysis stage

If the external temperature is below the building's base temperature you require heat and that will be in proportion to the temperature deficit in degrees.

As part of the t-mac online software suite annual hosting arrangement, the technical team at t-mac are constantly updating the suite with new reports and showcasing activities to assist business in its drive to manage, analyse and reduce energy consumption. Additions are at no extra cost to t-mac users and ensures that the t-mac software and reporting packages fit with market demands and changes, legislation and/ or client suggestions year on year.

“ Degree days will enable business to accurately compare energy consumption patterns year on year ”

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