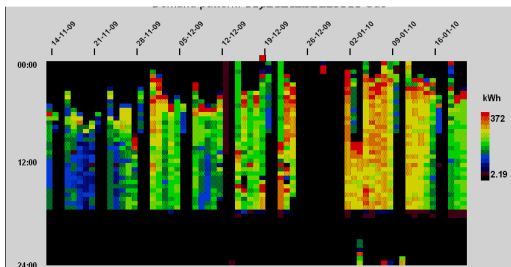# Training workshop: <mark>Energy monitoring and targeting</mark>

EFFECTIVE ANALYSIS OF CONSUMPTION DATA has to be the foundation of any energy management programme. Merely reporting how much you have used is not sufficient: at the very least, users should be routinely comparing actual consumptions with reasoned estimates of *what they should have used* (given the weather, levels of activity, or other variable influences prevailing at the time)

Managers and engineers who know how to do this enjoy several advantages…

- They can detect, investigate and promptly rectify excess consumption caused by malfunctions or inappropriate maintenance or operation (like it or not, even in the best-run organizations, hidden but avoidable energy waste strikes at random and eats up energy budgets needlessly).

- They are better able to quantify opportunities for energy-saving projects. Effective analysis reveals buildings and equipment with anomalous consumption patterns and trends.

- Only they are in a position to verify objectively the savings that their efforts generate, and just as importantly, to identify projects that did not perform as expected. Users who do not understand how to allow for something as obvious as changes in the weather are left uncertain as to the truth, which means that effective projects are not recognized as such (and replicated) while, at worst, bogus products earn endorsements they do not deserve.

This course explains how to compute *expected* consumption using information about the weather, production levels, attendance figures, mileages, hours of darkness and any other 'driving factors' relevant in particular circumstances.

It introduces and explains two simple but critically effective reporting and analysis tools. **Cusum analysis** reveals past changes in behaviour and thus identifies best achievable performance and enables diagnosis of anomalous consumption; while the **overspend league table** is a routine management report which, in a few lines of text, tells you at a glance where all your most significant deviations have occurred in the past day, week, or month. The course also covers two **advanced benchmarking** methods.

With a maximum class size of twelve enabling an interactive exercise-based approach to teaching, this workshop has always enjoyed outstanding feedback. Whether you are drowning in data or feel you don't have enough, whether you are responsible for buildings or industrial processes, whether you are an end user, a consultant or an energy software developer, and almost regardless of your professional background, you can expect to get tremendous value from the day—augmented by free software tools with which to put the principles into practice, and backed up with a money-back satisfaction guarantee.

Content of the day

- Avoidable energy waste
- Calculating "expected" consumption
- Accounting for the weather
- Energy performance indicators
- Detecting and prioritising exceptions
- Cusum analysis
- Manual and automatic meter readings
- Advanced energy benchmarking
- Verifying savings
- Implementation

Presenter

Vilnis Vesma MA(Oxon) CEng MEI CMVP CEM is a former local government energy manager. He is the author of *Managing energy with a desk-top computer* (Energy Publications, 1988), *Energy management principles and practice* (BSI, 2009) and two government advisory booklets on energy monitoring and targeting. He has lectured internationally on monitoring and targeting, produced small-scale M&T software tools, and advised a number of industrial companies and commercial and public-sector organizations on the application of the technique.

For dates, venues and rates please check the listings at www.vesma.com/training