Maximising the performance on an onsite CHP unit

Background

Windsor Leisure Centre installed a Combined Heat and Power (CHP) unit in March 2010 to generate electricity on-site and to provide hot water for the leisure centre. By utilising the heat from the energy conversion process CHP units have efficiencies of 85% (compared with 45% for traditional methods of sourcing electricity and heat).

CHP unit trips

Occasionally however the CHP unit trips and stops generating electricity. This is often not apparent to the leisure centre staff because all other equipment continues to operate as usual but grid electricity

consumption rises. If this is not noticed by the CHP operator then it may be some time before the unit is re-started and consequently the centre may exceed their daily target for grid electricity consumption.

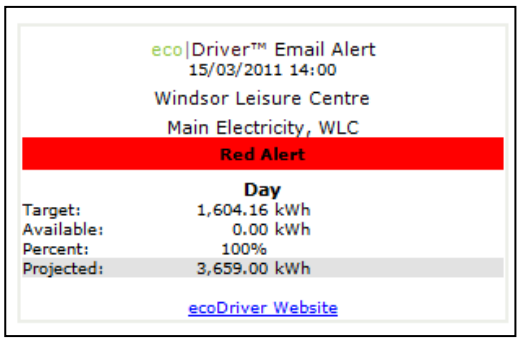
Email Alerting

In an attempt to avoid missing their target, in January 2011, the Leisure Centre manager initiated the use of the automated email alerting capability of their existing eco|Driver™ system.

How it works

Data is captured continuously from meters associated with the CHP unit and also from the leisure centre's main meters (electricity and natural gas) and this is used to update the eco|Driver™ database every 30 minutes.

A target level of consumption (half hourly, daily, weekly, monthly, quarterly and yearly) is specified via the systems unique target setting module, as is an alerting threshold (green, amber & red). Periodically an alerting routine runs on the eco|Driver™ managed servers and using the target values and the current level of consumption it evaluates performance against target in relation to the alerting thresholds. If a threshold is reached an email alert is dispatched to the appropriate person.



Results

Now that the leisure centre staff are made aware, in this way, whenever the CHP unit is not running, they contact the CHP operator and request urgent assistance. Consequently the leisure centre has been able to maximise the performance of their CHP unit and most importantly achieve their energy and emissions targets set for 2010/11.

"For some time now we've been using eco|Driver™ to monitor our energy performance but we're busy people as our main focus is providing a quality service to our customers; so by using eco|Driver™ alert, we are confident that we'll only be alerted when there is a need to take action"

Jes Spencer, Manager, Windsor Leisure Centre