Banking on innovative IT tools to help data centres save energy

Businesses looking to cut costs and reduce their carbon footprint now have access to a new tool that evaluates the energy performance of data centres.

ENERGY

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The ever-increasing popularity of the internet, cloud computing and high-powered computing have created new and exciting ways of working, communicating and storing information. However, new data centres are urgently needed just to keep pace with this exponential growth of online traffic.

This in turn has created a challenge – how can we continue to keep building these energy-hungry facilities if we wish to meet our climate objectives? To date, stakeholders have often felt that they lack the necessary tools that might enable them to make the most carbon footprint-conscious decisions.

This is where the EU-funded RENEWIT project, comes in. The project's newly launched tool – now online and free to use – is targeted at data centre operators, designers and other stakeholders interested in building new facilities and refurbishing existing ones with energy efficiency measures and renewable energy sources built in.

Through accessing details of over 60 locations across Europe, the tool analyses the costs and benefits of various efficiency measures and energy sources for users via an easy to use interface. This makes it easy to compare facilities in terms of electricity costs, access to renewables and other factors that influence decisions when planning the site of a new facility.

'After three years of research and development, it's great to be able to launch the

finalised RENEWIT Tool and more importantly that we can make it available for free,' said Andrew Donoghue, RENEWIT project spokesperson. 'The tool is truly unique. It not only allows data centre operators to model the benefits and costs of on-site and grid renewables but also the efficiency gains from technologies such as free cooling, and even workload management, can also be assessed in detail.'

Although focused on Europe at present, future development of the tool may extend this to North America and Asia.

In order to develop this innovation, the RENEWIT project consortium worked with large data-focused businesses such as Netherlands-based financial services company and bank ING. Using models developed through the project, RENEWIT was able to demonstrate how the bank could improve the efficiency of one of its carbon-neutral facilities by using a biogas fuel cell and by raising the operating temperature in its data centre.

The project team also found that the data centre for a major bank in the south of Europe could achieve significant energy reductions through putting in place hot/cold aisle containment, using high efficiency chillers and implementing a biogas fuel cell system. The project estimated that this sustainability scenario would reduce non-renewable primary energy by 30 % and CO2 emissions by 1 650 tonnes a year. Given the projected expansion of data centres in the near future, achieving such savings could be significant.

RENEWIT, due for completion at the end of September 2016, has left behind other tools to help ensure that the valuable research carried out over the past three years is effectively implemented. A renewable energy optimised data centre monitoring tool to manage facilities that generate energy on-site using renewables sources – such as solar and wind – is now available in demo version on the website. The project has also published a free catalogue of advanced renewable and energy efficiency technologies to help data centre operators integrate renewable and energy-efficiency methods.

For more information, please see:
RENEWIT project website

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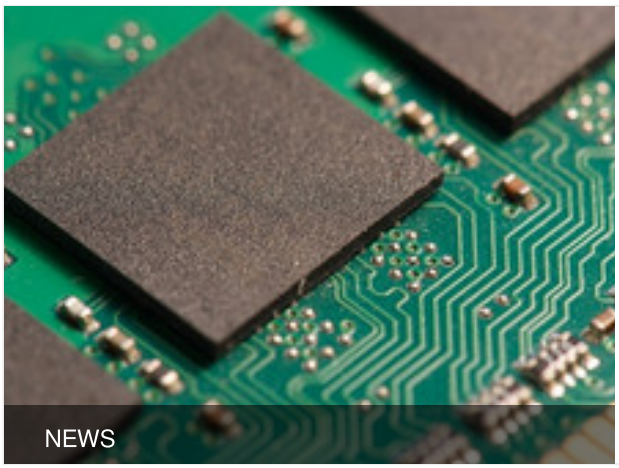

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