

Optimising energy usage while also going 'greener'

Against the background of the current power crisis, the 'green' versus 'greener' energy debate is more important than ever. This according to Dennis Williams, commercial director of Associated Energy Services (AES).



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The debate around 'green' energy usage versus the optimisation of energy efficiency is a critical question for industrial and manufacturing plants today. In South Africa, where local industry continues to grapple with the knock-on effects of the ongoing power crisis, plants are understandably focusing primarily on energy efficiency, rather than ensuring that their energy sources and utilisation are as 'green' as possible.

Dennis Williams, commercial director of Associated Energy Services (AES) explains: "Energy efficiency seeks to optimise the efficiency of the energy conversion process, while 'green' energy looks to use a different fuel source to meet those energy requirements, one that is deemed to be 'green' or greener'. In short, energy efficiency addresses the optimisation of existing energy, irrespective of whether it is renewable or non-renewable, so the plant can operate using less energy without a reduction in productivity."

Williams clarifies that changing to a cleaner fuel source can be slightly greener without necessarily being regarded as a renewable energy source. "A working definition of renewable energy is that it is deemed to be inexhaustible, for example, solar energy or that it is widely agreed to have no impact on carbon footprint," he notes.

"So, for example, if a plant is using coal, one can consider converting to natural gas which, despite still being a fossil fuel, has a smaller carbon footprint than coal. Alternatively, one can ensure that the plant uses less coal to generate the useful energy



AES Managing Director Chris Paterson

needed to meet production requirements. This can be achieved by optimising the production processes in order to use less steam and combust more efficiently."

Williams notes that AES is fuel-, solutions- and technology-agnostic: "We look for opportunities to diversify our clients' fuel mix, while remaining completely agnostic and objective. In this way, we can assist a client in diversifying by having access to different fuel stream options."

Energy usage best practices

AES Managing Director Chris Paterson continues: "AES has been assisting industrial plants with energy usage best practices for over 25 years, operating today across a broad range of vertical sectors where we promote optimised steam processes.

"We assist our clients to optimise their energy efficiency, reduce their risk and minimise the total cost of production throughout the operational life of their plants. This is all crucial in keeping the wheels of industry

turning. Yet it does not have to be at the expense of 'greener' energy options, even while facing South Africa's current infrastructure challenges."

Williams adds: "AES addresses the generation and supply of steam from coal, liquid fuels, biomass and biogas, allowing our clients to optimise efficiencies and future-proof their plants. For those who are pondering the issue of green energy versus energy efficiency, we are able to offer input, guidance and solutions.

"It is, of course, desirable that South Africa should – in line with most of the world – embrace efforts to reduce its national carbon footprint. At the same time, however, we remain in the grip of the ongoing power crisis, which affects industry across the board, and in turn negatively impacts the economy. As a country, we have committed to a number of international obligations around the reduction of carbon emissions. However, we do not have the same diversity as in other countries with regards to cost-effective alternatives for process energy streams," he says.

It is consequently a juggling act for South Africa to emulate the rest of the world in reducing its carbon emissions; while still needing cost-effective, higher carbon fuels, simply to keep industry going. That being said, there are solutions that will satisfy the need for reliable energy usage and the need to reduce carbon emissions.

Williams suggests a potential solution, starting with the requirements of the status quo plant. AES, he says, is able to assist in reducing the quantity of fuel used relative to the initial baseline: "As we are fuel-agnostic,



An AES-managed biogas plant.