

Press Release

AES fine-tunes O & M and empowers plants to work productively and cost-effectively

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There are optimistic signs that the imperative need for operations and maintenance (O&M) is at last firmly under the spotlight, around the country, with regards to the ongoing national power crisis. At the same time, O & M is of crucial importance at individual plant level, and this is where experienced local steam and boiler operations and maintenance service provider Associated Energy Services (AES), is well able to hold its own with the best in the world, even going so far as to guarantee its clients' operational uptime.

This is according to Dennis Williams, AES Commercial Director, who explains: "AES operates across a broad range of industrial sectors where we promote optimised steam processes. We fine-tune clients' industrial processes, assist in operational risk mitigation and asset care, and upskill operations staff. Notably, we also offer our clients an uptime and operational efficiency commitment and guarantee, which sends a powerful message of peace of mind and trust, as they know we are co-invested in the smooth operation of their energy plants."

Williams adds that AES's O & M offering is key to the overall performance of the entire plant, which has an impact on the company's uptime and costs: "O & M provision is critical in driving an energy plant to achieve successful and sustainable operations, allowing our clients to benefit from the availability of steam and the ongoing reliability of assets at an equitable price."

Clarifying plant operation and maintenance

Williams clarifies that plant operation includes the managing and controlling of the equipment within the industrial plant's energy plant to produce the desired energy supply.

"Its scope is broad," he notes, "and includes aspects across a wide spectrum relating to operational personnel, technical management, and the execution of functions directly and indirectly related to the energy plant.

"This includes its actual operations as well as a training component, fuel and services procurement and the technical oversight and planning requirements - right down to the on-site provision of personal protective equipment (PPE). Reliable delivery and operational safety are

imperatives - injuries in this environment can be very severe when working with pressure vessels such as boilers.”

He adds that maintenance, in turn, refers to both routine maintenance - for example ongoing checks and record keeping, servicing of valves, tensioning of belts, preventative maintenance to - as well as emergency repair. Regulatory compliance must also be factored in.

“Plant O & M is important,” clarifies Williams, “because we want to deliver good quality energy - meaning, for example, steam at the correct temperature; electricity at the right frequency and voltage - and we also want to deliver this when it is actually needed.

In this current economic climate, it is critical to maximise efficiencies, which requires being highly cognisant of risk factors. Environmental issues must also be addressed. O & M assists our clients in safeguarding their plant operationally, and thereby also their ultimate profitability.”

Risk mitigation and first-to-market uptime guarantee

AES’s purpose as a company is to assist industrial plants that wish to optimise their energy production processes and achieve energy usage best practices. AES’s entire business is therefore geared towards an improvement in energy efficiencies as well as operational risk mitigation, and it creates a bespoke solution for each client.

AES Managing Director Chris Paterson adds: “Optimal plant operation is critical and it is imperative to minimise downtime. This aim of minimising downtime is linked to the asset care status of the plant, which is also key to AES’s operations. We are passionate about facilitating our clients’ operational risk mitigation and reducing plant downtime through effective operations and maintenance – all of which also necessitates proper care of assets.

“We provide commitments on efficiencies and performance with regards to the fuel-based energy that is used to generate the plant’s required energy streams. We were the first in South Africa to introduce an uptime and operational efficiency guarantee to the market.”

AES has created its own remote monitoring system (RMS) which offers significant technological input into plant operations - allowing AES to collect data from the plant via multiple streams. Williams clarifies: “We collate and analyse the data to maximise the operations of the plant and its performance going forward. The RMS allows AES to ensure that the plant i can be monitored at any time, from anywhere.”

The role of maintenance

AES takes pride in operating on very specific assets with correspondingly specific requirements.

Williams notes: “It is crucial to understand the required maintenance parameters, including when and where in the plant maintenance will be carried out, and for what purpose. Plant boilers are subject to statutory maintenance requirements on an annual and also three-yearly basis. AES provides comprehensive routine maintenance across the plant, including preventative, to keep assets operational, and employees safe.”

“We have created our own asset management tracking system (AMS), to manage data that allows for the population of a database for maintenance scheduling, planning and optimisation.

The AMS is continually improved with the experience provided by the company’s expertise, and is optimised on an ongoing basis dependent on what is being seen in the field.

Assistance with fuel procurement

AES is highly flexible – being totally solutions-, fuel and technology-agnostic, and is therefore able to assist clients in diversifying their fuel mix by having access to all the different available fuel stream options, across the spectrum.

Paterson explains: “It is our opinion that coal is likely to be a mainstay in South Africa as regards electricity generation for the next 10 years at least. The same applies to process energy, which also has a substantial fuel requirement.

Nonetheless, AES is able to mitigate fuel risk through a wide and established fuel procurement offering, which includes coal, liquid fuels, biomass and biogas, allowing our clients to optimise efficiencies and future-proof their plants. We are extremely selective around the quality of coal that we provide, which further assists in plant efficiency improvements.”

The importance of skills

AES invests heavily in training and the promotion of talented people on an equal opportunity basis into the industrial operations environment. Inhouse training is offered at an extremely high level for AES operations personnel who work on client sites - where skills provision forms an integral part of the energy supply offering.

Williams clarifies: “Employee training is extremely important to us, and we provide skills in the operation of best practices with regards to energy systems and combustion. Our aim is to inculcate employees into operating energy plant according to the AES way of doing things. Having ensured that the correct AES people are in place on site - or else having given training and empowerment to the client’s personnel transferred to AES- we are in an even stronger position to improve processes at the plant.”

AES has created its own successful training system, which includes the necessary manuals as well as training offices in each of its regions. All personnel hold the required operations certificates that are valid for 3 years, but this is further supported by undergoing additional annual refresher course training.

The sum of its parts: carbon footprint reduction

When all of the above systems and processes are in place, AES is able to reduce the quantity of fuel that is used relative to the initial baseline. There may also be a process whereby the type of fuel is changed to a more cost-effective fuel source, given AES’s fuel-agnostic ethos.

Being selective around the quality of fuel that AES provides further assists in plant efficiency improvements, thereby using less fuel and additionally improving the plant’s carbon footprint. These changes in turn lead to a bottom-line improvement in running costs and profitability, with an additional knock-on effect on sustainability overall because of the improvement of efficiencies.

“The integration of energy systems remains an ongoing trend,” says Paterson. “AES is often required to take over plants built some time ago, using legacy technology. An understanding of how to improve the solution is key, and in addition to retrofitting, client education is an important aspect also.

“We distinguish ourselves from our competitors through our experience, capacity and skills. AES has the largest operational footprint within the industry, being present in four provinces, and with over 60 boilers in our portfolio with an installed capacity at over 560 MW_{th}. We have a strong track record with excellent clients. As we have also been in business for more than 25 years, we have weathered economic cycles and supported our clients throughout many challenges.

Looking into the future, we will remain at the forefront of operations and maintenance, to keep on improving a plant's energy efficiency and life cycle costs," he concludes.

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Note to Editors

About AES

AES is a pioneering, innovative, reliable and experienced steam and boiler operations and maintenance service provider. The company has been in existence for over 25 years and, as such, regards itself as being the leading O&M provider in steam and boiler operations and maintenance service within the country. The industry sectors it operates in include power generation, chemical, plastics and rubber, timber, pulp and paper, textiles, food and beverage, and mining.

The company's purpose is to assist industrial plants that wish to optimise their energy production processes, and achieve energy usage best practices, through the following offerings: The mitigation of risk and the reduction of plant downtime; the procurement of efficient fuel combustion; assistance with the care of assets over the plant's lifetime; diversification of the plant's energy resources; improvement in site operations; and a reduction in carbon footprint. AES has the largest operational footprint within the industry, being present in 4 provinces and with over 60 boilers in its portfolio with an installed capacity of over 570 MW_{th}.

AES subscribes to the highest ethics and operates according to high safety standards, process excellence and product and service innovation, exhibiting a commitment to quality, technology advancement and the development of human capital. AES invests heavily in training and the promotion of talented people on an equal opportunity basis into the industrial operations environment. The company believes that making a positive difference to communities and the environment is the best way to ensure that everyone benefits from good work. AES is ISO 9001, 14001 and 45001 certified, ensuring that the company maintains a focus on achieving, benchmarking and optimising its processes and activities.

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