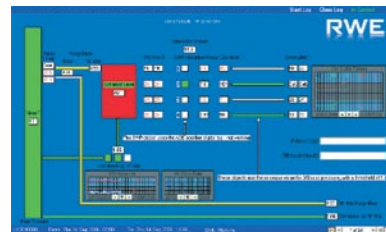


RWE's expertise in plant performance include:

Case study 1

RWE installed operational information management systems across the entire fleet of a large North American generator.

This enabled our client to optimise its maintenance and operational functions, improve plant reliability and flexibility, reduce fuel costs and demonstrate environmental compliance. It is estimated that earnings enhancement of €14 million will be achieved over a three year period.



epiLOG – RWE's electronic operator's logbook

Case study 2

RWE's PRISM work management system is installed across our fleet and has consistently demonstrated optimal maintenance costs, resulting in enhanced flexibility and reliability.

The system directly contributes to enhanced earnings of €21 million a year.



PRISM – RWE's Computerised Maintenance Management System (CMMS)

Case study 3

RWE carried out a flexibility study on a 600MW oil-fired power station in North America. This study identified considerable savings that could be achieved on cold starts.

There was an 8-hour reduction in the time of cold starts and a potential 0.6-hour reduction in hot starts. This resulted in an overall reduction of start up costs of over 40%.

Case study 4

The RWE Air Ingress Survey has helped power stations reduce their boiler losses through more focused outage maintenance.

At Aberthaw power station, UK, at least €700,000 per year has been saved on boiler losses as a result.



Aberthaw power station

Case study 5

RWE engineers have transformed Didcot A from a conventional base load generator into an aggressively cycled plant making up to 750 starts a year.



State-of-the-art soft desk control room at RWE's Didcot A power station

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Plant Performance is one of a wide range of capabilities that RWE Power International can offer to the power and mining industries. For more information please contact us.



Optimising plant performance

Proven systems and techniques to achieve greater flexibility, reliability and efficiency of power plant operation

Power generation and mining experts



RWE Power International's specialist services cover every aspect of owning and operating power plant, from construction, commissioning, operations and maintenance, to eventual decommissioning. Our mining expertise covers minerals and solid fuels and spans exploration, development, operations and rehabilitation.

We have a great depth of operations and engineering knowledge and practical experience as an asset developer, owner and operator. As part of the RWE Group, we can call on the capabilities and resources of one of the world's leading multi-utility companies. We combine global reach with local understanding to provide innovative solutions that enhance the performance and profitability of any power generation or mining asset.

With clients in more than 70 countries around the world, our expertise spans the full range of electricity generation technologies, fuel sources including hard coal, lignite, oil, gas, nuclear, and mining methods.

A shared history of innovation

RWE Power International is a collaboration between two companies within the RWE Group, RWE Npower plc and RWE Power's consulting subsidiary, RE GmbH. We have a proud history of innovation, shared between RWE npower and RE. Our experience of transforming state-owned power utilities into commercially focused private organisations was achieved by adopting cutting-edge, innovative operating and engineering solutions. Our mining services are based on more than 40 years of developing and running lignite mines, and include large-scale groundwater management, reclamation and environmental services.

Optimising plant performance

RWE has the resources and expertise to help power producers operate more profitably in liberalised and regulated energy markets. Through the implementation of sophisticated information and control systems, linked to well-proven operating techniques, our teams of engineers can help your plant achieve levels of performance that will ensure optimum returns from the value available. Our systems also drive a culture change: sharing information between operating, engineering and trading disciplines to build a more innovative, better motivated workforce.

It's a fully integrated approach. Plant flexibility to respond to varying levels of demand and price. Reliability to meet contracted supply. Efficiency to control costs.

We will review your current plant condition, examine levels of system redundancy, and advise where best to invest for the most profitable balance between risk and reward to optimise plant performance within the actual market conditions in which you operate.

Capturing value flexibly

RWE's expertise enables operators to flex their plant in line with daily fluctuations in pricing and demand. Our information management systems allow plant to be operated in the most commercially-advantaged manner. We have successfully introduced long-term, cycling regimes for large coal-fired and CCGT power plant, utilising a range of systems and technical expertise to minimise the engineering deficit that accompanies plant cycling.

These systems deliver higher returns on actual generation, even taking into account the associated costs of repeated starts and long-term plant degradation.

Managing reliability for profit

Reliability has a value. It also has a cost that can be measured in start-up energy needs, the engineering deficits imposed on the plant, and the commercial losses associated with failure to meet contracted supply. With years of experience participating in power markets, RWE has developed information management systems and operating procedures which improve the management of reliability, taking account of the full picture of revenues and costs.

Our systems provide both your trading and operations teams with the information they need to take the decisions that best suit your business day-by-day to capture the greatest value in the market at the lowest overall costs.

Making efficiency pay

RWE efficiency services can reduce operating costs and increase the profitability of your generating plant. Drawing on our experience with many types of power stations, supplying electricity within very different business environments, our specialist engineers will assess the current condition and future potential of your plant and introduce measures to increase its efficiency.

Our efficiency audits validate operational data, then use a suite of sophisticated software modelling programs to identify areas of inefficiency and benchmark against 'world's best practice'.

Varying your fuel diet to lower costs

RWE's fuel impact evaluation systems enable operators to vary the fuel diet of plant, giving greater scope to source alternative fuels according to availability and price. Our Combustion

Test Facility, along with various modelling tools, enables different coals to be assessed, and operational procedures to be adapted that suit variations in pulverised fuel quality. Additionally, on-line monitoring of boiler plant provides guidance on air heater fouling and sootblowing optimisation.

Our efficiency audit also assesses the implications for your plant of varying its fuel diet. We can also help you to specify fuels that will deliver your target generation costs, whilst still maintaining plant safety and environmental compliance.

Seeing things differently

Optimum performance is as much about the attitude of your workforce as the condition of your plant. RWE has developed programmes of training and change management that will help your staff to work more effectively in this new operating environment. The programmes create a fuller understanding of both the technical and commercial challenges of power generation in today's markets.

More flexible operating systems motivate staff to take greater responsibility and accountability,

supported by increased access to real-time business information. Individuals can see more clearly how they contribute directly to the business, creating a new incentive to perform well.

Synchronising plant with supply commitment

By reviewing plant design and operation procedures and introducing proven management and advisory systems – we can help you to introduce more reliable techniques for start ups and shut downs. Our techniques will allow you to control damage, time and costs, and consistently hit the time slot where generation from the plant is required.

Our information management systems guide the operator through the start up procedure, making every start commercially efficient. They also support the trader in negotiating more profitable contract agreements, based on a better knowledge of the level of reliability of your plant.

Targeting maintenance spend more accurately

Flexible plant operation lends itself to a more opportunistic maintenance strategy: taking advantage of shutdowns to carry

out maintenance work. This opportunistic strategy must be supported by accurate condition monitoring systems, and non-destructive modelling tools that will identify tasks and time-frames within which maintenance must take place.

RWE can supply and install these systems, which will identify over and under maintenance of plant, and help ensure maintenance activity supports flexible and reliable operation.

More confident investment decisions

RWE audit systems and monitoring processes can accurately assess the impacts on plant condition associated with any new operating regime. Our efficiency audit will also provide a menu of options for plant development, with detailed estimates of costs, along with the savings and benefits. This information can be of huge value as you decide how to develop your plant for the future.