

AMS™ Suite: Real-Time Optimizer Saves \$1.5M At INEOS Utilities Facility



RESULTS

- \$1.5M savings from fuel and additional electricity generation.
- Reduced CO₂ emissions by 25,000 tonnes.
- Project payback of less than 3 months.
- Beneficial operation within 6 months of signing contract.



APPLICATION

Cogeneration facility producing steam and electricity for use on a chemical, oil and exploration plant.

CUSTOMER

INEOS Manufacturing Scotland Ltd. * - Grangemouth, Stirlingshire, UK.

CHALLENGE

The utilities plant produces both steam (1644 tonnes/hour) and electrical power (280 MW) that is supplied to users elsewhere on the Grangemouth site. The plant consists of 8 boilers, 7 turbo-alternators and a CHP plant that is owned and operated by a 3rd Party. There is provision for importing or exporting electricity to the grid (normally exporting when the CHP plant is running).

Within the utilities plant there are effectively two main steam levels on the plant, EHP and MP. The other three levels, HHP, HP and LP are each supplied from either EHP or MP and have user demands only (i.e. no generation at those levels).

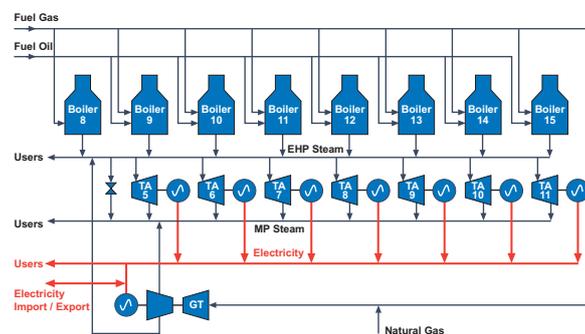
The utilities plant was the focus area in a procurement initiative to lower energy costs. It was considered that an optimization system was to be a key factor in achieving consistent plant operation, improving the control of daily Key Performance Indicators (KPI) and enhancing the planning process through improved equipment selection.

SOLUTION

INEOS selected AMS Suite: Real-Time Optimizer as a key technology in achieving consistent plant operation, improving the control of daily KPIs and enhancing the planning process through improved equipment selection.

“The optimizer has been instrumental in reducing our energy costs, which is a strategic goal for the site, saving us approximately \$1.5M per year and reducing our annual CO₂ emissions by up to 25,000 tonnes.”

Tim Desmond
Utilities Optimization Engineer



Utilities Plant Schematic.

AMS
Suite

For more information:
www.assetweb.com

EMERSON
Process Management

POWER

The utilities optimizer delivers operational benefits by reducing fuel usage and increasing generation of electricity. AMS Optimizer, a component of Emerson's AMS Suite, runs every 5 minutes and provides recommendations for the optimal steam generation (on a boiler basis) and power generation (on a turbine basis). The recommended setpoints are displayed for the operators including the amount of opportunity that is lost (i.e. the difference in cost between current and optimal operation). A graphical summary screen is also provided, allowing users to see the full AMS Optimizer solution in one place.

The plant operations and engineering staff have access to displays that replicate the information displayed on the DCS graphics. The cumulative opportunity lost on a shift-by-shift basis is also calculated and used by management at each start-of-day meeting.

An off-line version of AMS Optimizer is included, enabling the generation of optimal weekly operating plans. Emerson configured the off-line version to generate plans in exactly the same format that was already used, enabling the engineers to use AMS Optimizer effectively.

RESOURCES

Press Release

www.PMO.Assetweb.com/news/ineossavingspr.htm

* Previously BP.

“Following the installation of Emerson's AMS Optimizer package on the power station, we have been able to realize and improve our plant operations.”

Tim Desmond
Utilities Optimization Engineer

Emerson Process Management Asset Optimization Division

North America:

12603 SW Freeway, Suite 400
Stafford, TX 77477
T +1 281-207-2800
F +1 281-207-2814

Europe:

Startforth Road,
Riverside Park
Middlesbrough, TS2 1PT, U.K.
T +44 1642 773000
F +44 1642 773077

www.assetweb.com/pmo

©2006, Emerson Process Management.

The contents of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available on request. We reserve the right to modify or improve the designs or specifications of our products at any time without notice.

All rights reserved. AMS is a mark of one of the Emerson Process Management group of companies. The Emerson logo is a trademark and service mark of Emerson Electric Company. All other marks are the property of their respective owners.



AMS Suite: Real-Time Optimizer powers PlantWeb by optimizing operations in real-time, based on changing plant conditions and business constraints.

