

# Operational Outages for Power Generation

Optimising Plant Efficiency in a Cost Conscious Environment through Optimum Outage Planning, Maintenance and Risk Management

Vienna, Austria

24th–26th March 2010

Including Half-Day Interactive Pre-Conference Workshop:

**Improving Plant Efficiency and Implementing a Risk Based Approach for Optimal Performance**

Attending this Premier **marcus evans** Forum Will Enable You to:

- **Carry out** effective planning to ensure optimal outage performance
- **Address** and find a solution for the falling skill shortage in the power sector
- **Work** and coordinate with contractors to forge ongoing vital relationships
- **Develop** the best and most appropriate maintenance strategies
- **Deliver** a safe and efficient outage

Learn from Key Practical Case Studies:

- **Essent** drawing on experiences from creating long – term contracts
- **RWE Npower** establishing a best practice approach to outage planning through to execution
- **EDP** improving reliability whilst keeping costs low
- **Emirates CMS Power Company** showcasing the leaders an effective systems approach

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Pre-Luncheon Sponsor:



LIFE MATTERS

Reduce maintenance costs  
through **BETTER** planning, scheduling  
and contract management

to deliver **best in class**

outage performance



**marcus evans** Expert Speaker Panel:

**Krishnan Balakrishnan**  
Head of Operations

**Emirates CMS Power Company**

**Simon Walker**  
Maintenance Manager  
**Intergen**

**Eberhard Grauf**  
Managing Director  
**SE Engineering**

**Tony Wilkes**  
Portfolio Maintenance Coordinator  
**RWE Npower**

**Jac Weggen**  
Turnarounds Manager  
**Essent**

**Antonio Costa Goncalves**  
Retrofitting Projects Director  
**EDP**

**Santos Silva**  
Head of Maintenance  
**EDP**

**Tansel Kutmen**  
HSE Team Leader  
**Enka Power Plants**

**Antti Piirto**  
Managing Director  
**TVO, Olkiluoto Nuclear Power Plant**

**Hans van Holst**  
Business Centre Manager RBMI  
Technology  
**Lloyds Register EMEA Energy**

**Harald Koban**  
Business Development and Sales  
Manager Energy  
Central Europe and Nordic Area  
**Lloyds Register EMEA Energy**

**Sue Gill**  
Project Director – National Skills  
Academy for Power  
**The National Skills Academy**

**Diarmaid Mulholland**  
Region General Manager  
**GE Energy Services**

**Tron Engebretsen**  
Senior Vice President Power  
Generation  
**Statkraft AS**

**Prof. A.A. Becker**  
Head of Structural Integrity and  
Dynamics Research Group,  
Director of the Spencer Institute of  
Theoretical and Computational  
Mechanics  
**University of Nottingham**

**Dr. Sarinova Simandjuntak**  
Principal Engineer  
**European Technology Development**

**Jorge Fernandes**  
Project Engineer  
**European Technology Development**

## marcus evans summits

Producers and promoters of over 150 of the world's leading business and economic summits every year for senior decision makers at exclusive locations around the world. These events provide attendees with a unique opportunity to access the latest developments in their chosen industry and to network in a structured environment with leading industry practitioners.

## marcus evans conferences

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Specialists in corporate hospitality linked to the premier international sporting events around the world. Trading as The Hospitality Group (thg), Sports Marketing Group (smg) and International Championship Management, the event diary is nothing less than an international sporting directory.

## marcus evans congresses

**marcus evans** congresses bring together the leading vendors and decision makers from a wide range of services and industries. Each event provides an opportunity for key suppliers to exhibit and demonstrate their products to the region's key professionals. In addition to the exhibition format the event's educational conference is attended only by delegates who are pre-qualified, in most cases to a minimum spend of US\$5 million and many with budgets in excess of \$50 million.

### 24th March 2010

#### Half Day Interactive Pre-Conference Workshop

#### IMPROVING PLANT EFFICIENCY AND IMPLEMENTING A RISK BASED APPROACH FOR OPTIMAL PERFORMANCE

##### Led by:

**Dr. Sarinova Simandjuntak**  
Principal Engineer  
**European Technology Development**

##### Supported by:

**Jorge Fernandes**  
Project Engineer  
**European Technology Development**

13:30 Registration and Coffee

14:00 Workshop Leader's Opening Remarks

#### 14:10 Approaches to Consider for Plant Management

In relation to plant performance assessment, power plant availability and reliability/ risk based assessment, and impact on the maintenance, inspection and management costs

- Development of management strategy using risk based approach.
- Plant performance assessment by means of power plant benchmarking techniques and parameters
- The impact on forced and scheduled outage rate including cost of cycling for power plants originally designed for base load operation

#### 15:10 Practical Aspects

Plant life management and component condition assessment using risk based approach and 'best practice' comparison

- Examples of plant life assessment of critical components for conventional power plants and combined cycle gas turbines including cases when a plant tries to accommodate cycling operation
- Component replacement for life extension – techniques and experiences

16:10 Afternoon Tea and Networking

#### 16:40 Plant Outage Management Strategy

Outage improvement by means of streamlined integration of technologies and processes, work planning and scheduling, planned NDE inspection and structured approach to plant life management, plant modification and configuration control, safety culture, outsourcing, and contract management

- Identifying good practices in outage management. Outage planning and preparation, outage execution and post-outage review.
- Breakdown, forced and scheduled outage for European, American and Asian benchmarking power plants
- Practical issues for deciding outage intervals and workscope

17:10 Closing Remarks from the Workshop Leader

**Dr Sarinova Simandjuntak** gained her Ph.D. from Imperial College London. Her specialist area includes fatigue and creep analysis (including probabilistic analysis), defect assessment, Fitness-for-Service and Risk-Based Engineering and Maintenance of high temperature plant. Expertise has been built up from being a project leader or a team player in the work such as in Cyclic Capability Study for HRSG for CCGT and Co-Generation plants, Development of plant management strategy using Risk Based approach, Lifting Procedure for high temperature power plant, development of defect assessment software – CRACKFIT, electronic atlas of ageing power plant microstructures, and failure analysis tool. She is actively involved in the R&D and project development for various collaborative projects with international industries such as Electrobel and Laborelec - Belgium, EON - Germany, Siemens - Germany, ESKOM - South Africa, ESB - Ireland, and many others in Europe, Middle East and South East Asia.

**Jorge Fernandes** is Project Engineer at ETD with special interest in conventional power plant and gas turbine/associated HRSG design, inspection and maintenance. He has been involved in projects such as: Cost of plant cycling in the Single Electricity Market which looks into the technical and cost performance of number of units in particular their start up patterns and the component damage caused by frequent start ups; Benchmarking of conventional power and Gas Turbine Plant which involves the plant performance and cost modelling/analysis; The Development of Electronic Atlas of ageing power plant microstructure; and Life Extension and Replacement of components in ageing power plant boilers and HRSGs.

## 25th March 2010

08:30 Registration and Coffee

09:00 Chairperson's Opening Remarks

### 09:10 Opening Address

#### Providing the Right Skill Set for Effective Maintenance

- Overview of the challenges facing the power sector today in the UK and Europe
- Address the problems of ageing work forces, limited skill sets and the lack of new talent
- Establishing how the National Skills Academy can help operators for the future especially in reference to the power sector

#### Sue Gill

Project Director – National Skills Academy for Power

**The National Skills Academy**

### EFFECTIVE PLANNING TO DELIVER COST EFFICIENT OUTAGES AT REDUCED TIMES

### 09:50 Case Study

#### Develop an Effective Crisis Plan to Implement During a Forced Outage

- Understand the importance of an effective crisis plan so that the necessary support can be raised
- Ensure that the necessary resources are available to carry out an outage in the shortest possible time
- Assess how to work with contractors to create an effective plan so that they are ready to deliver the necessary support when needed

#### Simon Walker

Maintenance Manager

**Intergen**

10:30 Morning Coffee and Networking

### 11:00 Excellent Outage Performance: Typical Areas of Improvements and Solutions

- Recognise the impressive improvements realised in some countries/utilities
- Understand what are the main contributors to achieve short outages in particular related to the outage planning and related prerequisites
- Understand the typical problems to overcome
- Ensure that outage improvements do not compromise safety aspects

#### Eberhard Grauf

Managing Director

**SE Engineering**

### 11:40 Case Study

#### Best Practice Approach to Pre-Outage Planning through to Execution

- Guarantee efficient preparation using a strategic outage management plan
- Identify best practices for maintenance on power plants by liaising with service providers
- Aim to work effectively within a limited resource pool and ensure that regulations are matched whilst working in the UK

#### Tony Wilkes

Portfolio Maintenance Coordinator

**RWE Npower**

### 12:20 Pre-Luncheon Presentation:

#### Reducing Operating Risk on Static Equipment



### LIFE MATTERS

**The Lloyds Register Group** is an organisation that works to enhance safety and to approve assets and systems at sea, on land and in the air. We check that assets and systems work so that people and communities around the world can get on with everyday life. We are driven by a strong sense that what we are doing matters.

#### Hans van Holst

Business Centre Manager RBMI Technology

**Lloyds Register EMEA Energy**

12:40 Luncheon

13:40 Coffee and Networking

### 14:10 Employing Appropriate Inspection Technologies during the Planning Stages to Deliver an Effective Outage

GE Energy Services is one of the world's leading suppliers of power generation and energy delivery technologies – providing an array of solutions for traditionally fuelled plants as well as those driven by renewable sources. GE has the worldwide resources and experience to help customers meet their needs for cleaner, more reliable and efficient energy.

#### Diarmaid Mulholland

Region General Manager

**GE Energy Services**

### CONTRACT MANAGEMENT

### 14:50 Case Study

#### Establishing Turnaround Partnerships Based on Long Term Main Contracting

- Determining the impact of turnaround cost on long term expenses of ownership
- Examining the turnaround approach based on main contracting philosophy
- Analysing the key elements for success
- Long term cost of ownership
- Looking at the effect on main contracting “front end loading”
- Assessing the challenges of culture/behaviour and roles within turnaround main contracting

#### Jac Weggen

Turnarounds Manager

**Essent**

15:30 Afternoon Tea

### 16:00 Panel Discussion

#### Should Overhauls be Treated as Project Management or as Part of the Maintenance Process?

- How can outage management be incorporated and integrated more into the overall maintenance plan?
- Do operators often make the mistake of treating outages as a project?
- How can operators work with contractors to produce the required results?
- How can outsourced knowledge be maintained for the future?

*The panel will be joined by key speakers of the day*

17:00 Chairperson's Closing Remarks and End of Day One

## 26th March 2010

08:30 Registration and Coffee

09:00 Chairperson's Opening Remarks

### 09:10 Keynote Address

#### **A Performance Leader – Using the Systems Approach**

- Determining the successes of the Taweelah A2 Operating Company / Emirates CMS Power Company and their first IWPP (Independent Water and Power Producers) in Abu Dhabi
- Improving reliability and availability through a systems approach
- Benchmark best practice and discover the elements needed for success

**Krishnan Balakrishnan**

Head of Operations

Emirates CMS Power Company

### 09:50 Case Study

#### **An Alternative Approach – the Statkraft Way**

- Examining how the biggest generator of renewable energy in Europe takes a different approach to the planning of outages
- Analyse the importance of not outsourcing O & M capabilities but retaining control throughout the outage process
- Measuring the importance of watching market signals to plan outages as opposed to relying on maintenance – an alternative view point
- Draw conclusions from the way that Statkraft carries out their outage process

**Tron Engebretsen**

Senior Vice President Power Generation

Statkraft AS

10:30 Morning Coffee and Networking

### MANAGING OUTAGE PERFORMANCE THROUGH EFFECTIVE MAINTENANCE CAPABILITIES

### 11:00 Joint Case Study

#### **Managing Outages to Improve Reliability and Cut Costs**

- Addressing the maintenance strategy and outages
- Optimising the planning stages of outages
- Determine when is best to in-source and outsource
- Looking at the contractual models employed at EDP

**Antonio Costa Goncalves**

Retrofitting Projects Director

EDP

**Santos Silva**

Head of Maintenance

EDP

### 11:40 Case Study

#### **Preparing for a Refuelling Outage – Competence Management**

- Analyse the importance of preparing the right materials and tools to carry out successful refuelling
- Ensure that the right maintenance services are procured from vendor companies
- Look at how extensive inspections are carried out in a nuclear power plant

**Antti Piirto**

Managing Director

TVO, Olkiluoto Nuclear Power Plant

### 12:20 Ageing Power Plants; Assess the Remaining Lifetime

- Developing techniques using small materials to predict the life of the power plant
- Identify small material samples that are most likely to fail and use preventive methods
- Incorporate non destructive testing into the overall maintenance regime of a power plant

**Prof. A.A. Becker**

Head of Structural Integrity and Dynamics Research Group,  
Director of the Spencer Institute of Theoretical and Computational  
Mechanics

University of Nottingham

13:00 Luncheon

14:00 Coffee and Networking

### ENSURING SAFETY IS UPHELD BEFORE AND DURING THE OUTAGE PERIOD

### 14:30 Case Study

#### **Coordinating All Planning and Maintenance Components to Deliver a Safe Outage**

- Evaluate the importance of process safety management
- Assess how to deal with a shrinking resource pool on a global scale from both the operator and the contractor side
- Determine the importance of having the best safety strategy in place when undertaking large projects

**Tansel Kutmen**

HSE Team Leader

Enka Power Plants

### 15:10 Panel Discussion

#### **Evaluating the Importance of Working Closely with Contractors to Ensure that Safety Management is Upheld**

- What do power plant operators need to do to ensure that safety is upheld during the massive amount of man hours required during an outage?
- How can operators ensure that the right skill set is being employed to do the job from the contractor and that they will also uphold the same safety measures?
- How can contractors and operators build their trust through effective partnerships?

*Panel Moderator:*

**Harald Koban**

Business Development and Sales Manager Energy

Central Europe and Nordic Area

Lloyds Register EMEA Energy

*The panel will be joined by key speakers of the day*

16:00 Chairperson's Closing Remarks, End of Conference and Afternoon Tea

### Business Development Opportunities:

Does your company have services, solutions or technologies that the conference delegates would benefit from knowing about? If so, you can find out more about the exhibiting, networking and branding opportunities available by contacting our sponsorship division.

**James Pretty**

Tel: 0031 20 800 4377

Fax: 0031 20 800 4333

Email: [JamesP@marcusevansnl.com](mailto:JamesP@marcusevansnl.com)