



# Energy Efficiency

Manage energy consumption through better processing and implementation strategies



11 MAY  
2011

NH BARBIZON  
PALACE  
AMSTERDAM

## CONFERENCE HIGHLIGHTS

- Hear case studies from TÜPRAŞ, REPSOL, SARAS, SHELL, MOL / SLOVNAFT and CHEVRON
- Information on the several facets of sustainable development and how these apply to building the future refinery energy profile
- Learn how to appreciably curtail or avoid CO<sub>2</sub> and also NO<sub>x</sub> emissions
- Details of energy monitoring system technologies to ensure maximum efficiency
- Information on low or no capex energy efficiency programmes
- New low temperature waste heat technologies for mid and long-term implementation of energy efficient measures
- Comparison of different cases of crude oil residue conversion with and without CO<sub>2</sub> capture
- Analysis of how efficiently crude oil can be converted to lighter fuel products
- Learn how to identify energy saving opportunities through refinery optimisation

# Amsterdam

REGISTER ONLINE AT [www.gtforum.com/energy-efficiency](http://www.gtforum.com/energy-efficiency)

Following the success of the inaugural event in 2010, ERTC is pleased to return to the wonderful city of Amsterdam for the 2nd **ERTC Energy Efficiency** conference. Feedback from last year's attendees indicated that the emphasis on emissions reduction and energy efficiency within the refining industry is on the increase as it works towards better energy management and usage as well as meeting environmental responsibilities.

With energy efficiency being highlighted as a strategic goal for future sustainable success and with the ever-increasing pressure on margins, refineries are compelled to examine their energy consumption and focus on areas where greater process efficiency and cost-savings can be attained.

Many refineries have now set up dedicated departments tasked with energy efficiency management. The **ERTC Energy Efficiency** conference will provide you with the chance to find out how others are streamlining their operations.

The programme will present case studies from refiners along with details on new technologies and some of the issues we will cover include:

- **CO<sub>2</sub> and energy management in a refinery**
- **Advanced hydrogen management**
- **Monitoring of KPI's to allow ready identification of suboptimal performance**
- **Energy monitoring systems and the technologies that support them**
- **Operating cost reductions**
- **Optimisation of refinery fuel systems**
- **Optimisation of distillation tower operations**
- **Waste heat utilisation and energy integration**
- **What is the least cost of CO<sub>2</sub> capture?**
- **"Sustainability" and what it actually means for a practising engineer**

If you are looking to minimise your energy consumption and realise margin improvements at little or no capex, then this conference is not to be missed.



## Advisory board

Our advisory board is made up of industry experts who assess every single presentation to ensure the conference programme is innovative and relevant to the issues the industry is facing.

The advisory board members are:

- Pedro Martinez Conesa, REPSOL YPF
- George Sipos, OMV
- Gaetano De Santis, GALP ENERGIA
- Ernst Worrell, UTRECHT UNIVERSITY
- László Lázár, MOL
- Esa Tamminen, NESTE OIL



## Who should attend

From refineries and petrochemical plants:

- General managers
- Refinery managers
- Plant managers
- Energy efficiency managers
- Project managers
- Process managers
- Corporate and downstream strategy
- Operations managers
- Technologists
- HSE personnel
- Environment and CO<sub>2</sub> personnel
- Technology and service providers
- Industry consultants and analysts
- Engineers

### Sponsorship opportunities

To find out how your organisation can benefit from sponsoring **ERTC Energy Efficiency** please contact Matthew Whitfield on:  
T: +44 (0)20 7968 4607 E: [matthew.whitfield@gtforum.com](mailto:matthew.whitfield@gtforum.com)



MORNING	
08.30	Registration
09.00	Chairman's opening remarks
09.05	<p><b>Keynote address</b>  <b>The impact of CO<sub>2</sub> emission reduction policies on refining processes and technologies</b></p> <ul style="list-style-type: none"> <li>• Impact of policies and regulations</li> <li>• Emission reduction objectives</li> <li>• What efficiency can and cannot do to respond to the challenges</li> </ul> <p><b>Dr Frigyes Lestak, General Manager CO<sub>2</sub> Efficiency, Shell</b></p>
09.35	<p><b>Use of low temperature waste heat in refineries</b></p> <ul style="list-style-type: none"> <li>• Reduce the energy intensity at refineries: Short and mid-term vs out-of-the-box approaches</li> <li>• Identifying potential opportunities: Recover waste heat in refineries</li> <li>• Case study: ORC economic evaluation</li> </ul> <p><b>REPSOL YPF</b></p>
10.05	<p><b>You can't manage what you don't measure – KBC's energy monitoring system helps Tüpraş to reduce their operating costs and emissions</b></p> <ul style="list-style-type: none"> <li>• At 40% of total operating cost, energy is the largest managed cost in the hydrocarbon industry</li> <li>• By monitoring and reporting carefully designed key parameters, energy performance improvements can be sustained rather than lost.</li> <li>• Tüpraş has achieved a significant reduction of energy cost at two refineries by using a combined solution of ProSteam optimisation (from KBC) and BabelFish monitoring (from ISS)</li> </ul> <p><b>TÜPRAŞ / KBC PROCESS TECHNOLOGY</b></p>
10.35	Coffee break
11.05	<p><b>Advanced approaches to carbon capture and sequestration in a refinery</b></p> <ul style="list-style-type: none"> <li>• Modifications to refineries for removal and long term storage of CO<sub>2</sub></li> <li>• Regulatory uncertainties that stand in the way of CCS</li> <li>• The economics of carbon capture and sequestration</li> </ul> <p><b>Speaker to be confirmed</b> – please visit the website for updates</p>
11.35	<p><b>Experiences and results of energy saving projects – Saras' approach to reduce energy demand and energy costs in a 100\$/bl scenario</b></p> <ul style="list-style-type: none"> <li>• 5 \$/bl of energy costs in the current market scenario are by far the largest operating cost for Saras refinery and a key challenge for the future</li> <li>• Pinch studies led to the implementation of several projects, including new loops of low temperature streams interconnecting different units; the payback of these investments is boosted by national energy efficiency incentives driven by EU 2020 targets</li> <li>• A utility management system providing energy balances and a real time utility cost optimiser are the day-by-day tools to support a more energy focused organisation</li> </ul> <p><b>SARAS</b></p>
12.05	<p><b>Most efficient oil refinery schemes for upgrading the bottom of the barrel</b></p> <ul style="list-style-type: none"> <li>• Efficiencies of high conversion oil refinery schemes</li> <li>• Different ways of producing hydrogen</li> <li>• Refineries with and without CO<sub>2</sub> capture</li> </ul> <p><b>CB&amp;I</b></p>
12.35	Lunch

AFTERNOON	
13.45	<p><b>Lunch keynote address</b>  <b>Energy and sustainability in oil refineries</b></p> <ul style="list-style-type: none"> <li>• "Sustainability" is a very popular catchphrase, but what does it actually mean for a practicing engineer?</li> <li>• As energy industries move towards "sustainable" operations, what are the issues that the refinery engineers need to be aware of when planning or discussing their energy facilities, the energy supply options, or the operation of their energy systems?</li> <li>• Sustainability goes beyond just "energy efficiency", and has its social, economic, environmental and ethical dimensions</li> <li>• Building the future refinery energy profile</li> </ul> <p><b>KBC PROCESS TECHNOLOGY</b></p>
14.15	<p><b>Non-capex paths to improve energy efficiency of refinery operations</b></p> <ul style="list-style-type: none"> <li>• Implementation of effective energy conservation actions in MOL refineries</li> <li>• Benefits of switching drives from steam to electricity</li> <li>• Soft enabling factors</li> <li>• How can the operation of distillation towers be optimised to improve energy efficiency</li> </ul> <p><b>MOL</b></p>
14.45	<p><b>Least energy operation of refinery units</b></p> <ul style="list-style-type: none"> <li>• Operating envelopes for optimising energy usage</li> <li>• A visual interface for defining, exploring, and applying operation envelopes in real time</li> <li>• Industrial example that achieved a 2% efficiency increase</li> </ul> <p><b>PPCL</b></p>
15.15	Coffee break
15.45	<p><b>Comprehensive approach for optimising energy usage in low capex environment</b></p> <ul style="list-style-type: none"> <li>• Combination of deep process and modeling knowledge with Pinch analysis to enable step change energy efficiency and profitability of a petroleum refinery</li> <li>• Optimisation of energy consumption with efficient process control (including APC) and on-line analyser packages</li> <li>• Real life examples of implementation in grass roots and revamp projects</li> </ul> <p><b>NESTE JACOBS</b></p>
16.15	<p><b>Pembroke refinery fuel system optimisation</b></p> <ul style="list-style-type: none"> <li>• Utility system optimisation challenges</li> <li>• Optimisation of boiler load allocation</li> <li>• Technology and architecture of Pembroke refinery fuel system optimiser</li> <li>• Incremental benefits compared with traditional advanced control application</li> </ul> <p><b>APEX OPTIMISATION / CHEVRON</b></p>
16.45	<p><b>Advanced solutions for refinery hydrogen, CO<sub>2</sub> and energy management</b></p> <ul style="list-style-type: none"> <li>• Advanced hydrogen management using proprietary HyNDT® console for judicious hydrogen network</li> <li>• Hydrogen generation schemes with energy management through efficiency enhancement and optimal steam-power synergy</li> <li>• CO<sub>2</sub> avoidance and CCS readiness covering its entire value chain</li> </ul> <p><b>TECHNIP</b></p>
17.15	Closing remarks
17.20	Drinks reception and close of conference

# Reservation Form

Promo code: DM1



## ERTC Energy Efficiency Conference

11 May 2011, NH Barbizon Palace, Prins Hendrikkade, 59-72. 1012AD Amsterdam, The Netherlands  
Web: [www.nh-hotels.com](http://www.nh-hotels.com)

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## Accommodation

For accommodation options please visit the event website where you will find further details:  
[www.gtforum.com/energy-efficiency](http://www.gtforum.com/energy-efficiency)

I have read and agree to the terms and conditions below

Signature Date

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