

Powering Africa:

Captive Power & Cogeneration



The Power of Industry

The Need for Power

A country needs industry.
People need industry.
Governments need industry.
Industry needs power.

The view
from the
Vineyard
Hotel



Table
Mountain

An Executive Meeting

The aim of PACO is to share experience of cogeneration and captive power, and explore opportunities in both.

The demand for power in Africa is unstoppable. Both from industry and the population. Industry needs reliable power to operate efficiently. The population want power as a basic need. The two sectors share a common need that if creatively explored, could be of benefit to both.

The Need for Efficiency

Wasting power is not an option. The efficiency of cogeneration is established, and therefore should be adopted wherever feasible. There should be no regulatory barriers to the expansion of cogeneration, certainly given the associated environmental benefits.

The Need for Reliability

Downtime can cripple a business. Power outages are therefore potentially catastrophic. To avoid these it might be necessary to generate one's own power supply. The cost is high, but are there ways of reducing costs? Could there be feed-in opportunities? What are the environmental considerations?

The Need for Independence

Industry could contract with an independent power plant, if the terms were right. But control of power generation is often a zealously protected privilege. Escalating demand and independent regulators are beginning to unseat the status quo.

Members will also examine how independent power suppliers can play an increasing role in the provision of power to industry.

Government officials, national utilities and regulators also contribute to the discussions on how to improve the reliability of power supplies. Improved efficiency for every aspect of power provision and consumption must be a goal, not only to meet environmental targets, but to increase availability, and ultimately the competitiveness of a country's industry.

The Cost of Power

For many industries, power is a major cost and hence an important part of corporate planning, both short and long term. The lively discussions at last year's meeting showed the passion executives have to find answers to problems they know are solvable.

The format for PACO allows for frank, wide-ranging discussions. It is a collaborative meeting, where members identify their interest. Questions are gathered through consultation, and serve as a framework for the discussion.

Members who attended PACO 2009 are listed at the end of this year's agenda.

For more details contact Rod Cargill (cargill@energynet.co.uk)

The Vineyard

Cape Town, May 5 to 7, 2010

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Working Agenda

Wednesday May 5

19h00 **PACO reception & dinner at the Vineyard Hotel**

Thursday May 6

09h00

POLICIES FOR POWER

Changing policies

Cogeneration can provide valuable additional power in a tight market. Government policies should drive moves to increase cogeneration. Is this so?

The economic pendulum

Is the swing to higher power prices permanent, and what will be the impact on both cogeneration and captive power?

Feed-in Tariffs

All the rage but costly. What policies do countries in Africa have for their introduction?

Private power

Have African governments fully embraced the imperative of providing a policy framework for the provision of private power? Individuals are free, if they have the funds, to generate their own power. Industry is less so, despite being pivotal to growth.

The single-buyer model

'Evidence so far suggests that this "single-buyer" model has major disadvantages in developing countries: it invites corruption, weakens payment discipline, and imposes large contingent liabilities on the government. These disadvantages in most cases overshadow the higher short-term costs of a "bilateral contracts model" where generators contract with customers.' Is this World Bank statement still applicable?

The regulator's power

Power that the population can afford; affordable power for industry; reliable power for all; long-term power security; impartiality and fairness; decisions made in the long-term interests of the country. To meet the various demands, the regulator needs broad shoulders. Are they wide enough to cover the interests of IPPs, cogeneration, and renewable energy?

12h30 **A Taste of the Cape**

14h00

REALITIES OF POWER

From the horse's mouth

What are the realities of cogeneration? Surely it's an option that must be seriously considered, even given the high initial outlay. The efficiency benefits alone must reduce costs.

Comparative successes

Where are there examples of successful cogeneration across Africa, and what has been the essence of their success? Mauritius is a case apart, and of course it offers lessons for other African countries. Are there other industry-driven examples in Africa?

Captive costs

To produce or not to produce, that is the question. And if it is not possible to secure a reliable source of power, the answer is self-evident but not an option. Can companies in Africa produce their own power and remain competitive? Should power production be the business of industry?

Comparisons of independent power

It works in Asia. It works in the Middle East. It works in South America. But in Africa it takes the patience of Job, an unflinching commitment, and farsighted backers to even consider building an independent power plant. Why?

15h30 Coffee

16h00

POWERFUL SOLUTIONS

New generators

Is there a new generation of power plant that can provide industry with its own competitive source of power? Presumably the cost of power depends on the cost of fuel, which is variable? Could fuel costs cripple industries in Africa?

New co-generators

The kit is expensive but worth it. How easy is it to demonstrate the benefits of cogeneration?

Temporary solutions

Is there a place in industry for temporary power? Although perceived as expensive, it can deliver when required to meet temporary power shortages. This solution could be more cost-effective than investing in permanent plant.

Saving the planet

If it was simply a matter of technology, then clearly renewable energy technologies would be chosen by industry. But cost will feature, and will probably be the deciding factor against a renewable power solution in the short term. Is this view still applicable, and where are there examples of cost convergence?

Friday May 7

09h30

THE COST OF POWER

Opportunity costs

How much does independent power cost and can industry afford to pay for it?

Money for cogeneration

Will commercial banks lend for cogeneration and on what terms? Are grants available? Is cogeneration a focus for development finance institutions? Can the sale of power to the grid fund cogeneration, or at least a proportion of it? Are guarantees required from government?

New finance for cogeneration

Does the clean development mechanism in Africa make business sense? What is the post-Copenhagen horizon for CDM? If money is available from developed economies, can developed industries in developing economies access it?

Collective funding

How can a group of companies fund the collective provision of power to sustain their industrial activities?

Merchant funding

Can an independent power producer build a power plant in Africa on the speculation that the power will be sold to industry? What is the risk and who will carry it? What are the profits for the IPP?

Captive funding

Funded from balance sheet? From debt? But never from equity? Can the sale of surplus power be a source of finance?

13h00 **Close of PACO & farewell lunch**

An exchange of views

The objective of the EnergyNet executive dialogues is to promote understanding and an exchange of views. The dialogue is organized for the members, with the outline agenda providing a starting point for the questions that will be asked at the meeting. Members will elect before the dialogue to answer specific questions, which will provide the stimulus for the ensuing discussions. Previous EnergyNet dialogues have received positive endorsements, and are considered a fresh and incisive way of examining topics, where past discussions have been largely circular.

Members attending PACO 2009

Denmark

Nicolai Siegumfeldt Adviser Ministry of Climate and Energy

Ghana

Joshua Mortoti Regional Capital & Energy Manager Newmont Ghana Gold

Ireland

Mark Fitzsimmons Business Development Director ESBI Carbon Solutions
Paz Nachon Carbon Specialist ESBI Carbon Solutions

Kenya

Charles Keter Assistant Minister for Energy Ministry for Energy
Hancox Wilson Jaoko Regional Energy Adviser United States Agency for International Development (USAID)

Mozambique

Luiz Augusto Rosa Gomes County Director Camargo Corrêa Moçambique

Namibia

Siseho Simasiku Chief Executive Officer Electricity Control Board
Jason Nandago Board Chairman Electricity Control Board

Nigeria

Muhammed Daggash Chief Executive Officer Ashaka/Lafarge
Akeem Adedeji Agbaje Chairman Entec Power & Utilities Company
Titus Olasunkanmi Abiola Chief Executive Officer Multi-Power Engineering

South Africa

Vijandren Naidoo Utility Manager Afrox
Johan van den Berg Director BioTherm Energy
Jeremy Marillier Head Economic Information & Research Cape Town City Council
Stuart Webb Acting Director City Power
Lonwabo Magida Senior Manager: Energy Trading City Power
Vinesh Surajlall Power Generation Director Cummins South Africa
Peter Sørensen Counsellor (Climate Change) Danish Ministry of Climate and Energy
Karim Berrada Director DelArz Projects
Mark Gordon Chief Director Energy Department of Public Enterprises
Tebogo Maphosa Project Assistant: Energy and Broadband Department of Public Enterprises
Luther Mashaba Group Executive, South Africa Operations Development Bank of Southern Africa
Jean Madzongwe Energy Specialist Development Bank of Southern Africa (DBSA)
Luther Mashaba Group Executive Development Bank of Southern Africa (DBSA)
Willem de Beer Chief Operations Officer EDI Holdings
Mark Pickering Regional Director Empower
Yousuf Haffejee Head: Single Buyer Office Eskom
Svetla Stoeva Finance Officer, Southern Africa & Indian Ocean European Investment Bank
Thomas Garner Manager: Growth Energy Exxaro Resources
Clive Ferreira Managing Director Fieldstone Africa
John Taylor Vice President Fieldstone Africa
Johannes Cilliers Growth & Strategy Leader: Africa GE Energy- GDSI
Louis Scheepers Executive: Project Management Great Basin Gold
Des Muller Head of Power Development Group Five Power Infrastructures
Nonkanyiso Mayatula Senior Project Manager Industrial Development Corporation (IDC)
Dhesen Moodley Chief Executive Officer Infrastructure Empowerment Fund Managers (Pty) Ltd
Danny Quan Senior Executive Murray & Roberts
Phil Edmunds Director Navitas Energy (PTY) Ltd
Sakkie Leimecke Director: Energy Project Finance Nedbank Capital
Emile Malan Transactor Nedbank Capital
Hugh Hawarden Transactor Rand Merchant Bank
Sven Heinichen Business Unit Manager, Oil & Gas Products Siemens Energy
Greg Babaya Head of African Infrastructure Private Equity Standard Bank
Arnaud Gouet Business Development Manager Power Plants Wärtsilä South Africa

Tanzania

Krista Bates-van Winkelhof Partner Shadbolt LLP

United Kingdom

Andrew Beadle General Sales Manager Africa /Middle East Rolls-Royce Diesels Power Business

United States of America

Tony Iskarpatyoti Senior Transactions Advisor Nexant Inc
Alain Rosier Project Manager Nexant Inc
Joseph Nganga Chief Executive Officer Africa Energy and Renewables
Jonathan Jacobs Managing Consultant PA Consulting Group
Rahim Inoussa Principal Consultant PA Consulting Group
Jeffrey Humber Director, Africa Infrastructure Program USAID Africa Bureau AFR/SD/EGEA

PACO Registration & Hotel Information

Please register the following members for **PACO** executive dialogue at a cost of £795 per person. Discounts for multiple attendees are 5% for two, 10% for three, 15% for four, and 20% for five and above.

Full name: _____

Position: _____

Full name: _____

Position: _____

Company/Organization: _____

Address: _____

Tel: _____ Fax: _____

Email: _____

Company activity: _____

Signature: _____ Date: _____

Payment by credit card

Credit card number. _____

Security No. (usually on the signature strip) _____

Expiry Date: _____

The card is in the name of: _____

Visa/Master/Euro Diners

Credit card billing address: _____

Payment by Bank Transfer (attach copy or supply full details of transfer). Payment should be made through the Royal Bank of Scotland plc, quoting (1) account number 0028 19 73; (2) sort code 116-0109; (3) swift(BIC) code RBOS GB2L and IBAN GB 22 RBOS 1601 0900 2819 73, noting "PACO", delegate name & company. All transfer costs to be paid by sender; alternatively add £20 to your total fee.

Payment by Cheque drawn on a UK Bank, payable to EnergyNet Ltd.

Please return your completed form to:

Evelyne Cargill

EnergyNet Limited

110 Elm Road | Kingston upon Thames | Surrey KT2 6HU | United Kingdom

Tel +44 (0)20-85 47 06 98 | Fax +44 (0)20-85 41 32 44 | evelyne@energynet.co.uk

The fee covers:

- Access to the PACO Lunches
- Documentation
- Corporate documentation will be available online.

Cancellation:

The fee is non-refundable if cancellation is received after April 5, 2009. For a cancellation before this date the fee will be refunded, less a handling charge of £50.

Venue:

PO Box 151, Newlands, 7725,
Colinton Road (off Protea Road),
Newlands 7700, Cape Town, South Africa
www.vineyard.co.za

Hotel accommodation:

Rooms at the **Vineyard Hotel & Spa** have been reserved for PACO attendees at a preferential rate.

To reserve accommodation at the **Vineyard Hotel & Spa** please contact EnergyNet for a booking form, or the hotel directly:

Tel: +27 (0)21 657 4500

Fax: +27 (0)21 657 4501

Email: hotel@vineyard.co.za

May is a popular season, and therefore it is advisable to reserve your hotel room as soon as possible. EnergyNet cannot guarantee that there will be rooms available in the Vineyard. There are other hotels in the vicinity.



Vineyard Hotel & Spa



Originally built by Lady Anne Barnard in 1799, the Vineyard Hotel & Spa has spectacular views of the forested slopes of Table Mountain. This deluxe 207 roomed hotel is situated in six acres of attractive landscaped parkland in the lush leafy suburb of Newlands on the banks of the Liesbeeck River. It boasts two outstanding restaurants. The glass-roofed "the square" restaurant caters for breakfast and dinner, while the "Myoga" restaurant offers lunch and dinner with excellent views of the garden and Table Mountain. Relax at the heated outdoor and indoor swimming pool, adjoined by the state-of-the-art Health & Fitness Centre, Vineyard Shop and Splash Café.



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