Revenue Management Conference
Frontiers of Development:
The Hydrocarbon Industry in Trinidad and Tobago
Panel Discussion
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New Frontiers for Downstream Gas Development

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Presentation Outline

- Overview of National Energy Corporation of Trinidad & Tobago
- Global Forecasts
- Natural Gas Utilisation
- NEC’s Project Portfolio
- Key Focus Industries
- Strengths-Weaknesses-Opportunities- Threats
- Future Energy Based Projects
- Additional Thoughts
NEC’s Current Mandate

- The conceptualization, promotion, development and facilitation of new energy-based and downstream industries in Trinidad and Tobago
- Identifying and developing new industrial estates
- Identifying and developing new industrial deep water ports to facilitate these estates
- Own and operate marine and other infrastructural assets to facilitate all gas-based petrochemical and metal plants
- Development and Management of La Brea Industrial Estate
- Towage and Harbour operations
- Sustainable management of the environment
Some Global Forecasts

Unconventional gas such as shale gas anticipated to transform global gas markets. Impact already felt in the LNG markets and are forecasted to continue.

Major gas producers such as those in the Middle East and Russia will be exploring different options for their natural gas in sectors such as chemicals, petrochemicals, liquid fuels and power production.

USA petrochemical sectors significantly benefitting from the large shale gas productions. The low cost feedstock compared with feedstocks such as Naphtha has resulted in petrochemicals being more efficiently produced.
.... Threaten our Energy Leadership Position

Global Leader

Leading Methanol Exporter from a single site

Leading Ammonia Exporter from a single site

Leading Exporter of LNG to North America.
..and possibly competitiveness in Natural Gas Utilisation

by Sector 2011
...and even the utilisation within the domestic subsector

Primary Derivatives - Ammonia & Methanol Manufacture 68%

Secondary Derivatives: Small Consumers/ Iron & Steel Manufacture etc. 32%

Primary Derivatives - Ammonia & Methanol Manufacture
A Strategic response to revenue management
.... Extracting more from the gas value chain....
NEC’s Project Portfolio Matrix

Africa and Guyanas Initiatives

Expansion opportunities

NATURAL GAS

- Methane [C1]
  - LNG
  - Methanol
  - Ammonia

- Ethane [C2]
  - Ethylene

- Propane [C3]
  - Propylene

- Butane [C4]
  - N-Butane

- Natural Gas [C1+]
  - Electricity

- Inorganic Chemicals
  - Acetic Acid
  - Formaldehyde
  - Methyl Methacrylate
  - Polyolefins
  - Polyethylene
  - Ethylene Glycol
  - Polypropylene
  - Propylene Oxide
  - Maleic Anhydride
  - Inorganic Chemicals
  - HBI/Metals
  - Renewables
Key Focus Industries

- Sustainable Initiatives
- Petrochemicals
- Renewables
- Inorganics
- Metals
- Plastics
- Biochemicals & Specialty Chemicals
What can we leverage? Of what must we be aware?

**Strengths**
- Long history
- Highly skilled work force
- International Brand
- Infrastructure

**Weaknesses**
- Talent highly volatile
- Limited technological or innovative focus
- Research & Development

**Opportunities**
- Strong growth in developing countries
- High demand in SA
- Trade partnerships
- Downstream development

**Threats**
- Unconventional shale gas
- New market dynamics
- Local conventional gas becoming more expensive to produce
A Peek into the future for Energy Based Projects

Existing Framework

- Downstream Petrochemical
- Plastics Industry
- Metals processing
- Creation of downstream manufacturing opportunities

New Framework (Innovation)

- Specialty Chemicals.
- Inorganic Chemicals.
- Food Chemicals.
- Biochemical Products.
- Alternative & Renewable Energy
- Expertise global - Guyana; French Guiana, Suriname, Africa

LNG Strategy

- Mid-Scale LNG Solutions
- Floating LNG
Some Food for Thought...

Is there an optimal mix of projects that can provide the best added value for natural gas (jobs, revenue, downstream manufacturing potential, support industries, etc.)?

What can be done to encourage innovation and research and development within the sector?

Do we have the requisite skill sets for a successful venture into these new frontiers?

How can we enable local manufactures to successfully compete in today’s highly competitive market?
Thank You!

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