

Sustainability through People & Technology

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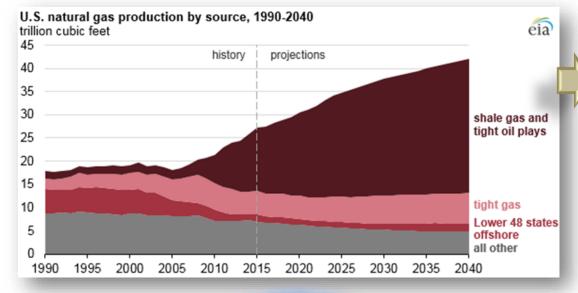














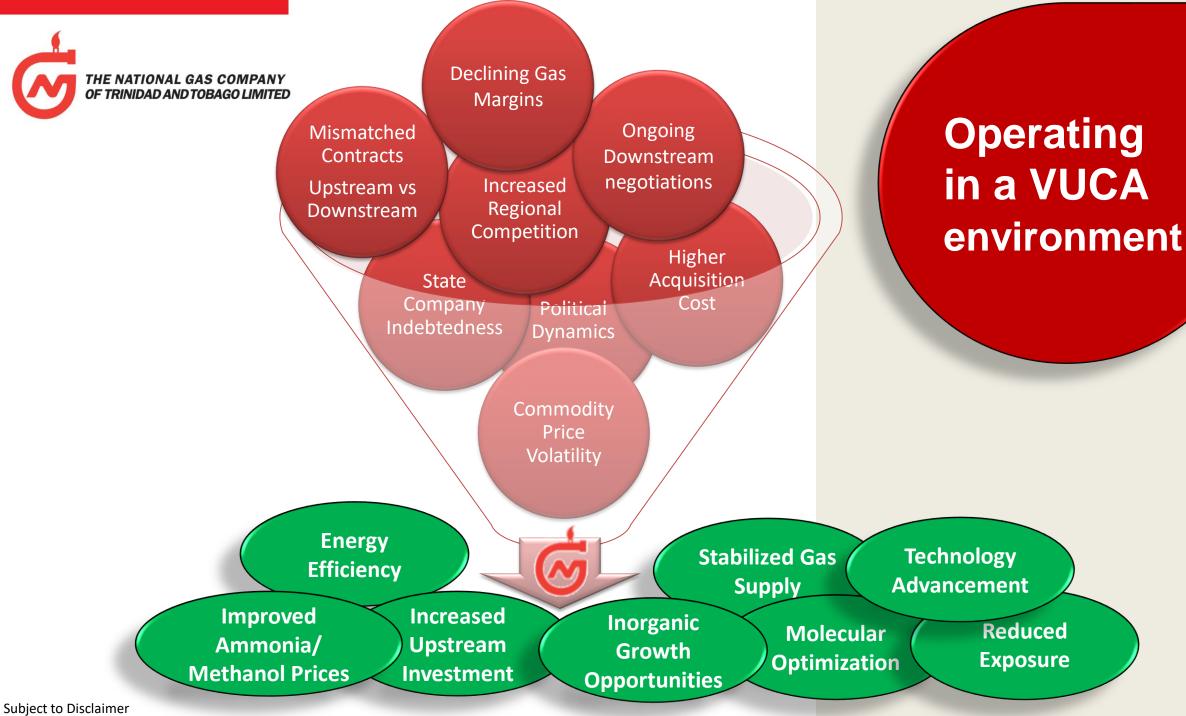
Currently the US accounts for a 45% growth in global natural gas production; Shale Gas accounts for 2/3rds of the total output.

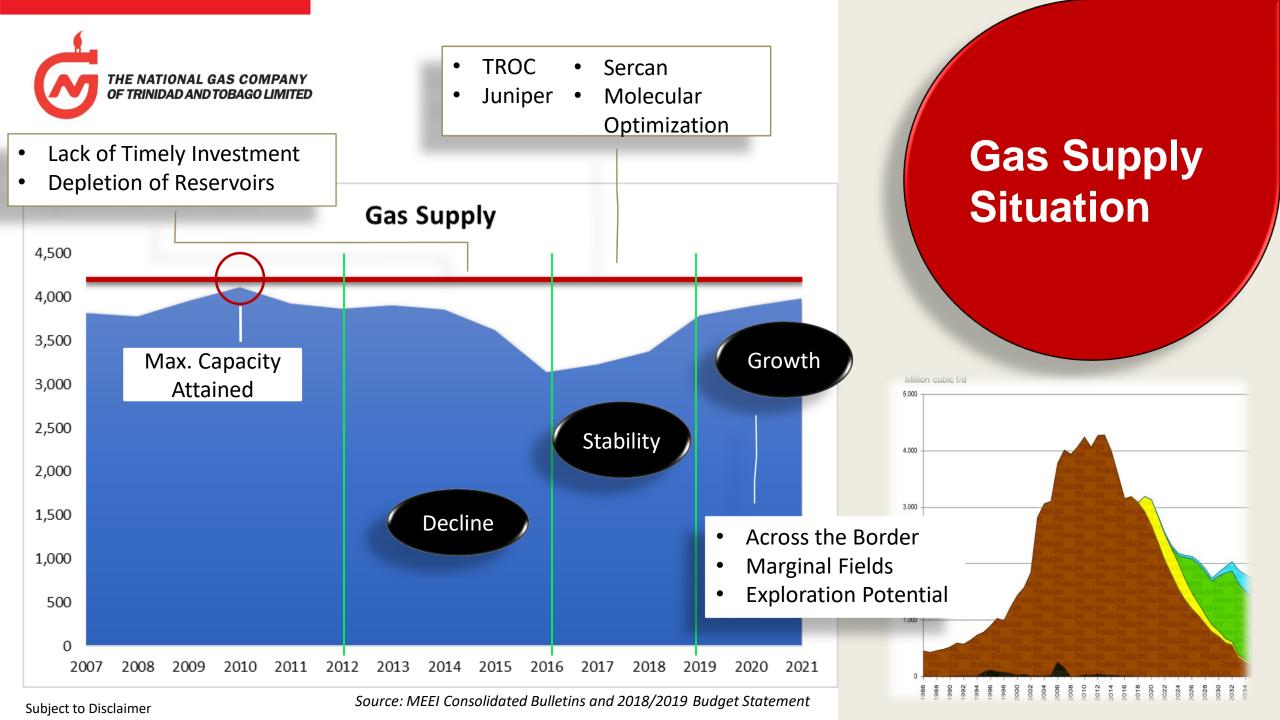
Increasing
Ammonia capacity
in the US

Emerging Asian markets, led by China, account for more than half of the growth in global natural gas consumption to 2023.

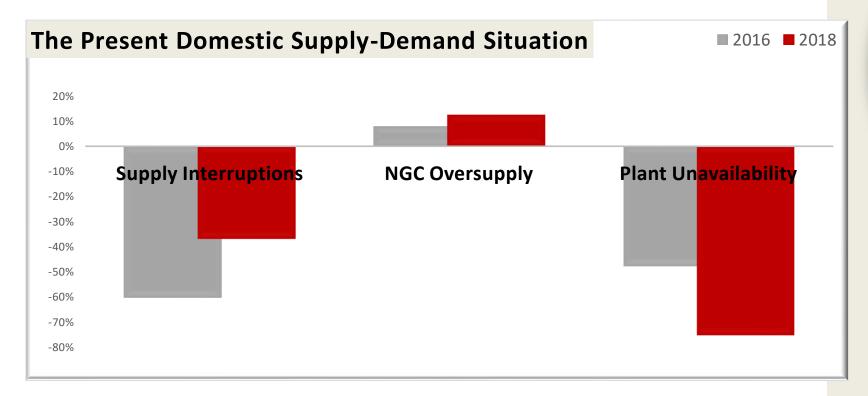
Global Trends Impacting Trinidad











Improvement in supply stability across the network, positively impacting downstream plants. This improvement resulted in a trend of increasing Plant utilisation.

# **Managing** our Molecules **Plant Efficiency Analysis 2016 2018** 86.92% 80.84% **Increasing Plant Utilisation ACTUAL UTILISATION**



Energy Efficiency – getting the same or better output using less molecules

#### **Benefits**

Increased Revenue via taxes

The Opportunity Cost in 2017 above

> Additional **Downstream**

Additional gas improves plant efficiency

#### **Mitigating Actions**

#### **Renewable Energy Initiatives**

- Solar
- Wind

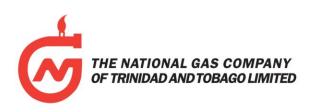
#### **Energy Efficiency Initiatives**

Molecular Optimization

Rethinking Energy Videos

## Renewable **Energy & Energy Efficiency**





- Debottlenecking Technology
- Asset Integrity

- Upstream Contracts
- Downstream Contracts

NGC today

- Molecular Optimisation
- Power Tranche
- Across the Border
- Marginal Fields
- Alignment along the value chain
- Improve communication along the value chain

- Train 1/Strategic discussions incl.
   GORTT on other Train Renewals
- LNG/Third Party Cargo Trading
- Energy Marketing & Trading



**Pipeline Company** 

Aggregator

Merchant

**Integrated Gas Player** 





#### **International Opportunities:**

- Mozambique
- Ghana
- Inorganic Growth
- Cargoes & Asia LNG

#### **Regional Opportunities:**

- Micro LNG
- Dragon & VZ opportunities
- Grenada
- Guyana

#### **Locally:**

- Strategic review of upstream and downstream investments
  - CGCL Downstream

**Growing beyond T&T shores** 



## Sustainability

#### Secure Current Business

- . Gas Contract Management . Across the
- Border Supply
  Marginal Field
- . Marginal Fields



Develop Organization

- . Org. Structure
- . Technology
- . Governance
- . Cost

Management

. Project Management



Grow Locally & Internationally

- . LIC
- . LNG
- . Mozambique
- . Marketing & Trading



Strengthen
National
Contribution

- . Carbon Sequestration
- . Reforestation
- . Heroes Foundation
- . Steelpan



**Values** 

Culture

Technology

Strengthening the Organisation to ensure Sustainability

Core Values: Safety &
Environmental Preservation
Integrity; Employee
Engagement; Excellence;
Transparency; Customer
Focus; Corporate Social
Responsibility

Leadership Driven
Learning Organization
Data Driven
Lessons Learnt/Incident
Sharing

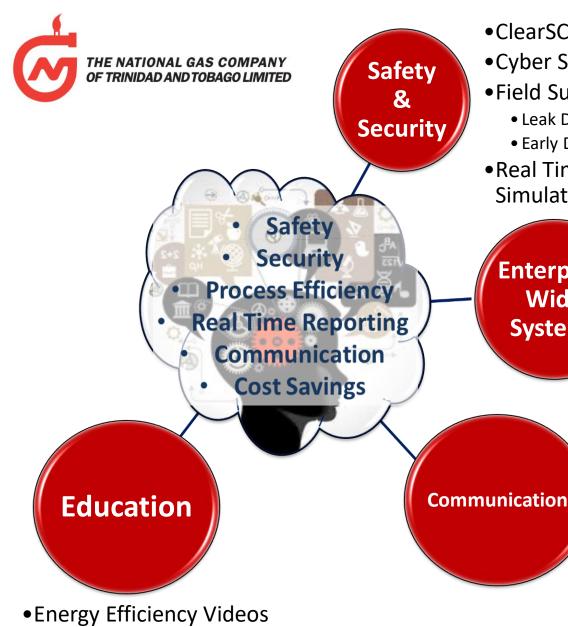
Safety

People

**Projects** 

Cost

Governance



- ClearSCADA
- Cyber Security
- Field Surveillance Robots & Drones
  - Leak Detection
  - Early Detection of Landslips
- Real Time Pipeline Network Simulation

**Enterprise** Wide **Systems** 

- SAP Ariba
- E-Auction
- •SAP 4 Hana
- SAP Success Factors

Podcasts

- Yammer
- E-Journals
- Microsoft Teams
- Digital Dashboards

**Technology Strategy Shaping NGC** 

High definition scanning of Group Facilities (Ports, Plants...) generating a savings of TT\$16M

launched in 2018



## **Music Literacy**

Sheet Reading

### **Music Scoring**

 NGC /UWI undertake to transcribe Panorama compositions for 4 NGC sponsored bands NGC continues to build sustainability through people

## Pan Manufacturing & Tuning

 NGC teamed up with MIC Institute of Technology to provide a Mechanical Engineering Technology with Steelpan Manufacturing Course

**Capacity Building (life skills)** 

Financial Management, Business Management...

