

# Launching of TTNGL on T&T Stock Exchange

- A SHARE IN THE ENERGY SECTOR *Page 4*



**NGC WELCOMES NEW  
BOARD OF DIRECTORS**  
*Page 6*

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## CONTENTS

### PRESIDENT'S MESSAGE

- As 2015 ends, a new period begins 3

### MARKET DEVELOPMENT

- Launching of TTNGL on T&T Stock Exchange  
- A share in the energy sector 4

### LEADERSHIP

- NGC welcomes its new Board of Directors 6
- The Board of Directors of NGC's Subsidiary  
Companies 9

### BUSINESS DEVELOPMENT

- NGC's 2016 - 2020 Strategic Plan:  
Planning in a time of uncertainty 10

### ENVIRONMENT AND SAFETY

- T&T makes progress in renewable energy 13
- Enterprise Risk Management (ERM)  
Framework at NGC 15

### NGC NEWS

- Launch of NGC Right On Track in Partnership  
with NAAA & NBFTT 17
- NGC Sanfest 2015 18
- The NGC Bocas Lit Fest 19
- NGC commits \$3 Million to Habitat  
for Humanity 19
- TIC 2015 20
- NGC's Spirit Award winners for 2014 20
- NGC's Scholarship Awardees 21

### NATIONAL ENERGY NEWS

- Sod turned for Natural Gas to  
Petrochemicals Complex 22
- Reconstruction of La Brea Dock:  
Berth II in Progress 23

### NGC CNG NEWS

- NGC CNG awards equipment  
supply contract 24
- Recent agreement signings 24
- Achievement Ceremony for the 1st Cohort of  
CNG Engine Maintenance Fundamentals  
Programme 25

### PPGPL NEWS

- Customer satisfaction at PPGPL 26

### INDUSTRY NEWS

- New Ministers - Ministry of Finance and  
the Economy and Ministry of Energy and Energy  
Industries 27
- CARICOM Energy Week (CEW) 28
- AMCHAM T&T 19th Annual HSSE Conference  
& Exhibition 29
- Launch of the Third EITI Report 30

# AS 2015 ENDS, A NEW PERIOD BEGINS

**A**s Acting President of The National Gas Company of Trinidad and Tobago Limited (NGC), I am happy to address you in this December Edition of *Gasco News*, the final edition for 2015. It is my distinct pleasure to welcome at the helm of NGC, Mr. Gerry C. Brooks, as the new Chairman and the Board of Directors, who collectively bring many years of experience in private sector business, civil service, state agencies and academia.

Year end is a fitting time to look back at what has transpired and forward to the future. What strides have we made? What new, continuing or intensified challenges have we faced? What is our final assessment of the year? Looking to 2016 and the years to come, how will we continue to succeed in the unfolding environment?

This year was very much a continuation - and in some instances, an intensification - of NGC's strategic objectives of growing the business through investment and diversification. In 2015, the subsidiary company NGC CNG embarked on several initiatives. These included a landmark partnership with National Petroleum (NP) and the Public Transport Service Corporation (PTSC) to increase the use of CNG as an alternative transportation fuel; an agreement with the Water and Sewerage Authority (WASA) to expand the use of CNG in its fleet; and the creation of a \$60 million grant to encourage maxi taxis to switch from diesel to CNG vehicles.

This year also saw the sod-turning ceremony by the locally-registered joint venture Caribbean Gas Chemicals Limited (CGCL) for the development of a new petrochemical complex at the Union Industrial Estate. NGC, through its fully owned subsidiary, NGC Petrochemicals



*Olave Maria Thorne -  
President (Ag.), NGC*

Limited (NPL) has a 20 per cent shareholding in CGCL.

Perhaps the most groundbreaking initiative this year was the launch of the TTNGL IPO. It was an opportunity for local investors to own a stake in our prosperous energy sector. The IPO was heavily oversubscribed, amassing more than \$2.2 billion. We are pleased with this strong result and grateful for this statement of confidence in the NGC Group by the investing community.

NGC's comprehensive Corporate Social Responsibility (CSR) programme continued

its ongoing support for communities and philanthropic causes in 2015. Initiatives such as the NGC Bocas Lit Fest, the NGC/ NAAA National Junior Championships and NGC Sanfest 2015 continued their growth in national participation and recognition. In addition, our CSI approach continues to evolve, seeking to build the capacity of these events and of underserved communities throughout the nation.

All the aforementioned activities emanate from our current strategic plan, which concludes this year. In this regard, the Company has been working on a new strategic plan for 2016 to 2020.

We, however, face global economic challenges: the effect of falling oil prices on NGC's customers and increased competition from the US market for gas-based exports. However, NGC is confident of its strategic planning capability, staff, systems, infrastructure and the foundational strength of NGC that was laid over 40 years ago.

It is fitting as we end our 40th commemorative year that I close in recognition of our pioneering spirit that led to the creation of NGC. In September 2015, Mr. Errol Mahabir, passed away. In August 1975, Mr. Mahabir was Minister of Petroleum and Mines and part of the pioneering team of government officials and technocrats that created NGC and our post-independence gas-based energy sector. In 2016 and beyond, all of us at NGC will endeavour to work with the same vitality of the pioneers to advance the interests of our company and nation.

*Olave Maria Thorne, President (Ag.), NGC*



# LAUNCHING OF TTNGL ON T&T STOCK EXCHANGE - A SHARE IN THE ENERGY SECTOR



(L - R): Ms. Michelle Persad, CEO, Trinidad and Tobago Stock Exchange (TTSE); Mr. Peter Clarke, Chairman, TTSE; Mr. Gerry C. Brooks, Chairman, NGC; Ms. Olave Maria Thorne, President, NGC (Ag.) and Mr. Ray A. Sumairsingh, Deputy Chairman, TTSE at the Listing Ceremony of the TTNGL Shares on Monday 26th October, 2015

### TTNGL IPO is a Major Success

On 10th August, 2015, NGC launched its Initial Public Offering (IPO) of shares in its subsidiary, Trinidad and Tobago NGL Limited (TTNGL). Though it was projected to raise approximately \$1.5 billion, by the time of its close on 9th September, 2015, the offering had far surpassed that estimate. Total subscriptions amounted to over \$2.5 billion, an oversubscription of more than 50 per cent. Apart from its performance, the offering of shares represented a landmark moment for NGC and the country. Through the TTNGL IPO, citizens of Trinidad and Tobago were given an opportunity to directly own a stake in the gas-based energy sector, the main driver of the economy.

Speaking before an assemblage that included Trinidad and Tobago Stock

Exchange (TTSE) Chairman, Mr. Peter Clarke, NGC's President (Ag.), Ms. Maria Thorne and senior personnel from the TTSE and the NGC Group, Mr. Gerry C. Brooks, NGC's Chairman, expressed his gratitude to investors for the IPO's outstanding performance: "To all investors who subscribed to the IPO, we say thank you, thank you, thank you. Without your participation, this Initial Public Offering would not have been the resounding success it is now."

In total, 75,852,000 TTNGL shares were made available to investors at a price of \$20 per share. It was in August 2013 that NGC initially purchased the 39 per cent stake in PPGPL from ConocoPhillips, increasing its shareholding in the gas processing company to 90 per cent.

Thereafter, TTNGL was formed as a wholly owned subsidiary company of

NGC to hold the 39 per cent stake in Phoenix Park Gas Processors Limited. Of this, 49 per cent of the stake was allocated to the public domain. In effect, 19 per cent of PPGPL was offered to local investors

That acquisition and the TTNGL IPO are strategic initiatives that were carried out not only as part of NGC's strategic plan for growth and diversification, but also as a national strategy to develop the capital markets.

The PPGPL acquisition has given NGC a greater presence in the energy sector value chain. In September 2013, NGC also acquired the exploration and production assets of the European-based multinational Total S.A., giving NGC a strong foothold in the upstream as well.



Commenting on the financial sector development thrust, Chairman Brooks said, “Through this IPO, we at NGC created opportunities for investors from all sectors of society. This is evidenced by the volume and \$2.2 billion worth of TTNGL shares of value that have been traded within one week of listing. Our IPO has invigorated the local stock exchange and we are hopeful that the healthy market reaction to our listing will be sustained.”

### **More Shares for Individuals, Employees**

The IPO development team consisted of NGC employees as well as external teams from Deloitte and Touche, Ernst and Young and Hamel-Smith and Co., who provided their expertise in the different aspects of the share offering. Working together over several months (beginning in December 2014), the teams created the IPO strategy.

The final allocation of shares in the IPO were 60 per cent (45.5 million shares) to individual and the NGC Group employee investors; 10 per cent (7.58 million shares) to mutual funds; 10 per cent to the National Insurance Board of Trinidad and Tobago (NIBTT); 15 per cent (11.3 million shares) to pensions and other trust funds, credit unions and cooperatives and National Enterprises Limited (NEL); and 5 per cent (3.79 million shares) to other registered companies in Trinidad and Tobago.



*Tombstone marks the listing of TTNGL on the Trinidad and Tobago Stock Exchange*

After the team completed the prospectus for the IPO and received approval from the NGC and TTNGL Boards, as well as the Trinidad and Tobago Securities and Exchange Commission (TTSEC), copies of the prospectus were printed and the opening of the offer period was announced. First Citizens acted as lead broker.

Following the 30-day offer period, every investor class (individual, mutual funds, etc.) was oversubscribed, far surpassing the company’s expectations. Financial analysts attribute the success of the IPO

to a liquid market seeking investment opportunities and the strength of the NGC and PPGPL brands.

“We firmly believe that one of the main reasons for the oversubscription of these shares was the confidence that the public expressed in TTNGL’s primary asset, its 39 per cent shareholding in PPGPL,” Mr. Brooks said. “PPGPL was a key driver in the attractiveness of TTNGL. PPGPL has earned the respect of many within and outside the energy sector for its business performance, stability, safety record and social investment.”

For greater transparency, NGC has opted to have an audit of the process for the allocation of shares. NGC will also put mechanisms in place to ensure that the Group meets disclosures required by public companies.

NGC is pleased that the IPO process has been relatively smooth and that there has been outstanding investor interest in the offering of shares. Speaking at the 26th October listing ceremony, NGC President (Ag.) Ms. Maria Thorne said, “It is our hope that the TTNGL stock that now belongs to the people of Trinidad and Tobago will continue to generate interest and profits well into the future.” She added, “We at NGC are honoured to have been associated with this undertaking. This IPO represents yet another significant contribution that NGC has made to our people and the future of Trinidad and Tobago.”



## NGC WELCOMES ITS NEW BOARD OF DIRECTORS

On 30th September, 2015, the new NGC Board of Directors was formally announced. *Gasco News* takes this opportunity to introduce the five distinguished gentlemen who represent a wide array of business and educational backgrounds who have been entrusted to look after NGC's interest.

### **Mr. Gerry C. Brooks - Chairman**

Mr. Gerry C. Brooks was recently appointed Chairman of the NGC Group of Companies by the Cabinet of the Government of the Republic of Trinidad and Tobago. He is the retired group Chief Operating Officer of the regional conglomerate and publicly held group, ANSA McAL.

Mr. Brooks is an Attorney at Law and has served as the Vice President of the Law Association of Trinidad and Tobago for the past three years. A graduate of the Hugh Wooding Law School and The University of the West Indies, he was recently awarded the title of "Distinguished Alumnus of The University of the West Indies.

Mr. Brooks is also a graduate of Columbia University where he obtained an MBA, Dean's Honour Roll. As a former Deputy Chairman of the Caribbean Court of Justice Trust Fund, he also chaired its Finance and Investment Committee for ten years.

A regional thought leader, he is the President of the Family Planning Association. He has been honoured by Rotary International, his alma mater, Queen's Royal College, and other key institutions in Trinidad and Tobago and abroad. He is also a member of the Standing Energy Subcommittee of the Cabinet of Trinidad and Tobago.

He was appointed Chairman of the Board of Directors in September 2015.





## **Professor Andrew Jupiter - Director**

Professor Andrew Jupiter received a BSc in Natural Sciences and a Post-Graduate Diploma in Petroleum Engineering from The University of the West Indies (UWI) and also holds a Masters of Engineering Degree in Mineral Engineering Management from The Pennsylvania State University.

Professor Jupiter served as Permanent Secretary, Ministry of Energy and Energy Industries from 1998 to 2004. Prior to this appointment, he held several senior positions at the Ministry, including Senior Petroleum Engineer, Director - Operations and Director - Energy Planning.

Starting as the Vice President of Business Development, Professor Jupiter first joined the National Energy Corporation of Trinidad and Tobago Limited (National Energy) in 2004. He then served as President from 2009 to 2012.

In addition to these posts, Professor

Jupiter held the position of Director on several state boards, and led the government's team in its initiative to provide several African countries with technical guidance in the development of their respective petroleum sectors. He is currently attached to the Department of Chemical Engineering at UWI, is the holder of the Trinidad and Tobago Methanol Company (TTMC) Chair in Petroleum Engineering, and serves as an Energy Consultant

Throughout his career, Professor Jupiter was awarded by multiple associations, notably the Society of Petroleum Engineers (SPETT), and was conferred the honorary title of 'Distinguished Fellow' by UWI in 2013.

In September 2015, Professor Jupiter was appointed a Board Member of The National Gas Company of Trinidad and Tobago Limited (NGC) and Chairman of the Petroleum Company of Trinidad and Tobago Limited (Petrotrin).



## **Mr. Sham Mahabir - Director**

Mr. Sham Mahabir has a BSc (Upper Second Class Honours) in Electrical and Computer Engineering and an MBA in Finance, both from The University of the West Indies. He has received training from various Institutions in the USA and UK. He became a member of the Board of Engineering of Trinidad and Tobago at the age of 28 and a past member of the Code Committee of same. He is also a member of the Institute of Electrical and Electronic Engineers an international affiliate of the International Electrical Testing Association.

Mr. Mahabir has been employed as an Engineer with several companies. His career began at TYE manufacturing where he held several positions, including Shift Engineer, Design Engineer, Sales Engineer and Sales Manager. Mr. Mahabir also worked as a Project Engineer with United Electrics Limited

(1997-2001), where his duties included the general management of major projects such as the design of electrical systems and management of personnel. From 2001 to 2002, he worked as a High Voltage Switchgear Engineer with TYE Manufacturing Company Limited, providing service and support of medium voltage switchgear lines and other major infrastructural projects.

Since those engagements, Mr. Mahabir has gone on to become the owner, Managing Director and Lead Engineer of Shamco Limited, a company which provides Electrical Engineering Services. Under his management, the Company has executed a range of projects and services for such companies as Republic Bank, Powergen, PETROTRIN, TGU, Yara Trinidad Limited, and a number of government and retail organisations. He was appointed as a Director on the Board of NGC in September 2015.





## **Mr. Marcus Ganness - Director**

Mr. Ganness holds a BSc in Engineering from The University of the West Indies (UWI) with First Class Honors and an MSc. in Electrical and Computer Engineering (Systems Control and Optimisation) from the University of Toronto. He is a member of the Institute of Electronic and Electrical Engineers (IEEE) and a former Vice-Chairman of the Industrial Application Society (IAS) Trinidad and Tobago section of the IEEE.

Mr. Ganness has had global training and office and offshore field assignments in upstream petroleum operations through his employment as a Seismic Engineer with Schlumberger (2007-2008). He has since become the Founder and Managing Director of a multidisciplinary contracting firm Vitruvian Engineering Co. Ltd (founded

2010). Through this company he has delivered critical infrastructure and civil engineering projects to several public sector clients.

Alongside his business portfolio, Mr. Ganness has been a lecturer at UWI since 2010, delivering undergraduate and postgraduate level courses in Control Systems and Energy Systems. He has also published numerous papers in leading industry journals and is involved in various research projects focusing on energy systems, economic systems and financial optimization.

Mr. Ganness has knowledge and experience in financial markets and products including equity pricing and markets, derivative products and forex trading. He was appointed as a Director on the Board of NGC in September 2015.



## **Mr. Kenneth Allum - Director**

Mr. Kenneth Allum is a Chemical Engineer with 38 years' experience in the Petroleum and Petrochemical Industry at all levels. Among the various positions held throughout his career, he worked as a Senior Technologist from 1981 to 1987, and then as an Assistant to the Managing Director from 1987 to 1990 at Trinidad and Tobago Oil Company Limited (TRINTOC).

Most recently, Mr. Allum worked at PETROTRIN, initially serving as the Vice President of Refining and Marketing (2008-2009) and, thereafter, as President (2009-2012). As President of Petrotrin,

Mr. Allum was responsible for the company's strategic goals, working with all stakeholders to develop and implement the company's business objectives to maximize shareholder value. At the helm of the company, he was able to develop a highly motivated, business-oriented and customer-driven organization.

In the course of his service at the respective companies, Mr. Allum has had extensive technical and management training and has attended numerous international meetings and conferences. He was appointed as a Director on the Board of NGC in September 2015.

## **Conclusion**

The Board of NGC has pledged its commitment to ensuring proper corporate governance, cognisant of NGC's strategic and commercial importance to the future development of the natural gas-based sector and the economy of Trinidad and Tobago. The Board is also committed to making the appropriate interventions to realise the full potential of NGC. *Gasco News* would like to offer congratulations to the new Board of Directors of NGC and every good wish that its efforts will be successful and rewarding.

The Board of Directors of NGC's Group of Companies:

**National Energy Corporation of Trinidad and Tobago Limited (National Energy)**

Mr. Gerry C. Brooks

*Chairman*

Mr. Kenneth Allum

*Director*

Mr. Sham Mahabir

*Director*

Mr. Marcus Ganness

*Director*

Mr. Arnold De Four

*Director*

Mr. Wade Hamilton

*Director*

**Phoenix Park Gas Processors Limited (PPGPL)**

Mr. Gerry C. Brooks

*Chairman*

Professor Andrew Jupiter

*Director*

Mr. Kenneth Allum

*Director*

Mr. Sham Mahabir

*Director*

Ms. Olave Maria Thorne

*Director*

Mr. Kenny Lue Chee Lip

*Director*

**La Brea Industrial Development Company Limited (LABIDCO)**

Mr. Gerry C. Brooks

*Chairman*

Professor Andrew Jupiter

*Director*

Mr. Arnold De Four

*Director*

Dr. Zameer Mohammed

*Director*

Mr. Wade Hamilton

*Director*

**NGC CNG Company Limited (NGC CNG)**

Mr. Gerry C. Brooks

*Chairman*

Professor Andrew Jupiter

*Director*

Mr. Sham Mahabir

*Director*

Dr. Vernon Paltoo

*Director*

**Trinidad and Tobago NGL Limited (TTNGL)**

Mr. Gerry C. Brooks

*Chairman*

Mr. Anand Ragbir

*Director*

Professor Andrew Jupiter

*Director*

Mr. Vivek Charran

*Director (Independent)*

Mr. Ashmeer Mohamed

*Director (Independent)*

**NGC NGL Company Limited (NGC NGL)**

Mr. Gerry C. Brooks

*Chairman*

Mr. Kenneth Allum

*Director*

**NGC Pipeline Company Limited (NPCL)**

Mr. Gerry C. Brooks

*Chairman*

Mr. Kenneth Allum

*Director*

**NGC Petrochemicals Limited**

Mr. Gerry C. Brooks

*Director*

Mr. Anand Ragbir

*Alternate Director*

**NGC Trinidad and Tobago LNG Limited (NGC LNG)**

Mr. Sham Mahabir

*Chairman*

Mr. Kenneth Allum

*Director*

**Trinidad and Tobago LNG Limited (TTLNG)**

Mr. Sham Mahabir

*Chairman*

Mr. Kenneth Allum

*Director*

**NGC E&P (Barbados) Limited**

Ms. Olave Maria Thorne

*Director*

Mr. Samuel Paul Bernstein

*Director*

**NGC E&P Investments (Barbados) Limited**

Ms. Olave Maria Thorne

*Director*

Mr. Samuel Paul Bernstein

*Director*



*The Methanol Cluster of the Point Lisas Industrial Estate*

# NGC'S 2016 - 2020 STRATEGIC PLAN: PLANNING IN A TIME OF UNCERTAINTY



*Mr. Anand Ragbir, NGC's Chief Financial Officer introduces the draft Strategic Plan 2016-2020 to employees*

## Deep Analysis, Staff Surveys Anchor NGC's Strategic Plan 2016-2020

This year marks the completion of NGC's Strategic Plan for 2011-2015, the blueprint that has guided the Company over the last five years. NGC's strategic vision during this period led to major investments in the energy sector, advancement of its extensive pipeline network and expansion of its Corporate Social Responsibility (CSR) initiatives.

NGC has now completed a new plan for the 2016-2020 period, which is currently before the Board of Directors. Unlike the current strategy, this new plan has been formulated in a time of great uncertainty for the sector in general, and for NGC, specifically. The sector faces questions over the supply

of natural gas from the upstream, uncertainty over the commodity price of oil and changes in the global natural gas business.

Cognisant of these conditions, NGC's 2016-2020 Strategy Development Team developed an analysis-driven strategy based on a comprehensive understanding of the Group's business, forecasting of several different scenarios, and an organisation-wide communications exercise with staff at all levels.

### Strategic Priorities

The 2016-2020 draft plan is a continuation of the groundwork laid in the 2011-2015 plan, particularly its five strategic pillars:

- Grow local markets
- Grow external and new markets
- Strengthen asset integrity and management
- Strengthen brand and corporate social responsibility
- Strengthen culture and competencies

"These pillars have served us very well over the five years," said Mr. Anand Ragbir, NGC Chief Financial Officer and Head of the 2016-2020 Strategic Development Team, at the Group's recent President's Forum. "It is our intention to build on these pillars."

Mr. Ragbir also pointed to NGC's Vision (to be a valued partner in the global energy business) and Mission (to create exceptional national value from natural gas and energy business) Statements, as



guides for the new strategic plan.

Another crucial component is the input of NGC staff: “Employee feedback played a critical role in developing the 2016-2020 strategy,” explains Ms. Zareen Mohammed, Internal Auditor with the NGC Group and a member of the 2016-2020 Strategy Development Team. “In 2014, we conducted a survey to measure the health of the organisation through an Organisational Health Index (OHI) by collating over 800 responses from employees at all levels across the four companies in the NGC Group. The results highlighted employees’ aspirations for the NGC Group and in particular, areas of strengths and weaknesses, which we incorporated into the strategy through various initiatives. We also conducted a number of focus groups of over 100 persons and conducted one-on-one interviews with management.”

Building on the blueprint of the current plan and the perspectives of staff gained from the OHI survey, the team developed five priority questions:

- How do we maximise value from our existing business?
- What opportunities are there at home and in the Caribbean and how can we take advantage of them?
- How do we become a truly international company?
- How do we make NGC a great place for our people to work and take decisions in an appropriate and effective way?
- How do we further strengthen our contribution to the country and its people?

## Uncertainty in the Sector

In the five years since the development of the 2011-2015 Strategic Plan, there has been increased uncertainty in the energy sector, both locally and internationally. Trinidad and Tobago has had ongoing problems with natural gas supply and it is possible that these will continue. This has the potential to affect

NGC and its downstream clients in key industries like methanol and ammonia production. Solutions are being sought for the shortage, and analysts see a potential increase in supply by 2017 - but at present, the future is still uncertain.

Another concern is the commodity price of oil. Since mid-2014, the price of oil has been cut nearly in half, collapsing from figures as high as US\$90 to US\$100 per barrel to as low as US\$42 per barrel. Although NGC’s core business is in natural gas, the prices at which it sells to downstream consumers are linked to commodity prices, which in turn are driven by the price of oil. There are predictions of a rebound in energy prices before the end of the decade. Other forecasts are not so positive.

The third major concern is the re-emergence of the US natural gas industry through shale gas. The US has been Trinidad and Tobago’s main export market for natural gas and downstream commodities that use gas. As its own gas-based sector is reinvigorated, competition from the US requires Trinidad and Tobago to find new markets. In developing the 2016-2020 Strategic Plan, NGC had to address all of the potential scenarios related to these challenges.

The current and future environment in which NGC operates was a critical factor considered in developing the new strategy. NGC’s business model depends on the supply of gas entering its network, currently produced entirely locally, and on the performance of its end customers that purchase gas for conversion into ammonia, methanol, power, and other products. Deep discontinuities in local and global energy markets over the next five years could fundamentally reshape NGC’s business environment at both ends of the network.

Company diagnostics (a thorough understanding of NGC’s business and

its main profit earners) and market analysis were part of the first stage of a five-stage process for development of the strategic plan:

- Company diagnostics/market analysis
- Identify strategic options
- Select initiatives
- Detail initiatives
- Execute

When addressing uncertain scenarios like the gas supply and the oil price, the team developed different scenarios for each forecast. Using the example of the gas supply, Ms. Mohammed said, “We are planning three different scenarios. The first scenario is the most pessimistic. In this case, there are some near-term investments by producers over the next three years to sustain supply, but after that, supply declines to almost half [of what it is] today, by 2025. This is what we would expect to happen in a ‘do nothing’ case.

The second is the ‘plateau’ scenario. Examples from other mature basins, like the North Sea, have shown field life-extension investment such as infill drilling and well interventions can provide up to 40 per cent uplift on production in a declining field. Combined with production from new, marginal fields, this could maintain production levels until 2021, before they begin to decline.

The most optimistic scenario is the same as the second case, but with the addition of the Loran-Manatee field coming online in the next three years. If a successful agreement can be negotiated and production started, this would provide an uplift in gas production over the next ten years.”

## Refurbishing the Pillars

At the time of this writing, the Strategic Plan 2016-2020 has four pillars. The plan is subject to the approval of NGC’s new Board of Directors, so its final form is yet

unknown. The four pillars include:

- Safeguarding the current business in a challenging supply and demand environment
- Diversifying by making the pursuit of international growth a priority
- Focusing on reforming our organisation and the way in which our people are managed and developed
- Engaging the Government (and other key stakeholders) on topics that will materially affect how much value natural gas creates for the nation, and continuing to deepen NGC's social investment

Another one of the priorities within the strategic plan is NGC's mergers and acquisitions (M&A) agenda moving forward. The Group already embarked on an ambitious M&A programme in the 2011-2015 plan. These include the partnership with Mitsubishi on the petrochemicals complex at the Union Industrial Estate (UIE), the purchase of Total SA's upstream assets and the purchase of ConocoPhillips'

holdings in Phoenix Park Gas Processors Limited (PPGPL).

Moving forward, the plan identifies several potential areas for new local and international investment. For local market investments they analysed investment costs, rate of return and the net present value. When looking at potential international investments, additional considerations include: materiality, political risk and ease of entry.

"NGC and Trinidad and Tobago cannot take on the level of risk that huge multinationals can," explained Mr. Ragbir. "They can afford to go into a country and if the project flops, the strength of their balance sheet can sustain them to go forward to another project. Our company is very strong but we do not have the depth of balance sheet to have a failed international project. So we have to be very cautious in our approach."

The new strategic plan, in its current form, also continues NGC's extensive

Corporate Social Responsibility (CSR) programme. The NGC Group has a broad set of responsibilities and will continue to deepen its contribution to the country through both financial and non-financial activities, governed by the principles that limited resources should be targeted to causes and areas where NGC can have most impact, and NGC resources should be allocated purely on the relative merits of such causes; assessments of such merits should be fact based, backed by evidence of impact.

While still working towards a finalised blueprint, members of the 2016-2020 Strategy Development Team are pleased with the efficiency and analytical process through which the 2016-2020 Strategic Plan was developed. It has been a collaborative effort, leveraged by the commitment and input of hundreds of staff members from throughout the NGC Group who contributed to the document. They are mindful that there are considerations to be made, such as the mandate of the new Government and Board of Directors.



*NGC's Phoenix Park Valve Station*



## T&T MAKES PROGRESS IN RENEWABLE ENERGY

Globally, many nations in both the developed and developing world are increasing their investment in renewable energy. The Renewables 2014 Global Status Report (a publication of the Renewable Energy Policy Network for the 21st Century) states that by early 2014, at least 144 countries had renewable energy targets and 138 countries had support policies in place. Over 95 countries are either developing or emerging. At the end of 2013, more than US\$200 billion in new investments had been put into renewable energy such as solar, wind, hydro and bio-fuels.



*The Solar House Project at the University of Trinidad and Tobago (UTT) Energy campus in Point Lisas*

As a developing nation with a robust and mature oil and gas-based energy sector, Trinidad and Tobago can benefit from greater adoption of renewable energy as a means of lessening its reliance on fossil fuels, which are non-renewable and have a great impact on the environment.

The Ministry of Energy and Energy Industries (MEEI) has pointed to six main drivers for the investment in renewable energy:

- Long-term energy security
- Climate change mitigation and adaptation strategies
- National development of a renewable energy and energy efficiency industry
- Conservation of petroleum resources
- Increased exports of petroleum products (instead of local consumption)

- Employment and income generation

However, there are challenges in the large-scale local adoption of renewable energy. These include:

- The subsidy on petroleum products (Government announced a 15 per cent increase in the price of super and diesel fuel in the recent 2015 Budget)
- Lack of a legislative framework
- Lack of nationwide education and awareness on energy issues
- Financing
- Market barriers

The MEEI has recognised the potential benefits of renewable energy and has embarked on several pilot projects involving community centres and schools throughout the nation. These projects are collaborative and are being implemented with the support of

national entities such as NGC and the Ministry of Public Utilities.

### Community Centres Project

The first phase of this project, launched in 2013, entailed the use of solar power to provide lighting for community centres. Photovoltaic (PV) lights, which provide lighting from the conversion of solar power to electrical current, were installed on the exterior of community centres in three zones. They are:

#### North/ East Zone

- North Manzanilla Eastern Main Road, Manzanilla
- Duranta Gardens, Sangre Grande
- Samaroo Village via Arima
- Upper Malabar Main Road, Malabar
- Holly Betaudier Avenue, Malabar

#### North/West Zone

- Freeman Road, St. Augustine
- Community Drive, Mt. Lambert



- Second Caledonia, Morvant
- Mango Rose, Port of Spain

## Central/South Zone

- Roystonia Caryota Drive, Couva North
- St Johns Village, San Fernando
- Sister's Road Corner Nuckcheddy & Sister's Road, New Grant
- Palo Seco, Los Charos SS Erin Road, Palo Seco

NGC provided funding for four of these centres. Phase 2 of the pilot project calls for the upgrading of a further 15 centres, which are to be installed with the assistance of NGC subsidiary company, The National Energy Corporation of Trinidad and Tobago (National Energy), and the Trinidad and Tobago Electricity Commission (T&TEC).

## Renewable Energy (RE) and Energy Efficiency (EE) Education Pilot Project

This project seeks to enable the development of clean energy industries through education and training. The Renewable Energy (RE) and Energy Efficiency (EF) Pilot Project seeks to build our national capacity for green energy production at 25 secondary schools in eight school districts. This one-year project, which includes the training of 85 teachers, was initiated by the MEEI's Renewable Energy Committee.

Through the RE and EF project, students will receive an extensive educational programme consisting of theoretical frameworks, practical knowledge, and information and communications technology (ICT), as well as technology specific to renewable energy industries. The schools themselves will be provided with clean power sources for their public address systems and laptop-charging stations as a means of acclimatising students to the use of the technology. Apart from students, it is hoped the project will generate interest in renewable energy amongst the national community. Thus far 21 schools across the country have been issued solar panels which provide lighting for the libraries as well as solar stills which provide distilled water for the science laboratories. Phase 2 of this project for a further 35 schools has already been approved and funded for 2016.

## The Solar House Project

The Solar House Project is an initiative of the MEEI working with National Energy and UTT and is located at the UTT Point Lisas campus. The Solar House is a fully inhabitable two-bedroom house which is completely powered by Solar Energy. The house stores enough energy for three days of power and is designed with energy efficiency features for maximum conservation. The Honourable Minister Nicole Olivier, in November 2015, launched the first of a series of school visits to the Solar House so that students can learn more about renewable energy, energy efficiency and climate change mitigation by use of practical demonstrations.

## Home Energy Self-Sufficiency Programme

The Home Energy Self-Sufficiency Programme (HESS) is a pilot initiative that involves the installation of solar and wind systems at the Islamic Home for Children in Gasparillo. The project, started in 2012, is being undertaken by the Power Generation Company of Trinidad and Tobago (Powergen) in partnership with MEEI, the Ministry of Public Utilities, T&TEC, the Petroleum Company of Trinidad and Tobago (Petrotrin) and the Regulated Industries Commission (RIC). This is the first RE system project in the nation that is integrated to the national electrical grid.

Through the HESS, a 2000-watt (2kW) photovoltaic grid integrated system and a wind turbine of similar capacity were installed at the children's home, reducing their energy bill by allowing them to generate their own electricity using green technology. T&TEC is providing technical support and monitoring for the project.

## National Electrical Wiring Code in PV Systems

The MEEI, working with the Trinidad and Tobago Bureau of Standards (TTBS), partnered to establish a committee to revise Trinidad and Tobago's national electrical wiring code in order to make the nation's electrical grid compatible with RE systems. This will

allow RE systems like solar and wind to be integrated with the national grid, a crucial step in the development of an RE industry.

Formed in January 2011, the Electrical Wiring Code Committee (EWCC) on Renewable Energy contained representatives from the MEEI, TTBS, T&TEC, The University of Trinidad and Tobago (UTT), the Regulated Industries Commission (RIC), the Electrical Inspectorate Division (EIC) and private sector stakeholders. The result of the EWCC was the inclusion of a Part III to the national electrical wiring code, which makes provisions for the integration of PV systems in the national grid.

The provisions in Part III are currently being tested through a pilot project being undertaken by the Electrical Code Committee (ECC) of the Board of Engineering of Trinidad and Tobago (BOETT). This pilot involves the installation of solar power systems at the O'Meara Campus of The University of Trinidad and Tobago (UTT) and the Mount Hope headquarters of T&TEC. The PV systems include grid-tied inverters to test operating systems.

## National Energy Communication Campaign (NECC)

This campaign works in tandem with all the other projects to raise awareness of the energy sector in Trinidad and Tobago, renewable energy, energy conservation and climate change mitigation. Activities include school and community visits, booths at high traffic public events and is complemented by a dynamic interactive website at [www.myenergytt.com](http://www.myenergytt.com). The campaign has won many local and international awards and is now in the 3rd phase which focuses on sustainable energy.

## Still the Early Stages

These pilot projects and the changes to the legislative and regulatory environment represent an early stage in Trinidad and Tobago's investment in renewable energy. There are still many challenges to the kind of large-scale investment that can have a significant impact on either the economy or the environment, but some important early steps have been taken and there is potential for expansion.

## ENTERPRISE RISK MANAGEMENT (ERM) FRAMEWORK AT NGC

by Heather Moore-Bernard, Manager, Risk Management, NGC

### Are We too Big to Fail?

Research has shown that organisations fail because they do not embrace an Enterprise Risk Management (ERM) framework.

### What is ERM?

ERM entails the establishment of a risk management framework to mitigate the negative risk and exploit the positive risk throughout the entire organisation within specific parameters. This process must be enforced by the Board of Directors and filtered through to the operational level in the organisation. Every individual at The National Gas Company of Trinidad and Tobago Limited (NGC) should become a risk manager, escalating the risk to the strategic level for helicopter view and decision-making.

### Why is ERM important to NGC?

ERM will enable NGC to:

- Achieve its objectives
- Make more informed decisions
- Execute strategy and annual plans
- Protect and enhance service delivery to customers
- Meet and exceed shareholders' expectations
- Survive the turbulent economic times (falling gas prices)

The global financial crisis of 2008 has emphasised the importance of an ERM framework, because our stakeholders are concerned about the effects of risks on their sustainability and longevity. NGC is a major player in our local



*Members of NGC's Risk Management Team seek to implement a comprehensive ERM programme at the company*

oil and gas industry; the Company understands what failure means to the economy of Trinidad and Tobago. While all risks cannot be eliminated, the Company's ability to manage and better prepare for uncertainty would propel internal growth and sustainability. Falling oil prices, while it has downside potential for the Company, will allow NGC to conduct an internal environmental scan and determine what adjustments can be made to achieve organisational efficiency.

Risk management has a positive correlation to economic performance and professional reputation. ERM will assist NGC to perform well in an uncertain environment. The global meltdown of 2008 was not due to the failure of the risk management discipline, but rather a failure to fully embrace ERM. As NGC embarks on

embracing the ERM framework, it will shift the focus from operating in risk management silos to an incorporation of all facets of the organisation under one global umbrella. Research concludes that when organisations like NGC embrace ERM, they would continue to gain the competitive advantage over others who have not embarked on an ERM programme. There is the perception that state organisations are not profitable or efficient; NGC has the potential to lead the other state agencies to efficiency, longevity and sustainability by being the leader in ERM implementation.

Globalisation, advanced technology, creative financial instruments, sophisticated accounting methodology and the economic crisis are currently challenging most economies of the world; this has contributed to

complication of risk management. NGC today is facing an increased amount and complexity of risk, and management must recognise that risk must be managed with the total organisation in mind. They must encompass a more practical approach to risk management by moving beyond purely statistical and analytical approaches to more plausible scenarios and planning.

Enterprise Risk Management should encompass a holistic view of all the different risks encountered by the organisation. These risks should not be managed separately. Instead, the management of all events that positively or negatively impact the organisation's performance should be viewed holistically. If the Company can understand and manage its risk better than its competitors, it would be in a very powerful position to leverage risks to its competitive advantage. Greater knowledge of risks delivers the ability to deal with risks

that challenge competitors and to manage risk at the lowest costs.

## ERM Process Steps

The ERM process steps are the formalised logical pattern of events that must be followed to accomplish an effective ERM Framework. This suggests that it is not a one-off activity, but rather, a continuous process with ongoing monitoring and the results fed back into the process. It is critical that ERM is integrated into NGC's DNA and risk management must be implemented at the embryonic stages of each project.

## How Large is an Organisation's Risk Appetite?

For an organisation to implement an effective ERM Framework, Executive Management, in conjunction with Risk Management, must determine the Risk Appetite of the organisation - how much risk NGC will accept in pursuit

of achieving its objectives. The Risk Appetite is a clear guideline that informs the nature and amount of risk an organisation undertakes to achieve its strategic objectives and meet its obligation to stakeholders. It provides assurance to stakeholders that there are clear, established boundaries for risk-taking. Risk Appetite goes to the heart of how the company does business.

## ERM Components

ERM is not strictly a serial process, where one component affects only the next; it is a multi-directional, iterative process where almost any component can and does influence the other. ERM consists of eight interrelated components, which have a direct relationship with the objectives that NGC should strive to achieve (see Diagram 1 below).

**Diagram 1:** Enterprise Risk Management Model





## Launch of NGC Right On Track in partnership with NAAA & NBFTT

In 1999, NGC created its sports development programme: NGC Right On Track, conceptualised and spearheaded by Mr. Hasely Crawford, TC - then Head of NGC's Community Relations Department. Since then, the Right On Track programme has benefitted over 15,000 participants in 105 communities and eight institutions. It has trained 88 coaches and has formed and/or restored seven sports clubs. With the support of the National Association of Athletics Administrations of Trinidad and Tobago (NAAA), and the National Basketball Federation of Trinidad and Tobago (NBFTT), the main component of this programme - the NGC Right On Track Coaching Caravan - uses a science-based approach to developing the key skills needed in both Track and Field and Basketball, for boys and girls between 8 and 19 years of age.

On 3rd November, 2015, a launch was held at the Radisson Hotel in Port of Spain to formalise a partnership between NGC's signature Right On Track Programme, the NAAA and the NBFTT.

Christine Punnett, Manager, Corporate Communications (Ag.), in her opening remarks at the launch, said, "We are confident that the collective investment of NGC, the NAAA and the NBFTT in the future of sport will see countless young athletes aspire to and achieve glory for the red, white and black...the success of these organisations at developing their respective sports has been an impetus for NGC to deepen our relationships, so as to grow the reach of the Right On Track Programme...NGC will be extending the parameters of its partnership with these organisations through collaboration on the NAAA's Kids Athletic Programme and the NBFTT's Mini to Masters Programme. Both these initiatives embody the spirit and capture the intent of Right On Track and we are excited about the possibilities they present."

In his address, the Honourable Darryl Smith, Minister of Sport and Youth Affairs, focused on the Ministry's plan as it pertains to strengthening the track and field and basketball disciplines. Minister Smith lauded NGC for its sustained interest in

sport and its efforts in producing this programme: "For too long we have not been appreciating work such as what NGC is doing with this programme. I am looking forward to the Right On Track programme and I hope it continues for many years to come. Let us focus on the young people and the athletes. Let us take a back seat and let them be [in] the spotlight."

The heads of both the NAAA and the NBFTT applauded NGC for its contribution to sport in Trinidad and Tobago. President of the NAAA, Mr. Ephraim Serrette, said, "I want to thank NGC for their intervention and support to the sport of track and field. We look forward to future work with the NGC." President of the NBFTT, Mr. Garvin Warwick, noted, "Relationships and opportunities for development like this one are what we have been working towards to foster the growth of the sport."

NGC is extremely proud of this signature programme and is committed to making a positive impact in the national community through sport.



NBFTT President (second from left) Mr. Garvin Warwick, Mr. Hasely Crawford, TC (centre) and the Honourable Darryl Smith, Minister of Sport and Youth Affairs (third from right) meet with young, aspiring athletes at the launch

## NGC Sanfest 2015

On 13th September, 2015 the 45th NGC Sanfest was officially launched at the Creative Arts Centre in San Fernando. The NGC Sanfest is a Junior Arts Festival that promotes healthy competition amongst primary and secondary schools in the areas of Visual Arts, Creative Writing, Dance, Drama, Speech and Music, organised by The San Fernando Arts Council. NGC has been a proud sponsor of this festival for 13 years and took up the mantle of title sponsor in 2013.

The theme of this year's festival was "Empowering our Youth through the Arts"; it ran until 17th November, 2015. NGC Sanfest 2015 paid tribute to Ms. Joyce Kirton, the first director of the festival, who was recognised for her contributions to the arts. She is the founder of Les Enfants Dance Company, one of the founding members of the Arawak Dance Company and a lecturer at the Centre for Creative Arts at UWI, St. Augustine. Vice Chairman of The San Fernando Arts Council, Ms. Shella Murray, noted, "Commemorating this year's festival to Ms. Kirton is our way of showing gratitude for her many years of assiduous dedication to promoting the arts and culture in our country."

At the launch, Mr. Fofi George, Community Relations Officer II, gave remarks on behalf of NGC and focused on this year's theme in his address: "When you educate young people and believe in them, you empower them to dream imaginatively, and to pursue those dreams confidently. As a result of events like the NGC Sanfest, young people nurture their creativity. They strive for the highest standards of performance because they are in a competitive environment, which ignites passion and spirit. Young people can connect with their sense of purpose and develop their leadership skills. They also learn ways to become active in their communities and to speak out about issues that matter to them. These are the qualities that define



*NGC Sanfest 2015: Empowering our Youth through the Arts*

'empowerment'. It occurs when there are teachers, mentors and parents to motivate, equip and mould the raw talent."

Mr. Winston Bramble, Festival Director of NGC Sanfest, gave special mention to the Company at the launch: "For the last 12 years, we have been extremely fortunate to be sponsored by The National Gas Company of Trinidad and Tobago Limited. They have indeed been a source of inspiration and encouragement to us all. Their

involvement in Sanfest has been a blessing to us and we truly owe them a debt of gratitude for providing the resources and expertise which the festival has maintained over the years."

NGC wishes to offer congratulations to The San Fernando Arts Council and its committed members and stalwarts for continuing to successfully host this Junior Arts Festival for 45 years! Special recognition is also offered to the participants and supporters of the NGC Sanfest 2015.



## The NGC Bocas Lit Fest

This annual literary festival, which takes place each April, was founded in 2011. NGC was the main sponsor and in the following year assumed title sponsorship of the event.

The festival brings together readers and writers from Trinidad and Tobago, the Caribbean and the wider world, for five days of readings, performances, workshops, discussions, film screenings, and more. The festival also includes a full programme of activities for younger readers - The NGC Children's Bocas Lit Fest. Apart from the main festival in Port of Spain, there are two other literary festivals in Tobago (in July) and San Fernando (in October).

The San Fernando leg of the festival occurred most recently on 11th October, 2015 at the Visitors' Centre on San Fernando Hill. The action-packed programme included:



- Screening of the documentary *The Amerindians* for secondary school students in San Fernando, in celebration of First People's Heritage Week and in collaboration with Presentation College Past Students Association. Followed by a discussion & Q&A with the director, Tracy Assing.
- Words for Music: a workshop on poetry and song with Muhammad Muwakil

- Empower! A storytelling workshop for children with Auntie Thea
- Theatre performance *Searching by Iere* Theatre Productions
- The First People's Legacy discussion panel
- Open Mic and entertainment hosted by One Mic
- A panel discussion with a focus on history and conservation with "A Walk Back in Times", featuring Angelo Bissessarsingh, Judy Raymond, Geoffrey Maclean and Brinsley Samaroo
- A reading by Trini-Canadian debut writer, Sabrina Ramnanan, author of *Nothing Like Love*
- A poetry finale event: The Page Meets the Stage.

NGC is proud to be associated with this festival which, in five short years, has established itself as a 'must-attend' event and has generated enthusiasm and celebration of the Caribbean's literary achievements.

## NGC commits \$3 Million to Habitat for Humanity

NGC once again answered the call 'to eliminate poverty housing and homelessness' by partnering with Habitat for Humanity Trinidad and Tobago (HFHTT) for yet another cycle. On 20th July, 2015 NGC hosted a cheque handover ceremony to present HFHTT with the first installment in its three-year sum of \$1 million. This contribution will assist in the provision of housing solutions and training to families in dire need of a safe shelter.

Our partnership with Habitat for Humanity will allow us to:

- Assist in the construction of five homes per year for the three-year sponsorship period
- Meet our mandate of creating shared value for the Company and our multiple stakeholders, with a focus on socio-economic

development and human development

- Strengthen the partnership with Habitat for Humanity, with which we have had a five-year agreement in the past
- Provide opportunities for employee involvement in our Corporate Social Responsibility (CSR) programmes by providing mechanisms for employees to donate their time, skills, knowledge and energy to programmes undertaken by the Company, especially on a team basis
- Publicise part of our CSR programmes in a tangible and visible way

According to HFHTT, "NGC has been one of HFHTT's most important corporate partners over the years.

NGC staff have gone above and beyond their duty, volunteering to build and paint the homes, and purchasing gifts and furnishings for their Home Partner families. NGC truly gives back to communities in Trinidad and Tobago."

In 2005, as part of NGC's corporate giving for its 30th anniversary celebrations, the Company entered into an agreement with HFHTT to provide TT\$250,000 per year for a five-year period. This funded a total of 15 houses and one orphanage dormitory, sheltering families and children in need. In 2012 and 2014, NGC funded two houses for families in our fenceline communities, which we used to engage employees in our volunteerism programme. NGC has now deepened its relationship with HFHTT with this three-year sponsorship.



## TIC 2015

The Ministry of Energy and Energy Industries (MEEI) coordinated the Energy Pavilion at the annual Trade and Investment Convention (TIC). This year's event was held from 8th-11th July, 2015 at the Centre of Excellence, Macoya.

The energy companies who participated in the Energy Pavilion were:

- The National Gas Company of Trinidad and Tobago Limited (NGC)
- National Energy Corporation of Trinidad and Tobago Limited (National Energy)
- NGC CNG Company Limited
- Phoenix Park Gas Processors Limited (PPGPL)
- National Petroleum (NP)
- The Petroleum Company of Trinidad and Tobago Limited (Petrotrin)

TIC is a "multi-sectoral tradeshow that brings together local, regional and international businesses. Exhibitors with thousands of products meet hundreds of buyers seeking new suppliers, goods and services."



*Permanent Secretary of the Ministry of Energy and Energy Industries  
Mr. Selwyn Lashley visits NGC booth of the Energy Pavilion at TIC 2015*

NGC's External Communications Department and other employee volunteers manned NGC's area in the Energy Pavilion. They fielded questions from visitors, disseminated information on NGC and its operations, and encouraged persons to utilise the Energy Pavilion touchscreen app, which provided profiles on each company of the NGC Group and its operations.

It is to be noted that participation in events such as TIC provides the opportunity to showcase Trinidad and Tobago as a premier site for gas-based investment, and highlights NGC's competencies in natural gas operations, while at the same time contributing to image building and heightening natural gas literacy.

## NGC's Spirit Award winners for 2014

NGC's Spirit Award winners for 2014 were announced at the annual awards ceremony, held this year on 11th July, 2015 at the Port of Spain Ballroom, Hyatt Regency. Long Service and Safety Awards recipients were also recognised that night.

NGC's Spirit Awardees 2014 included:

- Spirit Award Winner: Naieem Mohammed
- NGC's Spirit Builder: Robert Baird
- Best Project Team Spirit: Pipeline Maintenance Team for Leak Repair at MLV2
- Team Safety Award: Pipeline Services
- President's Award: Ronnie Kantasingh



*Employees of Pipeline Services copped the Best Project Team Spirit and Team Safety Awards*

## NGC Scholarship Awardees

The Post Graduate Scholarship Programme (PGSP) provides an opportunity for all employees of the NGC Group who are citizens of Trinidad and Tobago to build the appropriate competencies to drive a sustainable energy industry. This is the PGSP's third year. Fifteen employees were shortlisted for the 2015-2016 academic year and the winners are Shane Wilson, Shiva Persad and Shiva Bachoon. Below, they share their thoughts on being successful with their scholarship applications.



**Shane Wilson: NGC, Geospatial Information Services Department**  
Mr. Wilson has been awarded a scholarship to attend Robert Gordon University in Aberdeen, Scotland, where he will read for a Masters in Energy Management.

"I feel blessed, honoured and privileged. Yes, these would be the three words to describe how I feel being awarded a scholarship to study Energy Management. Attending the International Gas Union IGRC 2014 Conference as a selected Young Professional, I would say was the spark that ignited the flame to pursue the scholarship programme offered by NGC.

The exposure gained from an international forum raised my awareness of how important managing energy resources will be for the future. The Company's vision is 'To be a valued partner in the global energy business', but before we can achieve that, 'we must have our house in order first'. I am hoping my course of study will provide

me with the competencies required to not only assist with refining our housekeeping principles, but also to improve strategies explored for future business ventures for not only NGC, but also the Group of Companies and by extension, Trinidad and Tobago.

I must also make mention of my peers working in GISD: the office environment is always campaigning for self-development. Special mention must be given to Francis Martinez, who encouraged me to apply based on his experience with the first group of scholarship winners. Other benefits to note from the scholarship include having the opportunity to live in Europe for a year!"

**Shiva Persad: NGC, Information Technology Department**  
Mr. Persad has been awarded a scholarship to read for a Masters in IT, for the Oil and Gas Industry at Robert Gordon.

"It is a great achievement for me personally to have been awarded a scholarship through NGC to study for an

MSc in IT for the Oil and Gas Industry. I look forward to the course of study ahead and the many challenges and opportunities it will bring with it, to make me a more knowledgeable person in the field of IT - especially as it relates to the Oil and Gas Industry - and a more effective employee for the NGC Group of Companies."



**Shiva Bachoon: National Energy, Loss Prevention and Sustainability Department**  
Mr. Bachoon will read for a Masters in Maritime Affairs at the World Maritime University, Malmo, Sweden.

"I feel ecstatic to represent National Energy, and by extension, the NGC Group of Companies, in pursuing this MSc in Maritime Affairs. The benefits of this opportunity are endless as the NGC Group moves towards achieving its Vision, in the best interests of the citizens of Trinidad and Tobago."

The Group's Maritime Assets are critical infrastructures that require the highest level of safety and security protection.

This was the main reason for me applying for the scholarship, which was greatly endorsed by my Supervisor.

As one of the awardees in this year's PGSP, I feel honoured to represent the NGC Group as we aim to expand and diversify our competencies to achieve sustainability and viability in a dynamic global energy market."



## Sod turned for Natural Gas to Petrochemicals Complex

On 1st September, 2015, the sod was officially turned for the start of a Natural Gas to Petrochemicals Complex at the Union Industrial Estate (UIE), La Brea. This event was significant in the history of the energy sector of Trinidad and Tobago, as the project represents the first mega petrochemical complex to be delivered in Trinidad and Tobago in the last 10 years through the Public Private Partnership (PPP) model. The dimethyl ether (DME) component of the complex is also historic, as it will take the country further downstream on the methanol value chain.

For National Energy, the start of construction of the new Natural Gas to Petrochemicals Complex is especially important, as it marks the culmination of over two years of intense and complex project development negotiations among the many parties involved. The project will be managed by the locally registered, joint venture enterprise Caribbean Gas Chemical Limited (CGCL), which is owned by the consortium of Mitsubishi Gas Chemical Company Inc., Mitsubishi Corporation and local conglomerate Massy Holdings Limited. Mitsubishi Heavy Industries Limited, an equity investor in the project, will perform the role of Engineering Procurement and Construction (EPC) Contractor, responsible for construction of the Methanol and DME plants, while The National Gas Company of Trinidad and Tobago Limited (NGC), also an equity investor, will act as the DME off-taker.

As landlords of UIE, National Energy has a vested interest in CGCL's success, as revenues are expected to be derived from the leasing of land. The importation of materials during construction of the plants is also expected to result in increased shipping activity at the Port of Brighton. As owners of the facility, La Brea Industrial Development Company



Limited (LABIDCO) stands to benefit from increased revenue from port usage, logistical support, storage and warehousing. Operating Assets would also derive revenues from the provision of towage services during construction.

Construction of the CGCL Natural Gas to Methanol and DME Complex, which represents a capital investment of US\$990 million, is earmarked to commence in Quarter 1, 2016 and to be completed by Quarter 1, 2019. At

its peak of construction, the project will employ 2,000 workers, while 150-160 permanent jobs are expected from operation of the plants, with an equal number of indirect jobs being created. National Energy continues to work with its business partners and stakeholders to attract complementary services to UIE and La Brea Industrial Estate to support the project, which will see the transformation of UIE into the next Point Lisas.



## Reconstruction of La Brea Dock: Berth II in Progress

Monday 18th May, 2015 marked the start of the contract for the reconstruction of Berth II at the Port of Brighton, La Brea. The project has been identified as one of National Energy's strategic priorities for the remainder of 2015 and the upcoming year 2016, as the berth will support new business at the port, which is expected to continue to be a main source of revenue for LABIDCO.

Preliminary works are in progress to implement the approved Value Engineering design, in which combi-walls made of HZ and sheet piles will be installed.

Surveys are being conducted to identify and remove potential obstructions from the work area. Preparation works are ongoing for excavation and extraction of existing piles and breaking down of existing structure. Wherever possible, extracted materials would be reused to save both time and cost.

However, structural integrity of the new quay wall will not be compromised. Temporary stabilisation works on Cell 14 are expected to be completed by the end of December 2015, in order to allow construction of the new quay wall to begin.

The manufacture of steel structures, including sheet piles and tie rods, is currently in progress, along with the setting up of the platform for construction offices. The storage platform for the piles has been completed.

The reconstructed berth is expected to accommodate shipping activities for the Mitsubishi Natural Gas to Petrochemicals Complex, and will also include a heavy lift area for the load-out of offshore platforms. The reconstruction project is carded to be completed in the first quarter of 2017.



*Berth II repairs in progress at Port of Brighton, La Brea*

## NGC CNG awards equipment supply contract

In July 2015, NGC CNG awarded a contract for the supply of CNG Refuelling Equipment and Services for 24 CNG Service Stations, for approximately US\$ 7.6 million. The award went to D. Rampersad Company Limited, which tendered in a supply and service partnership with Clean Energy Compression (formerly known as IMW) out of British Colombia, Canada. CEC is a world leader in the manufacture and supply of CNG and LNG equipment for vehicles. They own and operate over 500 CNG and 120 LNG Stations globally. Each

set of equipment consists of a package of a reciprocating, non-lubricated CNG compressor, CNG storage units, and two CNG dispensers with two hoses each. This award represented an important milestone in NGC CNG's quest to provide an adequate and efficient supply of CNG across Trinidad and Tobago, utilising the most modern compression and dispensing technologies available anywhere in the world today.

A two-day visit was made by Mr. Ronald Adams (NGC CNG Operations Manager)

and Mr. Keith Narayansingh (NGC CNG Project Manager, Supply) to the Headquarters of CEC in Chilliwack, British Colombia, Canada in August 2015 to meet with key executives of the company, tour the facility and visit external installations operated with CEC-built compressors.

The equipment will be delivered in tranches over the next 18 to 24 months, with the first two sets due to arrive before the end of 2015.

## Recent agreement signings

The move towards increased use of CNG as a fuel gained momentum mid-year with the signing of a Memorandum of Understanding (MOU) between the NGC CNG Company Limited and the Association of Maxi Taxis of Trinidad and Tobago (AMTTT) in May 2015. Under the terms of the MOU, NGC CNG will provide a grant of TT\$45,000 to each successful applicant, for the replacement of small diesel powered maxi-taxis, and TT\$75,000 for the replacement of large diesel powered maxis. The grant represents the salvage value of each size of maxi taxi and will be used towards the purchase of an OEM CNG powered maxi taxi. The old diesel-powered maxi will be disposed of, so there will be no net increase in maxi taxis on the roads. The grant will be available to any registered maxi taxi owner in Trinidad and Tobago who meets certain criteria. The maxi taxi grant was offered to the public in August 2015 and generated a fair amount of interest among owners and those in the transportation industry.

In July 2015, the NGC CNG Company Limited signed a Memorandum of Understanding (MOU) with the Water



*NGC CNG President, Mr. Curtis Mohammed (left) and WASA CEO, Mr. Gerard Yorke, shake hands upon signing the MOU*

and Sewerage Authority of Trinidad and Tobago (WASA) that formalised an agreement between the two state entities, in relation to the expanded utilisation of CNG in the Authority's fleet of vehicles.

The MOU facilitates further negotiations between the parties, particularly in

relation to the potential financing of the CNG conversion of select WASA vehicles by NGC CNG, and the signing of a contract between the parties governing the construction, operation and maintenance of a CNG Fuelling Station at WASA's Transport Department, St. Joseph.

## Achievement Ceremony for the 1st Cohort of CNG Engine Maintenance Fundamentals Programme

Twenty CNG service technicians were recognised at an achievement ceremony on Wednesday 21st October, 2015, after completing a skills training course. The five-week course, 'CNG Engine Maintenance Fundamentals', was conducted by the National Energy Skills Centre (NESC) and was based on a Memorandum of Understanding (MOU) signed between the NGC CNG Company Limited and NESC in October 2014. The participants were employees of NGC, NGC CNG, Unipet, NP, PTSC, Sterling Service Limited, Dumore Enterprises and the Association of Maxi Taxi Trinidad & Tobago.

Minister in the Ministry of Education, Dr. the Honourable Lovell Francis, delivered the Feature Address and told the gathering that not enough focus

was being placed on skills training. He stated, "Our society is yet to realise that the technical and vocational areas are just as legitimate. You can live a very meaningful and successful life being a mechanic, or a technician, or even a scaffolder. As a society, we need to have a broader view of education, a broader view of intelligence."

He also offered that any effort to reduce Trinidad and Tobago's carbon footprint should be applauded. CNG as a motor vehicle fuel produces significantly less carbon emissions than other liquid fuels.

Also addressing the gathering were the President of NGC CNG Company Limited, Mr. Curtis Mohammed, and the President of NESC, Mr. Kern Dass.

Mr. Mohammed praised the collaboration of the two state agencies working together for the national benefit in training the technicians and told the graduates, "Your new-found expertise in CNG will be put to the test and the success of the national CNG initiative will depend on the collective effort of all of us."

Mr. Dass said he was proud of all involved in the programme, since they were "pioneers".

The course, which was delivered at the NESC's Woodford Lodge campus, prepared the technicians to understand the installation, operation, diagnosis and maintenance of CNG systems on gasoline and diesel vehicles.



*Dr. the Honourable Lovell Francis (centre) is flanked by Mr. Kern Dass, President, NESC and Mr. Curtis Mohammed, President NGC CNG, participants and company representatives of NGC, NGC CNG, Unipet, NP, PTSC, Sterling Service Limited, Dumore Enterprises and the Association of Maxi Taxi Trinidad & Tobago at the Achievement Ceremony*



## Customer satisfaction at PPGPL

One of the core values of Phoenix Park Gas Processors Limited (PPGPL) is customer satisfaction. In pursuit of this value, the company gauges the level of satisfaction experienced by its product customers by issuing an annual survey.

The questionnaire uses a combination of Likert rating scales and open-ended questions to measure the customers' sentiments in the areas of service provided, products sold, adequacy of facilities/infrastructure and overall business experience. The questionnaire also serves as a benchmarking tool, as it reveals how customers rate the company against regional competitors

and those they consider to be best-in-class suppliers of natural gas liquids (NGLs).

PPGPL uses the results to design action plans to address the very specific issues captured in the survey and consequently improve the measured overall satisfaction rating the following year.

Since 2007, PPGPL has achieved above 80 per cent satisfaction, with a steady increase from 2010 to 2014. In 2014, with the exception of overall business, which saw a slight decrease, there was an increase in rating in all categories

surveyed - facilities, product and service. In last year's survey, one customer described its relationship with PPGPL by stating, "PPGPL's staff is very helpful and always willing to collaborate with our business. It's a pleasure to work with them. We highly appreciate their flexibility and understanding."

While the figures consistently reflect a high level of customer satisfaction, PPGPL continues to explore ways of closing any gaps to further improve the experience of one of its key stakeholders - its customers.



*Phoenix Park Gas Processors Limited (PPGPL) Plant Facility*

## New Ministers - Ministry of Finance and the Economy and Ministry of Energy and Energy Industries

The National Gas Company of Trinidad and Tobago Limited (NGC) is accountable to two line ministries - the Ministry of Finance and the Economy and the Ministry of Energy and Energy Industries.

### **The Honourable Colm Imbert, Minister of Finance and the Economy**

Minister Imbert has over 35 years' experience in the professional field of Civil Engineering and his overall Parliamentary experience now spans 24 years.

After graduating from The University of the West Indies, St. Augustine campus, with Honours, in 1979, he served the Caribbean region as a Consulting Engineer. Mr. Imbert pursued a Master's degree in Maritime Civil Engineering from the University of Manchester, England and was formally registered as an Engineer in 1984. He obtained a Master of Laws degree in Construction Law and Arbitration from the Aberdeen Business School in 2007 and is currently in the final stages of his third Master's degree, namely a Master of Laws degree in Oil and Gas Law, again from the Aberdeen Business School, which he expects to complete in 2016.



*The Honourable Colm Imbert,  
Minister of Finance and the Economy*

Mr. Imbert served as a lecturer in Construction Management at the St. Augustine Campus of The University of the West Indies from 1985 to 1991, while also working as a specialist consultant with the Food and Agriculture Organisation of the United Nations (FAO) on Sea Defences for the Government of Guyana.

In 1991, Mr. Imbert entered public life as an elected Member of Parliament and a Cabinet Minister with responsibility for the Ministries of Works and Transport and Local Government, and has since served in varying political capacities.

During his career, Minister Imbert has served as:

- Minister of Works and Transport
- Minister of Local Government
- Minister of Health
- Minister of Science and Technology
- Leader of the House
- Chairman of the Public Accounts Committee of Trinidad and Tobago
- Member of Joint Select Committees of Parliament
- Member of the Energy Committee of Parliament
- Member of the Chartered Institute of Arbitrators
- Member of the Society of Construction Law

### **The Honourable Nicole Olivierre, Minister of Energy and Energy Industries (MEEI)**

Minister Olivierre has been well trained in multiple areas pertinent to the energy industry. Her academic achievements include a Master of Philosophy (MPhil) degree in Chemistry of Natural Products (UWI) and a Bachelor of Science (BSc) degree in Chemistry and Computer Science (First Class Honours, UWI).

As an energy professional, Minister Olivierre has over 14 years' experience in the oil and gas industry. Her early career began as a laboratory technician in the Oil and Gas Laboratory in Trintope, Santa Flora. Thereafter, she moved to The National Gas Company of Trinidad and Tobago Limited at the time of the Atlantic LNG Train 4 expansion.



*The Honourable Nicole Olivierre,  
Minister of Energy and Energy Industries (MEEI)*

Minister Olivierre was involved in the negotiation of the suite of contracts pertaining to Train 4, including the plant

construction agreement, gas-processing agreement, cross-island pipeline agreement and gas transportation agreement.

At NGC, she was involved in diverse areas of the natural gas industry, including project analysis and development, business intelligence, commercial negotiation, strategy formulation and enterprise risk management.

Minister Olivierre has served on the secretariat for the following international meetings held in Trinidad:

- Fifth Summit of the Americas (2009)
- Executive Meeting of the International Gas Union (2008)
- Fifth Gas Exporting Countries Forum (2005)



## CARICOM Energy Week (CEW)

CARICOM Energy Week (CEW) was established in 2011 to provide a platform for increased awareness on energy matters, given the critical importance of energy to the economic development of the region. CEW has been celebrated in CARICOM member states as a series of concurrent national energy weeks during the second week of November.

CEW 2015 was held in Trinidad and Tobago, hosted by the Government of the Republic of Trinidad and Tobago at the UTT Point Lisas campus from 9th-12th November, 2015. This year's theme, 'Empowering Our Sustainable Development', made a deliberate play on the word 'empower', as it was "envisioned that the spreading of awareness on sustainable energy will enhance the ability of Caribbean folk to make decisions and choices on the way in which they access and utilise energy; simultaneously, the broad engagement of stakeholders is expected to advance regional efforts for sustainable energy production and use."

The Honourable Minister, Ministry of Energy and Energy Industries (MEEI), spoke at the launch of CEW 2015 on Monday 9th November, 2015: "Education and awareness [are] key to changing our attitudes and lifestyles, with the aim of fostering a sustainable energy future for Trinidad and Tobago. In this regard, the Ministry of Energy and Energy Industries is pleased with the support of the Ministry of Education in moving forward with our projects involving the nation's secondary schools. We will certainly strive to ensure that the spirit of camaraderie that currently exists between both our Ministries will continue."

At the 5th Annual CEW, secondary



*The Honourable Nicole Olivier, Minister of Energy and Energy Industries, cuts the ribbon to officially open CARICOM Energy Week*



*Students visit the NGC booth at CARICOM Energy Week*

school students at the Form Three level were exposed to Trinidad and Tobago's renewable energy initiatives, mainly solar and wind energy, and were given a walk-through of the country's

first-ever solar house. The NGC Group's information booth provided a wealth of data on both the midstream and downstream sectors of the natural gas sector.



## AMCHAM T&T 19th Annual HSSE Conference & Exhibition

The American Chamber of Commerce of Trinidad and Tobago (AMCHAM T&T) held its 19th annual Health, Safety, Security and Environment (HSSE) Conference & Exhibition on 7th and 8th October, 2015 at the Hyatt Regency Trinidad. The theme for this year's event was 'Managing Risk in Economic Uncertainty'.

AMCHAM T&T's HSSE Conference & Exhibition is the Chamber's primary initiative for the promotion of HSSE best practice and new concepts, the sharing of information and the provision of a neutral forum for discussion of controversial issues with HSSE implications. The two-day conference, which hosted over 30 booths, attracted more than 300 HSSE professionals from

across the private and public sectors throughout the region. Technical sessions and panel discussions featured a wide range of local and international speakers.

Nicole Alexander, Environment Health and Safety (EHS) Coordinator and a member of NGC's EHS Team, formed part of this year's organising committee.



At centre, Major General (Retired) The Honourable Edmund Dillon, Minister of National Security declaring the Exhibition open. From left to right: Richard de La Bastide, President, YARA Trinidad Limited; Louis Prado, VP, Shell; Nigel Darlow, CEO, Atlantic LNG; Nirad Tewarie, CEO, AMCHAM T&T; Ravi Suryadevara, President, AMCHAM T&T; Vincent Pereira, President, BHP Billiton Trinidad and Tobago; and Norman Christie, President, bpTT



Dr. Ivan Pupulidy - Director of US Forest Services, Office of Innovation and Organisational Learning



Major General (Retired) The Honourable Edmund Dillon, Minister of National Security addressing the audience at the conference

## Launch of the Third EITI Report

On Friday 2nd October, 2015, the Third Extractive Industries Transparency Initiative (EITI) Report was launched at the Ministry of Energy and Energy Industries (MEEI) in Port of Spain. The EITI Report is an independent reconciliation of the revenues paid to Government by the major upstream oil and gas companies operating in the country with those reported to have been received by the Government. It shows the exact contribution of each of the country's major oil and gas companies to the economy. The report is the result of a collaboration between local accounting firm BDO Trinity Limited, and international audit firm, Hart Nurse Limited.

This report covers the findings of Trinidad and Tobago's third EITI Report

of Fiscal Year 2013 and was officially handed over to the Minister of Energy and Energy Industries, the Honourable Nicole Olivierre, by the Chairman of the Trinidad and Tobago EITI Steering Committee, Mr. Victor Hart.

At the launch, Minister Olivierre delivered a feature address, in which she stated, "Our energy sector is the pillar of our economy, and the requisite transparency that the EITI brings should give comfort to citizens and investors alike, that we are willing and able to disclose crucial information related to energy sector revenues. In this regard, Government, companies and civil society all benefit from this initiative."

Noting the value of the EITI Report in attracting investors, Minister Olivierre

made mention of the recommendations put forward and underscored this administration's commitment to fulfilling the upcoming reports for 2014 and 2015: "I recognise that the EITI Report thus far only covers the upstream oil and gas companies. I look forward, in the near future, to see steps taken to have the midstream and downstream energy sector companies, as well as the mining sector, also report as part of the initiative. To facilitate this, we will be embarking on capacity building within the mining industry as we move to improve the management and regulation of the mining sector. Government is committed to the longevity of this initiative and we plan to use the EITI as a transformative tool."



*The Minister of Energy and Energy Industries, the Honourable Nicole Olivierre (left) receives Trinidad and Tobago's Third Extractive Industries Transparency Initiative (EITI) Report of Fiscal Year 2013 from the Chairman of the TTEITI Steering Committee, Mr. Victor Hart*



## ONE MOMENT PLEASE

... to reflect on the beauty that surrounds us here in Trinidad and Tobago.



Photographer Mark Lyndersay

Nature's canvas showcases an amazing view of lush greenery and dense, fleecy cloud cover at the Vance River Dam, which lies south-east of NGC's Union Industrial Estate in La Brea, Trinidad





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