



GASCO news

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The NGC Group Pursues a
Foothold in International Energy



● Market & Trading ● Business Development ● Marketing & Trading Potentials

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Creating
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NGC Sanfest Command Performances



First Peoples artefacts on display

PRESIDENT'S MESSAGE

Pushing the Business Frontier Beyond T&T

As the NGC Group pushes forward with its new Strategic Plan to 2020, significant attention is being paid to exploring potential business opportunities beyond our shores. Internationalisation of The NGC Group brand is not just a means of growing the business and diversifying revenue streams; it can also help establish footholds for other local business entities in foreign territories and markets.

As the map on the cover of this edition of *Gasco News* shows, The NGC Group is scanning the entire globe for opportunities to expand its business.

REGIONAL OPPORTUNITIES

Closest to home, The NGC Group has prioritised a partnership with Venezuela, specifically with regard to the Dragon marine field, from which we expect to access natural gas by the year 2020. The Dragon project will involve construction of pipelines to tie the field infrastructure in Venezuela's territorial waters to Shell's Hibiscus platform off the north-west coast of Trinidad. Further pipelines will be built to channel the gas to shore. Finalising the logistics of this project has involved significant collaborative work among NGC, Shell, and Venezuelan state energy company PDVSA, with technical teams meeting frequently to advance discussions. Learnings from this ground-breaking partnership will help build our internal capability to participate in and drive projects beyond our shores, and lay the foundation for partnerships further afield.

Apart from our work with Venezuela, the Group has been capitalising on opportunities elsewhere in the region through representation at a number of conferences in the final quarter of 2017. Members of the leadership teams, representing not only NGC but its subsidiaries as well, have made presentations on our business and marketable expertise at the Inaugural Jamaica Natural Gas Conference, the Cuba Energy Conference and the Suriname International Mining, Energy and Petroleum Conference and Exhibition. Members of the Guyana Energy Agency also paid a visit to Trinidad to learn about our CNG industry. Clearly, there is solid interest in the Trinidad gas model, and by extension The NGC Group business template. Opportunities abound for cross-border collaboration, which we intend to pursue.

INTERNATIONAL PARTNERSHIPS

Beyond the Caribbean and Latin America, the Group has been investigating the potential for investment in East and West Africa, concluding with a visit to the



Mark Loquan, President, NGC

continent in 2017.

In Mozambique, NGC signed a Memorandum of Understanding (MoU) with state-owned petroleum company Empresa Nacional de Hidrocarbonetos, E.P. (ENH) for the provision of energy services in September 2017. In Ghana, the Group furthered discussions with government representatives around pipeline construction and management, gas processing and other prospects of mutual benefit. Dialogue was also initiated with executives of the Tanzania Petroleum Development Corporation (TPDC) to determine how the Group can participate in the development of that country's reserves.

GOING GLOBAL

Gauging from the activity of this quarter, I can say with confidence that NGC has successfully launched its internationalisation campaign. We foresee making NGC a global energy brand in the very near future by building on the foundations laid in 2017.

Mark Loquan, President

New Horizons: NGC Group Provides Guidance for Jamaica Natural Gas Sector



Ronald Adams, VP Operations, NGC, shares insights on NGC's gas transmission network

Jamaica has established a national development goal of building a modern and efficient energy sector that provides affordable and reliable energy supplies. Under its Energy Policy 2009-2030, the country aims to diversify its energy portfolio to expand the use of natural gas in its supply mix, with targets of 26% usage by 2020, and 42% by 2030.

In order to explore the economic, commercial, legal and regulatory implications, as well as environmental benefits of the development of a local natural gas industry, the Petroleum Corporation of Jamaica hosted its Inaugural Natural Gas Conference in Kingston from October 4th to 6th, 2017. On the agenda were presentations and panel discussions involving regional and international industry experts, as well as representatives from financial, academic, statutory and regulatory institutions. The theme of the conference was “New Horizons: Prospects and Challenges for a Natural Gas Sector in Jamaica.”

NGC CNG President Curtis Mohammed and NGC Vice President of Operations Ronald Adams, attended the conference and made presentations on behalf of The NGC Group.

Managing Natural Gas Infrastructure

In his presentation at the conference, Ronald Adams presented the NGC case study of natural gas infrastructure development and management.

He explored the evolution of Trinidad and Tobago's natural gas industry since the earliest days of gas utilisation, situating NGC's pipeline network expansion in this story. In developing this network, NGC has had to conform to international construction standards, ensuring the Company's infrastructure meets global benchmarks for safety and structural integrity. NGC has also had to comply with various legislative acts concerned with environmental care, occupational health and safety, and oil and gas industry regulations. The actual construction of the network testifies to the Company's project management capability. Led by a team of in-house design engineers, the Company used an award-winning Geographic Information System (GIS), stage-gate project management methodology, and cross-functional team planning, to deliver some extraordinary pipeline projects, including the first 56-inch diameter Cross Island Pipeline in the western hemisphere.

One of the outstanding features of NGC's pipeline network is the high level of system availability, which has approximated 99.9% for over 42 years. The network is constantly monitored by NGC operators, using a centralised Supervisory Control and Data Acquisition (SCADA) system, which relays real-time data and allows for remote valve operation. This real-time access to data has enhanced gas and service quality and improved the accuracy of billings. In addition, the Company has automated systems for gas chromatography, electronic flow metering and

flow measurement. It is expected that by 2018, all systems will be fully automated with cloud access to data.

Mr. Adams indicated that to further improve its network and service reliability, NGC is placing greater focus on process safety and asset integrity management. He explained some of the challenges faced by the Company with respect to its infrastructure, including aging pipelines, potential for damage by excavation works, agricultural and marine activity, and shifting terrain on account of landslips. The risk of encroachment on the Right of Way — where pipelines run through populated areas, and there is heavy undergrowth and animal intrusion in forested areas — present further challenges for asset integrity management. The Company, however, continues to tackle these challenges using its technological and human resources.

Another area for intensified focus is the incorporation of “green” technologies and policies into infrastructural development. NGC has already made significant strides in this regard, pioneering the use of Horizontal Directional Drilling when laying pipelines, to preserve surface ecosystems. The Company has also adopted a “no net loss” policy, and has embarked on a reforestation programme to replant areas of forest equivalent to the areas cleared during pipeline construction activity. Mr. Adams also shared design details of NGC’s Tobago Natural Gas Receiving Facility, engineered to be eco-friendly, with a ground flare and facility for treatment of waste water to meet Environmental Management Authority (EMA) effluence regulations.

In closing, Mr. Adams offered sage advice to Jamaica as it looks to develop its own natural gas industry. He advised that regular audits and review of integrity and controls relative to standards and regulations, along with informed employees and communities, reduce risk and cost over the long term. He encouraged thoughtful assessment of the country’s needs and adoption of standards that best fit those particular needs. He also encouraged coordination between government and industry stakeholders, open channels of communication between suppliers and consumers, and investment in new technology.

Exploring the CNG Option

Jamaica’s fuel prices are not subsidised and sit between 50% and 74% more than Trinidad and Tobago’s. As part of its energy plan, Jamaica is interested in switching a segment of its transportation matrix to Natural Gas-Powered Vehicles (NGVs). With

this in mind, Curtis Mohammed spoke of the Trinidad and Tobago experience with CNG in his conference contribution.

He gave an overview of the CNG initiative in Trinidad and Tobago, pointing out the respective roles of the government as initiator of the switch to CNG, NGC as the financier of the initiative, NGC CNG as the company executing the mandate and the private sector as converters and suppliers of Original Equipment Manufacturer (OEM) vehicles. Mr. Mohammed estimated the private sector has invested US\$29 million thus far.

Jamaica’s Urban Transit Company has a bus fleet of 605 vehicles, which Mr. Mohammed proposed could be targeted for replacement with NGVs over a 12-year period. This phase model is similar to that of Trinidad and Tobago where demand is created in tandem with supply. He observed that a combination of CNG and LNG bus retrofit and replacement showed the best economic results for Jamaica. In terms of providing CNG to vehicles that have been converted, Mr. Mohammed suggested the best model would involve vapourising LNG from storage tanks on site and channeling to CNG dispensation systems.

Mr. Mohammed also identified several opportunities for NGC and NGC CNG to capitalise on Jamaica’s foray into natural gas. Among the opportunities identified are:

- The supply of LNG to Jamaica’s Petroleum Company and private company New Fortress Energy¹
- Assistance with development of their natural gas regulatory framework and
- The supply of gas infrastructure to transition public transportation in Jamaica to NGVs.

In June 2017, the General Manager of the Petroleum Corporation of Jamaica, Winston Watson, met with three of the four NGC Group Presidents to indicate an interest in LNG supply, LNG to CNG conversion, assistance with building an NGV industry, and wind and solar power collaboration. This led to the drafting of a Memorandum of Understanding, which is currently under review.

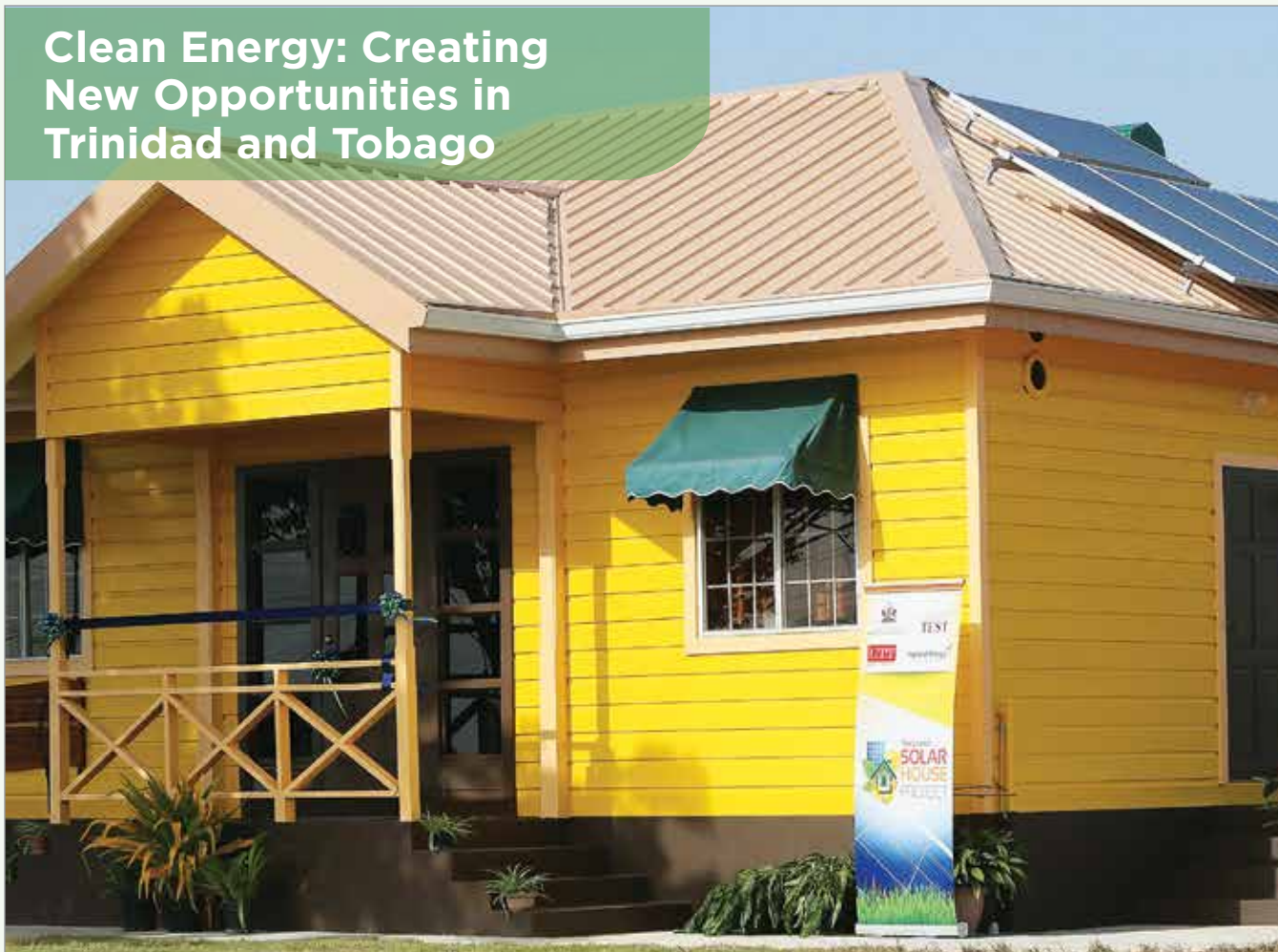
Sharing the model

Jamaica’s journey toward expanding its natural gas usage will undoubtedly involve greater collaboration with Trinidad and Tobago in the near future. The NGC Group stands ready to partner with its Jamaican counterpart, share its business model and help build regional capability in the natural gas sector.

¹ *New Fortress Energy is the current sole supplier of LNG to Jamaica with facilities for re-gasification in Montego Bay*

ENVIRONMENT & SAFETY

Clean Energy: Creating New Opportunities in Trinidad and Tobago



Solar House at UTT's Point Lisas Campus

Undoubtedly, the Trinidad and Tobago gas-based development model has provided strong economic growth for the country. Over the last decade, supply disruptions coupled with competitive global market environments have resulted in a decline in the energy sector's contribution to Gross Domestic Product (GDP) from a high of 51% (2008) to below 19% (2016). The effects of this decline will continue to be felt in the short to medium-term as the country seeks to restore balance to the economy.

Integration of renewable energy into the supply mix is now considered an imperative for all countries, given the adverse climatic effects being experienced globally. In Trinidad and Tobago, the incorporation of renewable energy will not only provide a clean alternative to hydrocarbon-fueled power, but can cradle a new cluster of sustainable energy service companies and lead to economic diversification.

As an industrialised Caribbean country, we possess natural renewable energy sources such as wind and

solar, as well as a highly skilled workforce, developed industrial sector, and supporting infrastructure to attract investments in areas across the clean energy value chain. Opportunities exist for investment in raw materials, component manufacturing, project development, financing, operations, installations and maintenance.

What is Clean Energy?

"Clean energy" and "renewable energy" are often used interchangeably, but what is the difference between the terms? Clean energy is simply focused on the reduction of carbon emissions through the application of lower carbon technologies. According to the International Energy Agency (IEA):

"The world needs a clean energy revolution to break the dependence on fossil fuels. Such a revolution would enhance global energy security, promote enduring economic growth and tackle environmental challenges such as climate change.

It would break the long-standing link between economic growth and carbon dioxide emissions. But to succeed it must be truly global in scope."

The IEA's focus on clean energy technologies includes global progress on technology roadmaps which encompass low carbon technologies, including renewable energy. Figure 1 below outlines the IEA's technical roadmap.

Clean Energy: Gateway to New Possibilities

It is important to note that the key enablers driving growth in the application of clean energy technologies

are the implementation of renewable energy policies and lower costs of accessing the technologies.

The adoption of the Paris Agreement continues to drive the implementation of renewable energy technologies. The IEA's outlook for the energy supply mix to 2040, shown in Figure 2, illustrates this progression. In the Caribbean, the Caribbean Community (CARICOM) has set renewable energy and energy efficiency targets of:

- 20% renewable power capacity by 2017, 28% by 2022 and 47% by 2027
- A 33% reduction in energy intensity by 2027

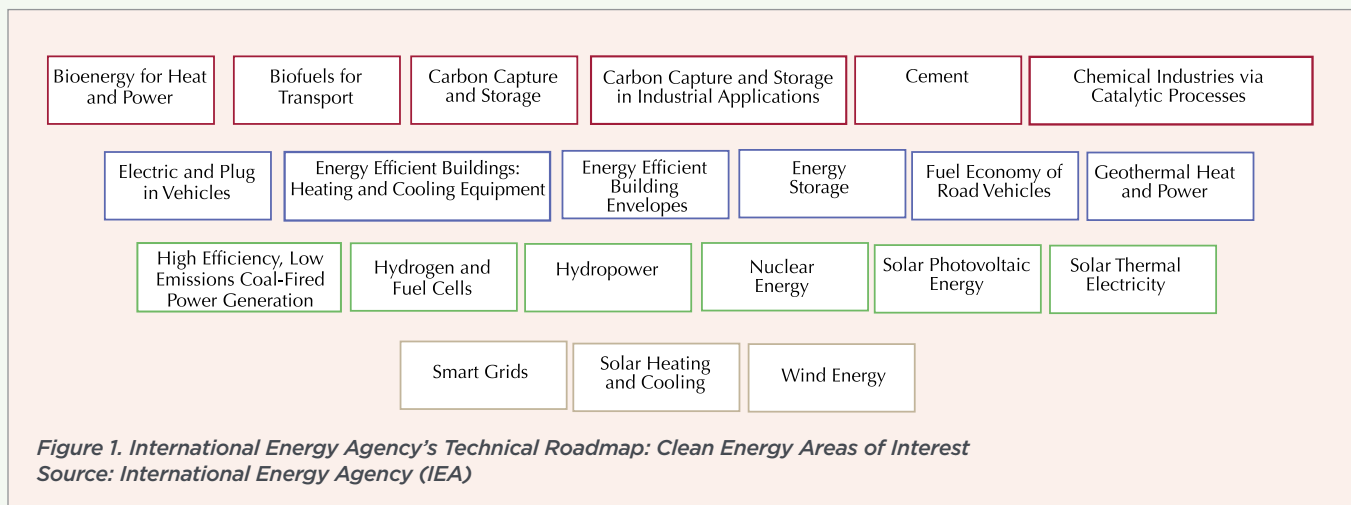


Figure 1. International Energy Agency's Technical Roadmap: Clean Energy Areas of Interest
Source: International Energy Agency (IEA)

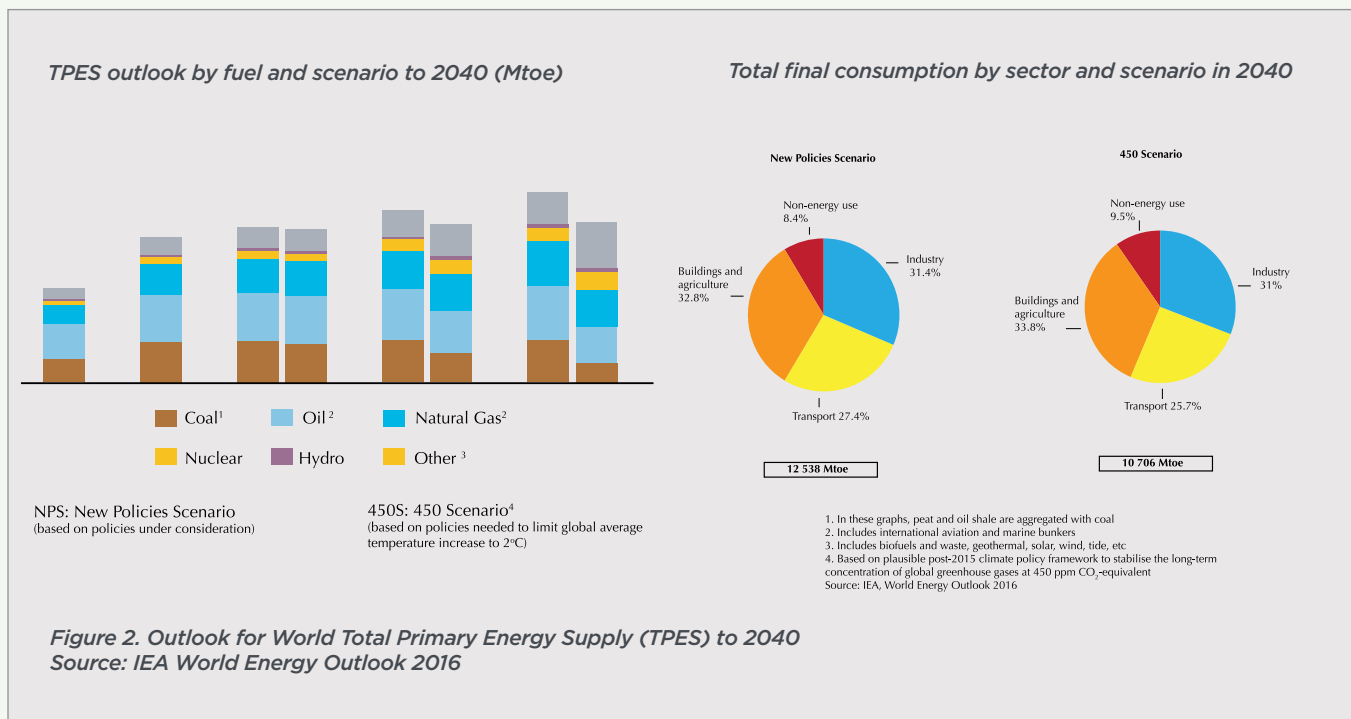


Figure 2. Outlook for World Total Primary Energy Supply (TPES) to 2040
Source: IEA World Energy Outlook 2016

- Power sector carbon dioxide (CO₂) emission reductions of 18% by 2017, 32% by 2022, and 36% by 2027.

Locally, in October 2015, both the Minister of Finance and Minister of Energy and Energy Industries presented Trinidad and Tobago's first policy target of generating 10% of electricity from renewable energy sources by 2021. Additionally, based on its Carbon Reduction Strategy for its power generation, transportation and industrial sectors, Trinidad and Tobago has also committed under the Paris Agreement to an emissions reduction target of 15% by 2030 from a 2013 business-as-usual case.

In support of the government's target, The NGC Group, through National Energy, is seeking to develop a solar industry in Trinidad and Tobago. The overall concept for the project envisaged the establishment of a solar photovoltaic (PV) manufacturing facility in Trinidad and Tobago. This involves development of a float glass facility in the initial phase, followed by metallurgical silica and polysilicon plants in the second phase (if economics justify expansion into the second phase). These plants can potentially generate 2,000 jobs, with the integrated solar PV plant accounting for 70% of the jobs. Furthermore, the implementation of enabling legislative frameworks can help create jobs for entrepreneurs; solar technology installers; engineers; project developers; skilled and semi-skilled workers both locally and regionally. Development of wind technologies is also on National Energy's agenda.

The implementation of renewable technologies can

expand the menu of energy sector employment options, as skill sets developed in the petrochemical industries can be transferred to this sector. According to the International Renewable Energy Agency's (IRENA's) Renewable Energy and Jobs Annual Review 2016:

"In the United States for example, renewable energy jobs increased by around 6% while employment in oil and gas extraction (and support activities) contracted by 18% (Saka and Muro, 2016). In China, renewable energy employed around 3.5 million people exceeding the 2.6 million employed in the country's oil and gas sector (CNREC, 2016)."

Figure 3 shows IRENA's breakdown of employment in renewable energy by technology.

Diversification of the energy job market must be supported by education and training programmes offered at both universities and technical/vocational institutions. This will deepen skill sets within the requisite standards outlined by local/international governing bodies for these new industries.

In addition to job creation, the adoption of clean energy in Trinidad and Tobago presents other benefits. For example, several fiscal incentives to promote renewable energy and energy efficiency were incorporated into the Finance Act No.13 of 2010 and came into effect on January 1st, 2011. These incentives included:

- **75% Accelerated Depreciation** - where a certified Energy Service Company (ESCO) has acquired

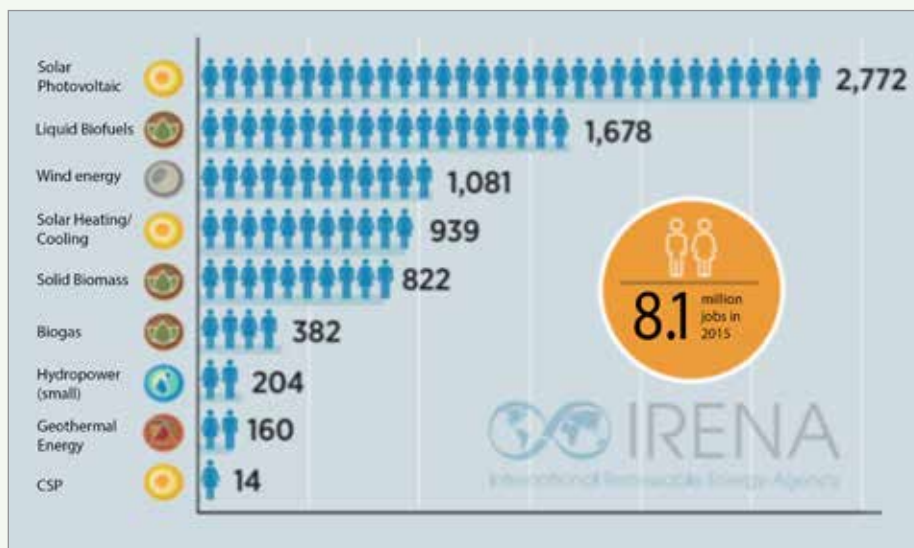


Figure 3. Renewable Energy Employment by Technology
Source: IRENA – Renewable Energy and Jobs Annual Review 2016



A solar photovoltaic (PV) panel

plant and machinery for conducting energy audits there shall be allowed an amount of 75% of the cost incurred in the year of acquisition, and this amount shall be the only allowance on this expenditure for that year.

- **150% Tax Allowance (Company that engages an ESCO)** - Allowance of 150% of the expenditure incurred by a company that engages another company certified as an ESCO by the Minister with the responsibility for energy for the design of energy saving systems and installation of the energy savings systems in the company.

The establishment of the Energy Services Companies Certification Committee and the certification system for energy ESCOs are key to unlocking the potential for creating new job opportunities to drive energy efficiency initiatives throughout the construction, manufacturing and industrial sectors.

Conclusion

A leader in the Caribbean in terms of industrial development, Trinidad and Tobago has lamentably lagged behind the rest of the region in adopting clean energy technologies. The impact of climate change, especially in the Caribbean region, warrants an urgent change in our approach to energy use and emissions. Our CARICOM neighbour Barbados, successfully developed a sustainable solar water heater manufacturing industry, supported by government incentives and policies and incorporated into both private and state sector housing developments. Recently, work conducted by the Economic Development Advisory Board concluded that Trinidad and Tobago should be focused on energy conservation, energy efficiency and renewable energy, in that order, to lay the foundation for a clean energy future. There is much to be gained from a move toward clean energy and there is no time like the present to begin the transition.

AMCHAM HSSE Conference 2017: People, Systems and Sustainability



Conference participants visit the NGC Group exhibition booth.

The American Chamber of Commerce of Trinidad and Tobago (AMCHAM T&T) hosted its 21st annual Health, Safety, Security and the Environment (HSSE) Conference and Exhibition on November 14th and 15th, 2017 at the Hyatt Regency, Port of Spain. Dubbed the region's premier HSSE conference, the event attracted more than 300 private and public sector HSSE professionals for two intensive days of panel discussions and technical presentations in the areas of occupational health, occupational safety, process safety, the environment, security and disaster management. The theme of the 2017 edition of the conference was, "People, Systems and Sustainability" and the objectives included knowledge transfer, networking and heightened awareness of HSSE issues among stakeholders.

Headlining the conference as speakers and panelists were HSSE specialists from the energy sector, the Trinidad and Tobago Police Service, security firms, legal and medical practices, universities, the Office of Disaster Preparedness and Management, and the international business community. The NGC Group, platinum sponsors of the event, was represented by NGC President Mark Loquan, NGC Senior Manager HSSE Curt Cadet, and PPGPL Vice President of Operations, Ramesh Harrylal.



NGC Senior Manager HSSE Curt Cadet delivers presentation on the OSH Act

Examining the OSH Act 10 Years Later

On the first day of the conference, Mr. Cadet participated in a panel discussion entitled, “TT OSH Act 2004, 10 Years On – An Employer’s Perspective”. His presentation looked specifically at challenges faced by employers with the Occupational Safety and Health (OSH) Act, 10 years after its enactment.

Trinidad and Tobago’s first HSSE legislation was the Factories Ordinance Chapter 30 No. 2 of 1950, which governed health and safety standards with respect to machinery, plants and hazardous processes. With post-1950 industrial expansion however, came new hazards and risks that were not adequately addressed by the Factories Ordinance, so the OSH Act was enacted in 2006 to absorb and replace the preceding legislation.

Mr. Cadet’s presentation focused on irregularities and shortcomings of the OSH Act in its current form, and the need to update and adapt it to the evolving industrial context. As Mr. Cadet explained, from an employer’s perspective, compliance with the Act is made difficult by ambiguous language and exclusions which leave room for interpretation. He gave numerous examples:

- There is no definition of what constitutes “medical attention” under the Act, so reporting requirements if an employee is sent for medical care out of caution rather than necessity are unclear.
- The parameters of workplace injury reporting are not clearly outlined, so reportable incidents can include injuries to customers, and debatably, persons who are injured on work premises but not in the course of work.
- There is uncertainty as to whether letters of recommendation issued by inspectors are legally enforceable, or whether the employer can disregard them with legal impunity.
- Minimum workspace requirements outlined in the Act do not specify whether furniture was considered in the determination of that space.
- Regulations for fire certification are not explicitly stated, so there is inconsistency in the process of obtaining this certification, varying from fire station to station.
- The limits of the powers of inspectors are not clearly defined, with room for subjectivity in the execution of duty.
- It is unclear how the Industrial Court is to treat with contestation of Prohibition Notices.
- There are instances where subsidiary legislation incorporated from the Factories Ordinance conflicts with prescriptions in the OSH Act of 2006, or is no longer applicable to modern industry.



Ramesh Harrylal, VP Operations, PPGPL, presents on Cyber Security – A Process Safety Risk

Mr. Cadet went on to compare Trinidad and Tobago’s OSH Act with the British Health and Safety at Work Act 1974 (HASAWA), from which our Act was mainly derived. He highlighted its use of more specific and precise language as an example for us to follow in revising our Act.

In closing, he touched on some of the positive attributes of the regulating Agency, OSHA and outlined a number of recommendations for improvement. Among other suggestions, he called for modernisation of the Act, collaboration with key stakeholders in the revision process, the establishment of an advisory mechanism under the Ministry of Labour and Small Enterprise Development to assist with OSH compliance, and a public/private partnership for an internship programme for Inspectors.

Cyber Security and Process Safety

In the oil and gas industry, process safety assurance is a critical success factor to business sustainability. As data acquisition and plant control system networks continue to be integrated with the business networks for real-time decision making by managers and executives, an ineffective cyber security programme can be a real threat to process safety assurance or Loss Of Primary Containment. It is imperative that executives and managers at every level understand why investing in cyber security is an important part of their risk management responsibilities.

To that end, PPGPL’s VP Operations Ramesh Harrylal delivered an insightful presentation to conference attendees. The presentation explored vulnerabilities with regard to cyber intrusion in the oil and gas industries. He gave an overview of applicable standards and outlined key practical and specific

actions to implement an effective cyber security programme. His presentation also outlined:

- The Global Risk Context
- Threat Sources
- Oil and Gas Industry Risk
- Cyber Security Integration with Process Safety
- Applicable Codes and Standards
- Executive and Management Responsibilities
- Practical and Specific Actions

People, Systems and Sustainability at NGC

Invited to close the conference was NGC President Mark Loquan. The uncharacteristic confluence of depressed product prices, declining reserves and expiring purchase and sale contracts has led NGC to carefully rethink its approach to business to remain viable. In keeping with the conference theme, Mr. Loquan outlined how the Company is focusing on its people and systems to ensure sustainability.

Developing People

As an energy company, NGC recognises that a strong safety reputation is critical to its licence to operate. Mr. Loquan told the audience that NGC’s Executive Management Team is seeking to engage more directly with employees to help build safety leadership within the organisation. He gave the example of Preventable Vehicular Accidents (PVAs) as being one target for attention. He added that employees are not the only focus for safety improvement. Contractors desirous of doing business with the Company are now required to have proper safety certification, following NGC’s signature of the Safe-to-Work TT Charter.

Another way in which NGC is approaching sustainability through people is by building its internal capabilities via strategic hires and organisational restructuring. For instance, in the interest of stabilising gas supply in the medium to long term, the Company has brought on board a geologist for the first time, to examine the economics and logistics of monetising marginal and stranded fields. Additionally, safety has been promoted up the order of Company priorities with the introduction of a new Senior Manager HSSE reporting directly to the President. Meanwhile, training and development of all employees continues apace, with revised training strategies being rolled out for 2018. The Company clearly intends to build on its strengths, and use its people to help keep the business competitive.

Refining Systems

Efficient systems are just as critical to company viability as capable people. NGC has been seeking to capture synergies with its subsidiaries and investment companies to cut expenditure and streamline processes. Systems targeted for rationalisation and upgrade include the internal procurement and ICT platforms.



Mark Loquan closes the AMCHAM HSSE 2017 Conference

From a business standpoint, the Asset Integrity Management system of NGC and its subsidiaries is being strengthened. According to Mr. Loquan, the results of the National Facilities Audit conducted this year reveal that NGC is lamentably below the national performance average. The aim is to correct that result so the Company meets and even exceeds the average in the near future. Asset integrity goes hand in hand with safety, and is consequently a core component of the Company’s licence to operate.

In as much as the energy value chain is a system, establishing and strengthening partnerships with upstream and downstream players is another way in which the Company proposes to leverage systems to secure its sustainability. The Company is a member of numerous stakeholder groups, including the Point Lisas Energy Association (PLEA), the Trinidad and Tobago Upstream Operators Group (TTUOG), the Energy Chamber and AMCHAM T&T. Through its membership and participation, the Company has a voice in matters concerning the future development of the local industry.

On a broader level, Mr. Loquan mentioned the need for a national allocation policy with respect to distribution of gas between the LNG and petrochemical sectors. A clearly defined and economically justified system for sharing declining supply between these sectors will help mitigate gas curtailment complaints, and will also inform planning for future expansion of downstream industry. These are both critical to NGC’s sustainability as the domestic merchant of natural gas.

INTERVIEW

**One Year Later:
PPGPL's President
Dominic Rampersad**



PPGPL's Facility at Point Lisas



Dominic Rampersad, President PPGPL

One year after his confirmation as President of Phoenix Park Gas Processors Limited (PPGPL), Dominic Rampersad spoke with NGC *GASCO News* to share more about himself, the business, and his vision for PPGPL. Employee development, employee engagement and organisational transformation have been high on his agenda. He shared some of his plans to achieve this through an organic merging of the old with the new.

GASCO News: Tell us about your journey in PPGPL. Where did you start and how did you progress through the Company?

Dominic Rampersad: I started as the Management Accountant in January 1994 and spent two years in that role. In 1996, I was rotated into a different role due to PPGPL's philosophy of job rotation and development. At that point, I was the supervisor of the Financial Accounting function, where I spent the next year and a half. In 1997, I was sent on a foreign assignment to work in the Treasury department of one of our shareholders at the time, ConocoPhillips. I was given specific learning objectives for treasury management, project financing, and learning more about the Front End Loading (FEL) process used in Business Development (BD) to take projects from ideas to construction and production.

There were 65 employees at the time working at PPGPL, and the Company invested in employees to build capacity. While I served as Management Accountant, I was given the opportunity to grow my capabilities by dealing with the project financing on the Soldado project, the construction of the first

gasoline tank on which Mr. Eugene Tiah was the Project Engineer. Employees were encouraged to take on projects once they showed interest. However, you had to do so in tandem with your normal workload and existing responsibilities.

We were fortunate to have a shareholder such as ConocoPhillips which made its resources available to us, and which shared its systems and processes, many of which we adopted. Working for a small company in Trinidad in those days, but having access to the technical and human resources of a huge, multinational company was of tremendous benefit to me. When PPGPL started the Gas Plan 2 Expansion Project in 1996, I worked again with Eugene Tiah, the then-Manager of Business Development, on the development phase of the project, and the construction of the port which is now Dock 2. I got involved in the entire project, while maintaining my core function in Finance. While at ConocoPhillips working in Treasury, the development phase of these projects had closed and the construction phase was about to begin.

When that secondment came to an end, I returned to PPGPL as the Business Development Project Leader working with the then-manager Prem Beharry. The two of us formed the Business Development department. After six months, we brought in two engineers. I worked on the contracts for Atlantic Trains 2 and 3, and practically completed the contract for Train 4. I also worked on the Fractionation 3 project, and by the time I was leaving the Business Development department, I began working on the Iso-Butane project.

In November 2003, I was promoted to the position of Manager of Finance and IT, which was eventually changed to VP Finance and IT. I spent 10 years in this role, and then in 2013 in a leadership rotation, I moved to the Operations department where I was VP Operations for a year. At the end of that year, I went back to F&IT and in November 2014, I began acting as the President of PPGPL until 2016, when I was confirmed in the role.

GN: What are your professional goals?

DR: Well, I've been in this role for some time now, so one of my main priorities is to become proficient as a CEO. There is still a lot of learning that is required, to know each function in this business, and to understand and then transform the key drivers for each function. My professional goal is to create opportunities for learning more about The NGC Group, and to get involved in more Group-related activities, because from that will come more accelerated, professional growth. For instance, I've been given the opportunity to lead two NGC projects and I welcome this. I get to learn NGC's core business, and expand my capacity

I would like when I'm leaving here for everyone to say that we set a vision, we worked towards it and achieved it.

by building competencies in different areas. I would like what I do as President of PPGPL to have a positive impact across The NGC Group. And so, it is my aspiration for my employees to also seek learning opportunities across the Group.

GN: How do you see PPGPL changing in the next few years, and how do you see yourself leading that change?

DR: There are three dimensions to that question. I refer to PPGPL's Strategic Plan which specifically addresses our main focus areas: production-centric business, marketing-centric business and growth-centric business. With production-centric business, we need to make it as efficient as possible and thus, secure it. But the biggest change will come from the marketing and growth-centric models. The marketing focus is really geared towards recovery of our market share. Due to gas curtailment on the island, we've had lower production, and therefore the amount of product we had available for sale was reduced, so we've lost market share. I therefore believe that we must regain our markets. As employees, we need to ask ourselves, what else can we do? We need to preserve what we have and grow it at the same time. We have to find new ways of doing business, if it means that we have to find product elsewhere, and use our geographic location in Trinidad to our advantage to be able to create a niche for ourselves. We have to be entrepreneurial! We have to be bold, and we have to be brave!

Within this, we need to transform the business. With respect to the growth-centric focus, this is where the transformation will come, and by growth, I don't necessarily mean growth in assets or in revenue. I mean growth in every dimension of the business. We are considering growth opportunities locally and regionally. Yes, we will continue to look for opportunities in Africa and other places, but it won't be at the expense of looking for opportunities here within the Caribbean. We have a strong balance sheet that gives us the ability to pursue these options. Organically, with this growth there will be expansion and realignment of some functions.

Already we have seen the Public Relations (PR) function aligning more closely with growth projects to create a favourable environment for business. Similarly, the folks in Finance will have to look at funding ventures in Barbados, or Cuba, or Ghana

or wherever we are doing business. All of our risk assessments will become different, and the risk profile of the business will start to change. Opportunities are not waiting on PPGPL or even the NGC Group. We have to compete with a multitude of companies that are looking to develop or expand or capitalise on these opportunities. These corporations are aggressive in their pursuits, and are positioned to make decisions on the spot. In this regard, we must be agile enough to take full advantage of opportunities when they are present.

GN: What is your vision for employees?

DR: We are working on multiple strategies, from employee engagement to succession planning. Employee engagement is an interesting one, because I want employees to be engaged with their hearts, by choice and not by force. Financial reward is an important motivator, but should not be the sole motivator for employees. I would like to see all employees committed to the company because they believe in what we are trying to achieve.

We are also looking at our succession planning systems for two reasons:

1. To extend our succession planning across the NGC Group and
2. To re-evaluate employees' experience within PPGPL.

We've already been able to access "cross-Group" advancements for our employees. However, there is no single employee for any position on the succession plan, the organisation has to ensure that we are fair to all the candidates on the plan, and that there is a development plan for everyone.

GN: Who are other leaders that inspire you?

DR: Sir Alex Ferguson. He took Manchester United, a football club that had not won the English Championship in over 20 years, and transformed it into the most successful football club in England and the most valuable sporting franchise in the world. To see what he did from the promotion of simple principles — loyalty to your fan base, loyalty to your club and discipline — was amazing. He recruited players who matched that philosophy. Before his tenure, the owners of the club tried to sell it, but it was only worth a few million pounds then; 20 years later, it is now a two billion-dollar business and one of the world's most profitable and successful football clubs.

Barack Obama, because of his dignity. He was the President of the USA for eight years, and to this day no one can point to anything unethical or questionable that he did during his tenure. They may question his policies, but not his character. I think you have to take your hat off to people like that. I admire the fact

that the most powerful man in the world was able to leave office with his family's name intact, and to date, continues to receive the respect and adulation of millions worldwide.

Prem Beharry was my "Jedi-master" at PPGPL. Former Manager of Business Development, he took me under his wing. When I was in Finance, he encouraged me to work in Business Development for my professional development. He taught me about business; he taught me about risk and how to manage it; he taught me how to not be an accountant, but a businessman; and he did it without ever asking me to say thanks. He did it out of the pure joy of doing it. I would say because of his work ethic and leadership style, he was the one who had the biggest impact on my career to date. I was able to implement a lot of ideas as the Vice President of Finance and IT because of my learnings in Business Development.

GN: When it is all over, how would you like to be remembered? What is the 'Dominic Rampersad legacy' that you want to leave behind at PPGPL?

DR: That with employees, we have all created something that we all love and are proud of. I don't want this to just be my legacy; it is not just about me — it is about all of us and what we want to create. We can choose what we want to create, and I am happy to empower everyone to get it done.

I would like when I'm leaving here for everyone to say that we set a vision, we worked towards it and achieved it. Everyone must have a voice, when people feel as though they aren't being heard, they disconnect, and this is so regardless of the situation — whether it's a relationship or at work, if people don't feel like they have a voice, they will separate themselves.

The other part of the legacy is that one day we will move away from being just a gas processing business to being something more. Gas processing should just be one part of what we do. If you think about Apple, it does not only manufacture computers, but changed itself and now sells a whole range of other technological products. If Apple just accepted that it is a computer manufacturer, then it would have never gone on to invent the iPod or the iPhone or put the iPod on the iPhone. So, we need to move away from just going with "business as usual" and transform into something else. There is something in here, in your heart, that we can do to transform ourselves to not simply think about gas processing, but something more.

That's the legacy I want for us.

GN: In one word describe yourself.

DR: Determined.

Exploring Further Business Opportunities Between Trinidad and Tobago and Venezuela



Verlier Quan-Vie, VP (Ag) Commercial at NGC, delivers a presentation at the Venezuelan Gas Processors Association Conference

On November 9th 2017, the Venezuelan Natural Gas Processors Association (AVPG), hosted a conference in Caracas on the theme “Business Opportunities between Venezuela and Trinidad and Tobago in the Natural Gas Sector.” There were several distinguished speakers at the event including the Venezuelan Deputy Minister for Gas, Douglas Sosa; Vice President of Gas of PDVSA, Cesar Triana; President of Royal Dutch Shell Venezuela, Luis Prado, and Verlier Quan-Vie, NGC’s Vice President, Commercial (Ag).

The Dragon Project featured as one of the main topics of discussion, given its progress to date and the avenues it will open for future collaboration between both countries.

With Venezuela’s vast reserves and its own development agenda, Ms. Quan-Vie explained that there is great potential for the sale and purchase of Venezuelan gas in Trinidad and Tobago as infrastructure and processing capability for LNG, NGLs and petrochemicals are already fully operational with available capacity. There are also further opportunities for growth including downstream investment and development.

Using the Dragon Project as a point of reference, Ms. Quan-Vie intimated that The NGC Group is open to collaboration, joint development and/or evaluation of investments with joint venture partners in the areas of:

- Upstream investment in cross- and across-border fields

- Natural gas transportation and distribution pipeline projects
- Gas supply arrangements
- Gas processing and fractionation projects
- Further downstream development
- Trans-shipment and logistics support services

The President of PDVSA Gas, Cesar Triana, had a similar outlook for future partnerships, noting: “These projects have a high probability rate to be implemented with the help of companies such as Shell [and] NGC, which will result in the generation of new jobs and high value for the development of the countries.”

Commenting on her experience at the conference, Ms. Quan-Vie stated:

“The AVPG conference in Venezuela was an excellent opportunity to introduce NGC, and by extension, the Trinidad and Tobago gas industry, to our Venezuelan counterparts. Our presence at the conference and presentation were well received. There was a very keen interest by several of the Venezuelan gas producers in Trinidad and Tobago’s available market opportunities and several meetings were arranged for further discussions. Simultaneously, NGC was able to obtain first-hand information about the Venezuelan gas industry and the significant gas resources of that country. NGC will seek to gain a better understanding of the Venezuelan gas landscape to determine potential synergistic growth opportunities.”

Celebrating our First Peoples Heritage



Smoke ceremony at the Hyarima Monument, Arima

The Santa Rosa First Peoples Community is the only organised area of Amerindian survival in Trinidad and Tobago. Formerly referred to as the Carib Community, the First Peoples Community is the official representative of the interests of local indigenous people in matters of national and international concern.

The First Peoples trace their lineage directly to the indigenous tribes who settled the island thousands of years before Spanish conquest. Their culture and traditions have survived centuries of oppression, notably, their knowledge and use of indigenous flora and fauna; traditional agricultural activity; basketry; distinctive house-building skills associated with thatching and tapia; the planting and processing of cassava and to a lesser extent, maize (corn). Their most important event is the annual celebration of the Festival of Santa Rosa de Arima/Lima which has the distinction of being the oldest continuously celebrated feast day in Trinidad and Tobago's history.

One of the ambitions of the Community is to use the 25-acre parcel of land that was granted to them by



Indigenous Street Parade

the government, along the hill slopes of the Northern Range on the Blanchisseuse Road, to establish a Model Amerindian Heritage Village and Living Museum. As envisioned, this village would provide visitors with an immersive insight into the lives and culture of our indigenous peoples.



Interactive demonstration at the Schools' Rally during First Peoples Heritage Week

First Peoples Celebration at NGC

In May 2017, the government announced that a one-off public holiday would be granted on October 13th to commemorate the history and legacy of the First Peoples of Trinidad and Tobago. The decision to have a national observance to bring the story and culture of the First Peoples to the fore was welcomed by the community, for whom visibility is the first critical step toward meaningful recognition.

As a state-owned Company invested in cultural preservation, NGC was keen to do its part to raise awareness around the contributions of our indigenous ancestors. To that end, the Company hosted a First Peoples Celebration at its Head Office on October 4th, and invited members of the Santa Rosa First Peoples Community to share their story, artefacts and arts and craft with staff. Invited to speak was Chief Ricardo Bharath Hernandez, who delivered an enlightening presentation which cleared misconceptions about the community's past and present, gave insights into its festivals and customs, and shared its ambitions and future plans.

Following the presentation and an interactive session with employees, NGC President Mark Loquan gifted a cheque to Chief Hernandez on behalf of the Company to support the activities of the community during the week of planned celebrations leading up to the



NGC President Mark Loquan makes presentation to First Peoples Chief Bharath Hernandez

official day of recognition, First Peoples Heritage Day, on October 13th.

In a further show of support to the community's cause of building awareness, NGC embarked on a project to produce an educational video featuring interviews with Chief Hernandez and Carib Queen Jennifer Cassar, as well as footage from heritage celebrations. This video will be circulated within the library and school systems. The project recognises that cultural preservation is predicated on public education, and aims to ensure successive generations are exposed to the culture and oral histories of our indigenous people.

Hasely Crawford Commemorative Exhibit Goes on Tour

They were contending in the shortest Olympic distance, but at that moment, it must have seemed the longest in the world. As the runners crossed the half-way mark, one figure emerged from the bunch, and the screams and cries reached a wildness of frightening intensity. Soon, it was over. The athlete lunged, breasted the tape, and leapt into the air in jubilation. Warm applause resounded around the ground, but thousands of miles away in Trinidad it was not simply a question of warm applause, it was a question of incredible joy.

- Michael Anthony, *Our First Olympic Champion*

The Hasely Crawford exhibition is the first in a commemorative series inaugurated by NGC to celebrate the lives and contributions of our national heroes. The impetus for the project is a desire to ensure the stories of the iconic men and women who have turned international spotlights on our nation through their work and achievements, are properly chronicled, preserved and shared. The project will focus on a different hero each year, selected from all fields of endeavour, and may assume different formats according to the individual being honoured.



L to R: Mrs. Marina Salandy-Brown; Sen. The Hon. Bridgid Annissette-George; H.E. Hasely Crawford; Mrs. Sharon Clark-Rowley; Mrs. Janelle Penny Commissiong-Chow; Mr. Neil Parsanlal (Chairman, NALIS) and Mrs. Catherine Romain (Executive Director, Ag, NALIS)

On July 21st 2017, NGC and The University of the West Indies (The UWI), St. Augustine launched an exhibition to celebrate the life and achievements of living legend, His Excellency Hasely Crawford TC. The exhibit, entitled “Invicta – The Crawford Legacy”, combines press reportage, articles, Olympic memorabilia and other awards into a comprehensive display, meant to educate the public about the prolific achievements and lifetime of contributions of one of our national heroes.

Initially displayed at The UWI’s Alma Jordan Library for a month, the exhibition was handed over to the care of The National Library and Information System Authority (NALIS) to be taken through the library circuit as a roving exhibition, with stops at the Rio Claro; Princes Town; Point Fortin; Couva and Arima Public Libraries.

The roadshow phase of the “Invicta” project was launched on November 7th 2017, at the National Library of Trinidad and Tobago in Port of Spain. The

event was staged as a series of readings from works written about the Olympic champion. Present to lead the readings were distinguished guests:

- Senator the Honourable Bridgid Annissette-George, Speaker of the House of Representatives
- Mrs. Sharon Clark-Rowley, wife of Dr. the Honourable Keith Rowley, Prime Minister of the Republic of Trinidad and Tobago
- Mrs. Janelle Penny Commissiong-Chow, Chairman of the newly formed Tourism Trinidad Destination Management Company Ltd.
- Mrs. Marina Salandy-Brown, Founder and Director of the NGC Bocas Lit Fest

Following the presentations, students of the Richmond Street Boys’ Anglican Primary School who attended the event had the privilege of meeting and requesting autographs from Mr. Crawford himself. The enthusiasm of the students made it clear that the ultimate intent of the exhibit to inspire our youth and build pride in our national heroes was realised.

Celebrating the Talent of our Youth: Another Successful Instalment of NGC Sanfest



Dancing away: NGC Sanfest Command Performances

NGC Sanfest is a competitive arts festival open to primary and secondary schools. It pivots around visual, literary and performing arts. For 47 years, it has served as a perfect springboard for young performers and an incubator for the arts in Trinidad and Tobago.

The standard of performance and creative output at this festival gets better every year. This is one reason NGC has continued to renew this investment since 2003. The 2017 Festival was themed, “Celebrating the Talent of our Youth” and was dedicated to cultural icon Calypso Rose and Torrance Mohammed, a Sanfest foundation member.

This year, Sanfest events ran from September 18th to November 8th, culminating in the following highlight events:

Mr. and Miss NGC Sanfest Teen Talent Competition

The Mr. and Miss NGC Sanfest Teen Talent Competition is a holistic event focused equally on honing talent and personal development. Prior to the stage performances, contestants are coached in leadership, public speaking, carriage and appearance, and are given guidance to refine their specific talents. The competition requires participants to portray a



Mr. and Miss Sanfest 2017

traditional folk character, creatively present their findings and opinions on a themed research question, deliver a stage performance in their genre of choice and answer one NGC fact-based and one opinion-based question.

This year, the rigorous contest saw the soucouyant,



Young drummer at NGC Sanfest Pan Ensemble Finals

the douen and the silk cotton tree come to life through exceptional performances from 18 competing delegates. In the end, it was Kevan Calliste, aged 18, of St. Benedict's College and Jilisse Roberts, aged 14, of Naparima Girls' High School, who emerged victors.

NGC Sanfest Pan Ensemble Finals

The Pan Ensemble event sets young pannists from primary and secondary schools at centre stage. Preliminary events take place at the respective schools, while the grand finals are hosted at Skinner Park, San Fernando.

The 2017 event was dedicated to Calypso Rose and each participating steel orchestra performed one of her songs to a large audience comprising schoolmates as well as officials from the Ministry of Education, the Ministry of Community Development, Culture and the Arts, the Mayor of San Fernando's Office and sponsor NGC.

The hotly contested event was eventually won by St. Gabriel's Girls' R.C. School in the primary school category, with their lively performance of the popular Calypso Rose song, "Tempo". In the secondary schools' category, there was a tie between St. Benedict's College, San Fernando and Trinity College, Moka, for first place. The two bands performed "Leave Me Alone" and "Leh We Punta".



NGC Sanfest Command Performance, The Silk Cotton Tree

Command Performances

After weeks of intense competition, the best performers are invited to deliver encore presentations at the highly anticipated feature event called Command Performances. One day is dedicated to primary school performers, while the other brings the best secondary school artistes back on stage. Certificates and trophies are also distributed at these events.

Invited to perform at the primary school Command Performance on November 7th, were Samira Baksh from San Fernando TML (oration), students of the Arima Government Primary School (limbo dance) and St. Gabriel's Girls' R.C. School (parang). Nailah Blackman, a past participant of NGC Sanfest, serenaded the audience with a special guest performance.

On November 8th, the audience was treated to a pan solo from Illorie Waite of Bishop Anstey High School, a monologue from Jilisse Roberts of Naparima Girls' High School, and African drumming from the Malabar Secondary School.

Making a Difference: NGC Proudly Sponsors Police Youth Clubs

On November 27th 2017, NGC President Mark Loquan and Acting Commissioner of Police Stephen Williams of the Trinidad and Tobago Police Service (TTPS) signed a Memorandum of Understanding (MoU) for NGC's sponsorship of five Police Youth Clubs (PYCs) in La Brea, Couva, Laventille Road, Penal and Mayaro for the period 2017 to 2019.

NGC's involvement with the PYCs began in 2013. With youth development being an axis of NGC's Corporate Social Responsibility (CSR) portfolio, the Company determined that the PYCs were a perfect fit for support, on account of the important work being done by the clubs to expose our youth, especially in disadvantaged communities, to positive influences and avenues for growth. Over the years, NGC has been heartened by the performance of the PYCs that receive direct support through our sponsorship. Their successes justify every dollar invested.

Below are highlight achievements of two of our sponsored clubs.

SPOTLIGHT ON SUCCESS

Couva PYC

The Couva PYC has been a recipient of NGC support since 2013. Among the many activities facilitated by the club is training in drumology, and participants in these classes have proven that the club's investment in the activity is well-placed. The club has been practising the art form for just over two years, and participants have consistently represented their area with excellence on various stages. In 2016, the club's first entry into the Prime Minister's Best Village Competition saw it rank among the top 10 out of 168 groups that participated. This year, the group improved its performance, placing third overall. Notably, the group had the youngest participants in this year's competition. The average age of its approximately 25 members was nine years old.

Laventille Road PYC

Since NGC first became involved with the Laventille Road PYC in 2013, the club has grown in strength and impact. According to club leader Senior Superintendent (Ag.) Curtis Paul:

"NGC has helped the club advance and develop tremendously since coming on board as sponsors, and has provided both financial and moral support. Our leaders and club members all profit from the training and capacity building exercises facilitated by the Company. Most notably, our steel orchestra has made great strides with NGC's support. We have



Acting Police Commissioner Stephen Williams (L) and NGC President Mark Loquan (R) sign MoU for NGC sponsorship of Police Youth Clubs

had the distinct honour of performing for the Prime Minister, President, Commissioner of Police, as well as foreign dignitaries. This year, the band was the only PYC orchestra to perform at the Junior Panorama Finals, Laventille Emancipation Steelband Festival and Pan on D' Avenue. We are extremely proud of its progress and grateful for NGC's continued support."

One club member in particular has demonstrated praiseworthy growth and development during the course of her involvement with the Laventille Road PYC. Ms. Rae-Ann Guerra, now President of the Youth Arm of the club, joined the PYC six years ago, and is today the first member to go on to pursue tertiary education at The University of the West Indies. A final year student of Theatre Arts and Communication Studies, Ms. Guerra is also an avid calypsonian and pannist, and has been afforded many opportunities for personal advancement by the PYC. She is now practiced in public speaking and is often selected to represent her PYC at events throughout the country. She has participated in and consecutively won calypso competitions, and has accompanied the steel ensemble at numerous engagements. She also benefitted from NGC-sponsored training courses. Ms. Guerra comments: "The PYC has done a lot for me. In addition to the opportunities I've had to develop my skills and talents, my leaders take an active interest in my development, reward academic achievement, and motivate me to strive for excellence."

NGC applauds the leaders of the PYCs for their invaluable work in service of our nation's youth. We restate our commitment to stand with the TTPS as corporate partners in its mission to build a brighter and safer future for Trinidad and Tobago.

PPGPL NEWS

PPGPL Presents a Trinidad Case Study at Cuba Energy Conference

NGC and its subsidiaries were represented at the Cuba Energy Conference held on September 27th and 28th 2017 at the Melia Cohiba Hotel in Havana, Cuba. The theme focused on the “Promotion of Partnerships in Pursuit of Opportunities in the Emerging Cuba Oil and Gas Sector”.

NGC’s team included: Alvin Dookie, Vice President – Business Development, Phoenix Park Gas Processors Limited (PPGPL); Aston Brown, Business Development Project Leader, PPGPL and Arden Rodriguez, Team Leader – Business Development, National Energy.

Alvin Dookie made a presentation on behalf of NGC and its subsidiaries entitled, “Oil and Gas in Trinidad and Tobago – A Case Study”. The objective was to highlight the accomplishments of Trinidad and Tobago in the development of its oil and gas sector over the years, and thereby position NGC and its subsidiaries as attractive, potential partners through which Cuba can further develop its energy sector.

The presentation highlighted the extensive track record of Trinidad and Tobago as a producer of oil for over 100 years, while providing a chronicle of the country’s success in attracting global downstream investment in the methanol, ammonia and derivative petrochemicals sectors.

The model of National Energy as an energy investment facilitator through the development of port and estate infrastructure was also discussed. The role of a suite of educational institutions established in Trinidad and Tobago was highlighted as a critical enabler of our success in attracting foreign investment. The University of the West Indies (The UWI), the University



Alvin Dookie, VP Business Development at PPGPL, presents at the Cuba Energy Oil and Gas Conference

of Trinidad and Tobago (UTT) and the National Energy Skills Centre (NESC) have been strategically placed in the country’s landscape to make Trinidad and Tobago one of the most competitive gas markets in the world for investment in downstream projects. Mr. Dookie concluded by highlighting the keen interest of NGC and its subsidiaries in developing mutually beneficial projects in the Cuban gas sector.



NATIONAL ENERGY NEWS

Exploring Business in Suriname

Companies in Suriname are taking a proactive approach to prepare their energy industry for potentially large oil and gas discoveries, which energy experts are predicting will happen soon. That was the unifying thread which connected the various presentations at the second Suriname International Mining, Energy and Petroleum Conference and Exhibition (SURIMEP) held in Paramaribo, Suriname from November 1st to 3rd, 2017. As a bronze sponsor of the event, The NGC Group used the opportunity to make a definitive statement about Trinidad and Tobago’s interest in expanding its energy industry beyond our shores, and outline the extensive range of energy services the Group, and by extension, the country, has to offer.

During the sixth session of the conference, Ms. Marcia Maynard, Team Leader in the Energy Industry Development Department at National Energy, made a presentation entitled, “Developing a Sustainable Energy Industry: The Trinidad and Tobago Experience”. She recounted Trinidad and Tobago’s experience over the past 100 years of commercial oil production in which the economy had shifted from being primarily oil-based to being gas-based.

Over time, the focus of exploration activity also moved successfully from onshore to offshore, resulting in significant increases in production.

An integrated group approach was taken during a series of targeted meetings with government agencies, exploration and production operators and private sector organisations including The Ministry of Natural Resources, Exxon, Staatsolie, Petronas and the Suriname Chamber of Commerce and Industry. Focus was placed on areas of potential cooperation between Trinidad and Tobago and Suriname, as well as investment opportunities in the burgeoning energy territory. The Group also took the opportunity to learn directly about the current business environment in Suriname and the challenges being faced by companies operating there.

A key area earmarked for further discussion and development was knowledge transfer based on Suriname’s advancements in the application of renewable energy technologies for power supply. Additionally, the potential for implementation of CNG and LNG as alternative fuels and other investment opportunities will receive further attention in the coming months.

Overall, the NGC Group’s visit to Suriname was very successful and helped to advance the Group’s internationalisation strategy.



Marcia Maynard presents on the Trinidad and Tobago Experience at SURIMEP Conference



Sharing CNG Expertise with Guyana



Curtis Mohammed, President NGC CNG (3rd from left), stands with visiting representatives of the Guyana Energy Agency

Guyana is preparing for a future of natural gas-based industrialisation, following significant oil and gas discoveries in its maritime territory. As part of its groundwork, the country is studying options for utilising natural gas in the CNG industry. To that end, officials of the Guyana Energy Agency (GEA) paid a visit to NGC CNG in September for a first-hand look at CNG installations and equipment. The contingent was led by CEO of the GEA, Dr. Mahender Sharma, and included officials of ICON LNG, a regional provider of LNG to power-generating and other industries.

President of NGC CNG, Curtis Mohammed, explained the basic philosophy of his company to the delegation and the progress of its mandate to accelerate CNG use in Trinidad and Tobago, in order to give some context to the local CNG industry. Discussions also centred on the mechanisms involved in getting maxi taxi drivers to switch to CNG, which was of particular interest to the GEA.

The team was then taken on a tour of different CNG facilities. They first visited the recently opened CNG station at Tumpuna North in Arima. To get a sense of the logistics of CNG operations, the group studied the metering station, compressor, storage and dispenser layout and set up. Team members also spoke to CNG



users at the pump for customer feedback on the product and conversion process.

Also on the agenda was a visit to the PTSC compound at City Gate, South Quay, to look at the mobile refuelling unit and temporary CNG station. The visitors also had the opportunity to meet with licensed converter Burmac CNG in Chaguanas, examine the equipment and discuss the economics of vehicle conversion.

CNG Station Network Expanding



CNG now available at Starlite Station

CNG is now available in Diego Martin, North West Trinidad. As of October 31st 2017, CNG customers now have a second station in their area at which to fill their tanks, in addition to the St. Christopher's station on Wrightson Road, which was opened in June 2016. The new multi-fuel station is located at the entrance to Diego Martin and offers CNG to the motoring public for the first time in Diego Martin.

NGC CNG, a subsidiary of NGC, was incorporated in 2013 with a budget of \$500 million to equip up to 22 new stations with CNG. Addressing the media and officials of the National Petroleum Marketing Company (NP) at the opening of the Diego Martin station, NGC Chairman Gerry C. Brooks said that since his Board assumed office, that plan has evolved into doing more with less. "From an initial budget of \$500 million, our

Board proposes to exceed the original targets with a reduced budget of \$321 million. The country saves \$179 million dollars and expands the network from the original plan of 22 to 30 stations by 2019."

In June 2017, CNG became available again in East Trinidad with the opening of the NP Tumpuna North station in Arima. The previous CNG supply in Arima at Massy ACL on O'Meara Road was closed in 2015. Several other CNG stations are at various stages of construction, with expected openings in late 2017 and 2018. Additionally, the Mobile Refuelling Units (MRUs) will be operational in 2018, with a key site of operation being the outskirts of the Cove Industrial Estate in Tobago. This CNG supply is being mobilised for Tobago ahead of the expected roll-out of CNG buses by the Public Transport Service Corporation in mid 2018.





TO REFLECT ON OUR HISTORY

Hyarima was a Nepuyo warrior and leader of the indigenous people of Trinidad and Tobago who fought to protect his people and their ancestral lands from European colonisers. This statue in his honour stands at Hollis Avenue, Arima.

Photo by Shaun Rambaran



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