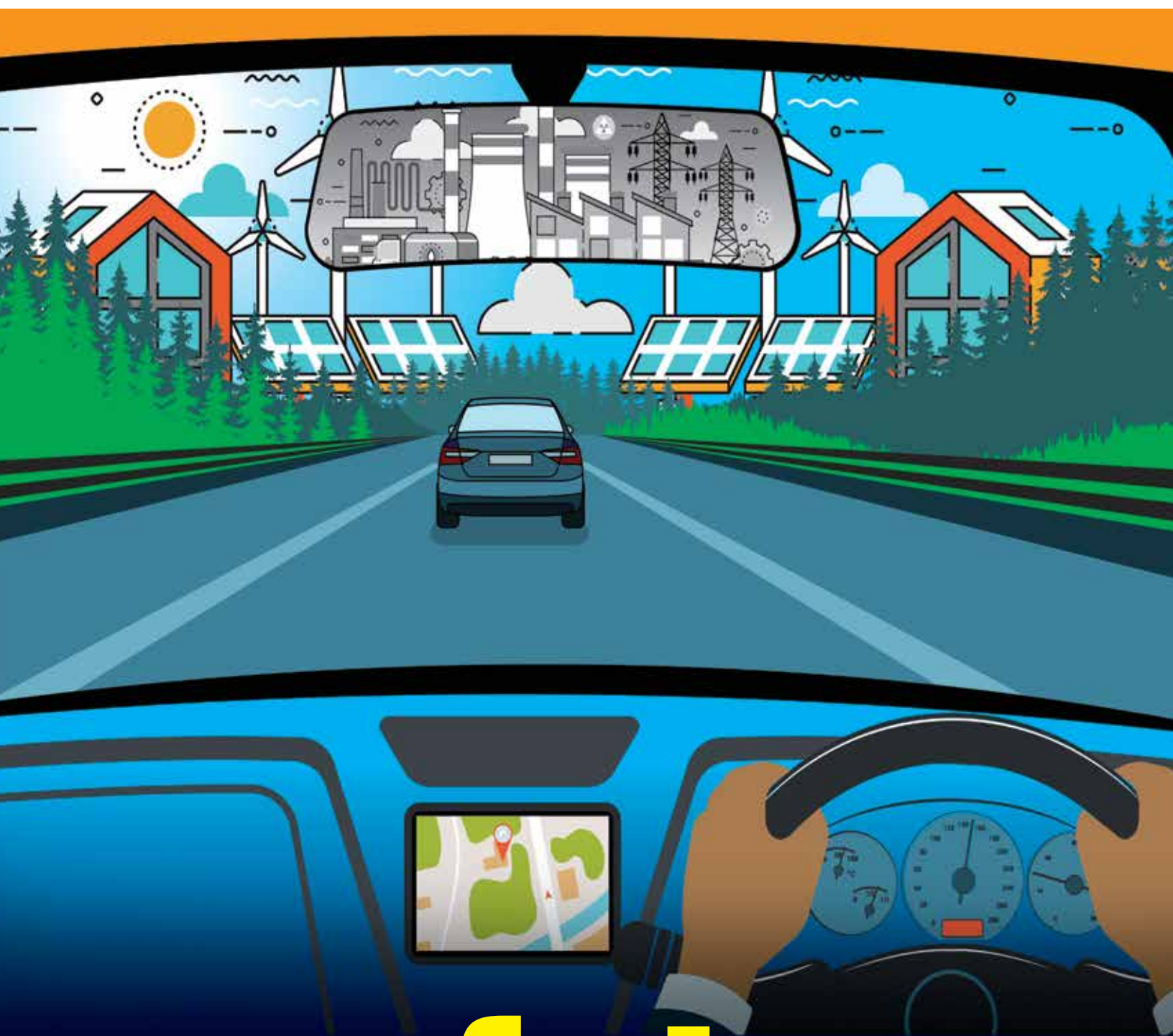


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Back to the **future**



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PRESIDENT'S MESSAGE

Looking Back to Chart the Way Forward

YEAR'S end is always a meditative period, when we are moved to reflect on our achievements over the year gone by and deliberate on the possibilities and opportunities that await in the months ahead. For us at the NGC Group, both the past and future give us reason to hope, and inspire pride in the path of our Company.

Thoughts on 2018

In 2018, the NGC Group pushed several important agreements forward to completion or past significant milestones. These included:

- Finalisation of a commercial agreement with oil and gas company, Global Petroleum Group (GPG), to collaborate towards monetising gas reserves in Grenada's maritime territory;
- Signing of a Technical Services Agreement (TSA) with Empresa Nacional de HidroCarbonetos (ENH) of Mozambique to assist with developing Mozambique's natural gas sector;
- Signing of a Gas Sales Agreement with DeNovo Energy for NGC to purchase gas from the Block 1(a) asset, in which NGC owns a 20% stake;
- Signing of the term sheet for the Dragon Marine Field project – the necessary precursor to the final Gas Sales Agreement;
- Signing of a gas deal with ammonia giant, Nutrien, which operates four ammonia plants and one urea plant at the Point Lisas Industrial Estate; and
- Conclusion of contract negotiations with CNC and Nitrogen (2000) Unlimited (N2000).

Important works were undertaken and completed on segments of our pipeline infrastructure, strengthening our network. We were also pleased to bring to a close two legacy projects – the Phoenix Park Valve Station (PPVS) upgrade and the Liquid Fuels Pipeline Project (LFPP).

The Company kept a close eye on safety this year, implementing several mechanisms for improving HSSE performance. Among these were a Full-Scale Emergency Response Drill, HSSE knowledge-transfer initiatives, eco-minded activities and training and development programmes.

NGC also had the distinction of participating in the 20th Ministerial Meeting of the Gas Exporting Countries Forum (GECF) hosted in Trinidad in November, which gathered oil and gas leaders from across the globe. NGC leveraged this opportunity to launch the 2018 Caribbean Energy Map – a seminal publication of value to all regional energy stakeholders.

Another headline accomplishment was the publication of our first *Sustainability Report*, which was also the first for any state enterprise in the country. As we seek to bring



Mark Loquan, President, NGC

our Company up to par with international best practice, we will be broadening our sustainability reporting metrics and improving our accountability as an organisation.

These activities represent but a fraction of the work programme closed off this year, which laid a solid foundation for continued growth and achievement in 2019.

Up next

Works continue apace at our subsidiary companies to advance the Strategic Plan to 2020, and 2019 promises exciting developments in our business portfolio. National Energy is making strides in green energy, with several important projects being explored, and NGC CNG continues to thicken the CNG network.

In the background, we will continue to deepen partnerships locally and abroad, broach new commercial territory through equity investments in international projects and initiatives such as commodity trading and consultancy, and generally push the frontiers of our business to grow our revenue streams. Our goal is to move beyond the core pipeline business, leverage our people and expertise, and evolve into a recognised and respected global energy brand.

This issue of *GASCO News* fittingly toggles between the year we have left and the one before us, spotlighting some of the highlights of 2018, and offering a glimpse into our plans for 2019 and beyond. We thank all who have brought us here, and all who will take us further. ■

Mark Loquan, President



Meeting of Minds

Trinidad and Tobago hosts the 20th Ministerial Meeting of the GECF

IN November 2018, Trinidad and Tobago had the privilege of hosting premiers, government ministers and energy officials of several gas exporting nations at the 20th Ministerial Meeting of the Gas Exporting Countries Forum (GECF). The event, which took place over two days at the Hyatt Regency Trinidad, was a platform for critical discussions and deliberations at the highest levels of the global natural gas industry. Represented were members Algeria, Bolivia, Egypt, Equatorial Guinea, Iran, Nigeria, Qatar, Russia, Trinidad and Tobago, the United Arab Emirates and Venezuela.

WHAT IS THE GECF?

The GECF is an international organisation established to support its member nations in their independent and sovereign management and development of natural gas

resources. To achieve this goal, the GECF has facilitated dialogue, and the exchange of information and ideas among its members, around issues such as:

- Worldwide gas exploration and production trends;
- Present and anticipated supply-demand balance for gas;
- Worldwide gas exploration, production and transportation technologies;
- The structure and development of gas markets (regional and global);
- Transport of gas: pipelines and LNG carriers;
- Interrelationship of gas with oil products, coal, and other energy sources;
- Technologies and approaches for sustainable environmental management, taking into account environmental constraints, national regulations

2018

Meeting of Minds | CONTINUED

and multilateral agreements on environment and their impact on volume and sustainability of gas consumption; and

- Techniques and approaches for maximising the contribution of natural gas resources, at all stages of the value chain, to the promotion of sustainable economies and human resources development in member countries.¹

The GECF also seeks to promote meaningful dialogue between gas producers and gas consumers to ensure global market stability and security.

Among the specific themes tabled at the 2018 GECF Meeting were the current state and prospects of natural gas markets, natural gas and long-term energy security, and the role of natural gas in the energy policies of Latin America and the Caribbean.

TRINIDAD AND TOBAGO ADDRESSES THE GECF

The Prime Minister of Trinidad and Tobago, Dr. the Hon. Keith Rowley, and the Minister of Energy and Energy Industries, Sen. the Hon. Franklin Khan, were among the speakers headlining the conference. Their message was clear – the landscape of energy is changing, with consequences for gas stakeholders across the world, and there needs to be simultaneous and careful recalibration in global gas to ensure the industry's viability.

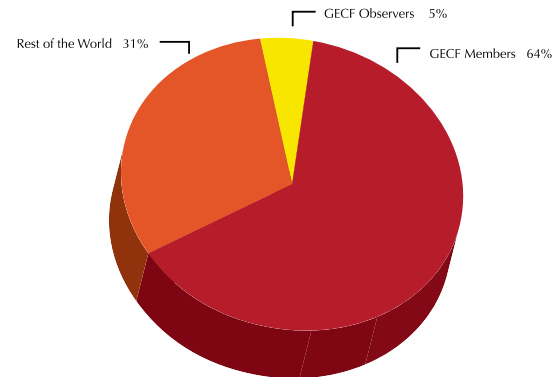
Dr. Rowley, in his feature address to the GECF assembly, made a solid case for adaptation and collaboration. The USA, formerly this country's largest LNG customer, has now become a competitor in the market on account of shale gas. Trinidad and Tobago now has to broaden its horizons to find new buyers for its gas products, and faces the threat of existing customers defecting to the US market. The challenge at hand is ensuring the local gas industry remains competitive in the face of these conditions, while maximising the value returned to the country from natural gas development and marketing.

The tug of war between these exigencies is further complicated by the country's diminishing reserves. As fields mature and reservoirs shrink, gas is becoming increasingly expensive to farm. This erodes the competitiveness of local gas on the international market, and also reduces the margins that accrue to government from gas production. This double-edged sword has forced a rethink of market strategy and compelled greater investment in offshore exploration and production.

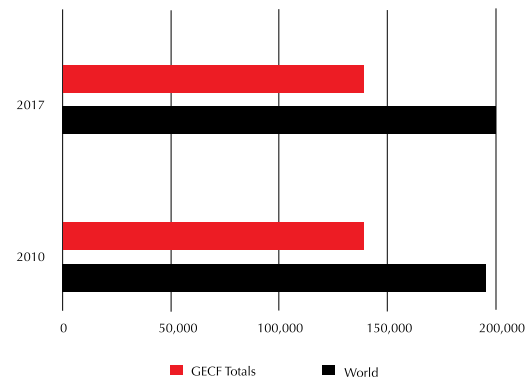
Giving some comfort, however, are projections that demand for natural gas will grow over the next few decades, as the world moves to build a cleaner energy

Charts showing GECF share of global gas reserves

GECF Countries and Rest of the World Natural Gas Proven Reserves 2017 • Bcm



GECF Countries and Rest of the World Natural Gas Proven Reserves 2010 vs 2017 • Bcm



future. As the least pollutant fossil fuel, and with its high energy efficiency relative to other hydrocarbons, natural gas is an appropriate complement to renewable energy sources. Consequently, natural gas will remain a valuable product, as will its derivatives and associated commodities.

The challenge, then, is to ensure the local industry can remain sustainable in that clean energy future, capable of responding to market demand and flexible enough to adapt to change. The sustainability of the gas industry requires deliberate and strategic investment in pipeline and storage infrastructure, new technologies, downstream development and training. Ensuring a secure supply of gas is a major imperative, as is greening gas production to reduce the carbon footprint of the industry.

This cannot be achieved in a silo. Trinidad and Tobago is not alone in these market circumstances, and collaboration among gas-producing nations is critical to the survival of the global industry as a whole, for producers and consumers alike. The GECF countries

¹ <https://www.gecf.org/about/mission-objectives.aspx>



NGC President Mark Loquan (R) presents the 2018 Caribbean Energy Map to Sen. the Hon. Franklin Khan, Minister of Energy and Energy Industries, at the GECF Symposium

together account for just over two-thirds of the world's proven gas reserves. This heft means the organisation holds considerable market share, and a pivotal role in shaping the future of gas.

While individually the GECF nations have sovereign rights and agendas with respect to their gas, they share a collective interest in sustaining the global industry. Of note, the GECF encourages knowledge-transfer among its members, allowing nations like Trinidad and Tobago to both share their experiences in energy and learn from those of other established players. Such exchange is facilitated at symposium events on the sidelines of the GECF Ministerial Meetings.

NGC President Mark Loquan participated in one such event – a panel discussion on 'The Role of Natural Gas in Energy Policies of Latin America and the Caribbean'. Mr. Loquan was also afforded the opportunity to unveil the 2018 Caribbean Energy Map at the event. Reflecting

on the experience, Mr. Loquan shared: "The GECF Symposium made it clear that despite our differences, we gas-producing nations are united in pursuit of one common goal – the sustainability of our industry in a period of change. Achieving this in Trinidad and Tobago's specific industry circumstances will involve, among other things, investment in renewable energy (RE) and energy efficiency (EE), and discussions among GECF members revealed that this is on the agenda for many other nations as well.

The primacy of RE and EE in the regional mindscape makes it easier for us to push that agenda locally – we have the support, there are regional models that we can co-opt, there is clear need and alignment of purpose. Entities such as the Latin American Energy Organisation (OLADE) can help facilitate the necessary intraregional exchange and cooperation to advance RE and EE across the islands, so we should seek and leverage stronger ties with the organisation." ■

2018

Looking Back

Progress of CNG in T&T: 2014-2018



THE CNG Initiative led by NGC CNG is experiencing double-digit growth as people are migrating towards the fuel in droves. Drivers are saving thousands annually by switching to CNG, and the CNG station network is rapidly expanding with state-of-the-art, fast-fill equipment in all new and upgraded stations maintained by NGC CNG.

NGC CNG MANDATE

NGC CNG's mandate is to expand and improve the number of CNG supply points nationwide to 22 while accelerating the demand for the fuel. Since its incorporation, the company has focused on building a broad-based CNG industry incorporating all key stakeholders, including regulators, state agencies and the private sector. Some of these stakeholders include the Trinidad and Tobago Bureau of Standards (TTBS), National Energy Skills Centre (NESC), fuel marketers and retailers National Petroleum Marketing Company (NPMC) and UNIPET, new and used car dealers, vehicle servicing companies, and equipment suppliers from the private sector. NGC CNG's approach has been to engage a wide cross-section of the national community to build the industry as opposed to attempting to control the entire value chain.

The success of NGC CNG and its contribution to Trinidad and Tobago can be measured across several key areas:

- Value of CNG conversion industry (conversions and servicing)
- Sales of Original Equipment Manufacturer (OEM) CNG vehicles
- Value of foreign exchange (Forex) saved from liquid fuel subsidy
- Value of Forex saved from displaced liquid fuels
- Disposable income created for CNG users

TOTAL
INVESTMENT
IN THE CNG
PROGRAMME
FROM 2014-2018

TT\$129M

NATIONAL
ECONOMIC
VALUE CREATED
FROM 2014-2018

TT\$500M

The total investment in the CNG programme from 2014-2018 is approximately TT\$129 million, while the national economic value created over the same period is estimated to be TT\$500 million.

NGC CNG is also using technology to make the CNG industry safer with the planned roll-out of a RFID chip and reader system, which will ensure all CNG vehicles meet an inspection schedule or they will be denied fuel. This system will also allow for cashless payments at stations – a first for Trinidad and Tobago.

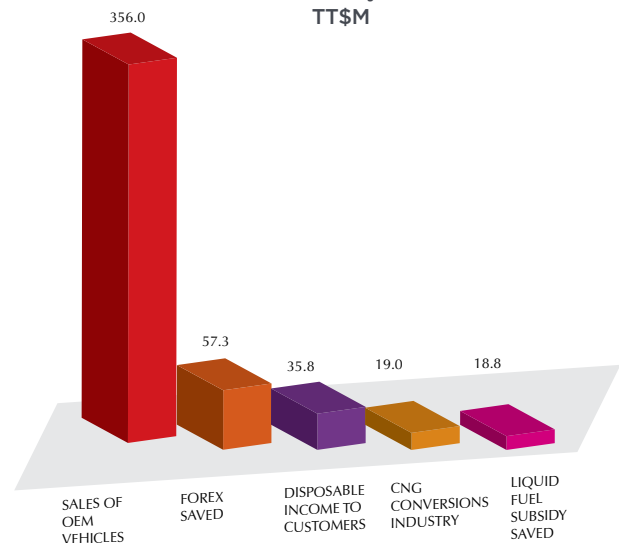
CNG litre sales

From 2014 to 2018, approximately 18,005,952 litres of CNG were sold, with a 48% increase in 2018 over 2017 figures. The aggressive upturn in 2018 can be attributed to two factors: the increase in conversions sponsored by NGC CNG and the addition of 25 OEM CNG buses by the Public Transport Service Corporation (PTSC).

NGC CNG's focus over the years has been in several key vehicle market segments with high mileage users, including:

- PTSC
- Maxi Taxis
- Taxis
- Commercial Fleets.

Economic Activity 2014-2018
TT\$M



2018

Progress of CNG in T&T: 2014-2018 CONTINUED

CNG bus

Based on car sales, as at the end of 2018, it is estimated that there are over 4,500 CNG-equipped vehicles in Trinidad and Tobago and 6,500 car equivalents (one bus = 20 cars in fuel usage).

CNG conversions

The value of the CNG conversions segment over the last five (5) years stands at an estimated TT\$19 million, inclusive of conversions and servicing.

OEM CNG vehicles

In 2014, no OEM CNG vehicles were available on the Trinidad and Tobago market. Today, there are 13 brands and 17 models from passenger buses, to omnibuses, commercial and passenger vehicles. The sale of OEM CNG vehicles from 2014-2018 has generated approximately TT\$355.1 million.

Fuel subsidy savings and value of annual potential foreign income

Every litre of CNG sold means a litre of liquid fuel saved. This benefits the country by unburdening the fuel subsidy and liberating more product to be sold on the

4,500+

CNG-EQUIPPED
VEHICLES IN T&T
IN 2018

open market. NGC CNG estimates that from 2014 to 2018, these savings and revenues approximate TT\$76.1 million.

Disposable income

Similarly, consumers using CNG save the difference between the price of CNG and the price of liquid fuel. This translates into more disposable income for customers, which NGC CNG has calculated to be circa TT\$35.8 million.

CNG stations

At the end of 2018, there were 17 CNG-equipped stations with three (3) due to be commissioned. Tobago received its first supply of CNG in 2018, when a Mobile Refuelling

30%

REDUCTION IN VEHICLE
CARBON EMISSIONS
BY SWITCHING TO CNG

Unit was installed and operationalised at Cove Estate to facilitate the filling of five (5) PTSC buses.

Benefits to the environment

A switch to CNG from liquid fuel results in an immediate reduction in carbon emissions by 30%. As party to the United Nations COP 21 Paris Climate Agreement, Trinidad and Tobago pledged to reduce greenhouse gas emissions from the public transport sector by 30% by the year 2030. This reduction will depend significantly on the rate of conversion to CNG among high mileage users.

Market

The Trinidad and Tobago vehicle market is a prime target for CNG conversions, since there are over 800,000 licensed vehicles in the country. All internal combustion vehicles can be converted to use CNG, and 99% of the vehicles in this country fit that description.

Liquid fuel sales experienced a slight decline in 2018, as a result of higher prices at the pump, more users transitioning to CNG and increased penetration of hybrid vehicles, which use 30% less fuel. Although hybrid and electric vehicles offer greener technology and can support Trinidad and Tobago's emissions reduction campaign, at present market penetration of these vehicles is low. Retrofitting vehicles to use CNG therefore remains the most cost-effective way to reduce emissions and conventional fuel consumption.

CONCLUSION

The CNG industry is being built in Trinidad and Tobago via a mix of state participation and support and significant investment by the private sector. The numbers speak to tremendous value being generated by this industry, with as-yet unquantified environmental benefits simultaneously accruing. If it wasn't clear before, four



STATION LISTING:

Nine (9) NPMC branded service stations

1. Point Fortin
2. Rushworth Street - San Fernando
3. Carrousel - San Fernando
4. Chaguanas Main Road
5. Tumpuna North - Arima
6. Ramco - Orange Grove
7. Beetham
8. St. Christopher's, Wrightson Road - Port of Spain
9. Starlite - Diego Martin

Two (2) UNIPET branded service stations

1. Brentwood - Chaguanas
2. Peake's - Tacarigua

Two (2) NGC stations

1. NGC Warehouse - Point Lisas
2. PTSC City Gate, South Quay - Port of Spain

One (1) MRU deployed

1. Cove Estate - Tobago

Two (2) stations completed in December 2018, awaiting commissioning

1. UNIPET (Harkness) McBean Service Station - Couva
2. NPMC Cyrus Road Service Station - El Socorro

One (1) station awaiting gas supply

1. NPMC Munroe Road Service Station (estimated completion May 2019)

years of data have made it clear - CNG is an all-round solid choice for the motoring public.

Make the switch today! ■



SAFEGUARDING ASSETS

Managing Risk Along The Line



Asset Integrity Management is a core function of NGC's Operations Group

THE backbone of NGC's business has long been its extensive transmission and distribution network. Spanning more than 1,000km on land and undersea, NGC's impressive pipeline system comprises enough infrastructure to line the coast of Trinidad more than twice over. Operation and upkeep of this massive network requires round-the-clock monitoring, routine inspections and systematic maintenance. At stake is not simply system availability, but citizen safety.

UNDERSTANDING RISK

The footprint of NGC's pipeline network is considerable. Subsea lines bringing gas from offshore platforms converge at Guayaguayare, then onshore transmission pipelines route the product cross-country to Point Fortin and Point Lisas. Processed gas is then piped to downstream consumers on the Point Lisas Industrial Estate and along the East-West corridor via distribution lines.

It is not surprising that a network of this magnitude and scope confronts diverse risks. There are four main types of pipeline risk that must be managed by NGC:

1. Third party interference – risk of damage caused by the actions of persons or entities external to the Company;
2. Corrosion – risk of damage to infrastructure due to internal or external deterioration of pipeline hardware;
3. Natural events – risk of damage due to landslides, earthquakes, washouts, rapid earth movement and other events linked to natural occurrences; and
4. Operational failure – risk of damage due to oversight, error or mismanagement in the course of network operation, or inherent engineering/design flaws.

Failure to address these risks could lead to asset loss or infrastructural damage, which in turn would impact NGC's ability to service its customers. More importantly, certain risks can precipitate dangerous incidents along the line and cause harm to the public and environment.

MANAGING RISK

NGC consistently assesses the risk in its operations and takes action to pre-empt damage to its infrastructure.

Third-party interference

NGC's pipeline corridor or Right of Way (ROW) is identified by a series of yellow marker posts. Vegetation is cleared and grass kept low on either side of these markers, to ease access for surveillance and maintenance works, and call attention to the presence of buried lines.

Where pipelines run through trafficked areas such as communities, towns or near agricultural land, there is risk of encroachment on the ROW. Persons may traverse the area, operate machinery or build in close proximity, or even graze animals along the route. These practices can be potentially dangerous in the event of a pipeline incident, can cause damage to the buried infrastructure if invasive, and can obstruct NGC's access to the network. For this reason, one of the key functions within NGC's Operations Group is routine ROW monitoring. Teams regularly survey the route and flag any possible encroachment issues. Over the years, NGC has made it a priority to build solid relationships with its fenceline communities, and the healthy rapport between NGC personnel and residents generally facilitates dialogue and resolution of any issues that may arise.

As a preventative measure against infrastructural damage due to civil works in the vicinity of the ROW, entities such as public utilities or contracting firms must obtain approvals from NGC before undertaking such projects. The Company reviews project proposals and designs to ensure its assets would not be impacted before issuing clearance.

Corrosion

As with any steel structure, natural gas pipelines can become corroded over time. This corrosion can occur on the outside of the lines due to characteristics of the soil or exposure to the elements, while liquids in the gas stream can contribute to internal wall loss.

Different layers of protection are built around the lines to delay corrosion. The outside of pipeline segments is surfaced with a coating that serves as a physical barrier against corrosive elements in the soil. The protection provided by coatings is supplemented through Cathodic Protection, which in its simplest terms involves inducing a low voltage current on the line to force corrosive chemical reactions to act upon 'sacrificial' metal anodes instead of the pipeline steel.

Over time, these methods of protection can falter, so it is necessary to routinely monitor their effectiveness. Direct Current Voltage Gradient (DCVG) surveys are used to check the condition of the coating and segments of pipeline may be excavated and recoated if the barrier has appreciably deteriorated. In addition, NGC uses special probes to check the levels of Cathodic Protection on an annual basis, then adjusts voltage on the line and installs new anodes accordingly.

To protect against internal corrosion, the Company continuously injects a chemical inhibitor that adheres to the interior walls, mitigates corrosion and prevents wall loss. Probes and 'coupons' help monitor the

rate of corrosion and signal whether there is need for remediation works.

Preventative maintenance activity also plays a role. Routine 'pigging' of lines helps clear residual liquids that could precipitate corrosion, while In-line Inspections (ILI) are used to detect and assess structural anomalies in the pipeline wall that could deteriorate into leaks.

Natural threats

At present, monitoring land movement around pipelines is a manual enterprise undertaken by the ROW Surveillance team. Land slippages, washouts and erosion that can potentially expose pipelines must be detected by sight – a labour-intensive but effective method which is necessary given the expanse of NGC's network and the terrain it crosses.

To make this surveillance more effective and reduce the risk of avoidable pipeline exposure, NGC is looking to technology. The use of satellite imagery is being considered as an option to supplement on-the-ground reconnaissance of the pipeline routes. Additionally, the feasibility of using drones to capture footage along the ROW was explored in a trial run of a quadcopter in 2018. The Company was sufficiently convinced of its potential applications to invest in a larger model, and a more comprehensive surveillance exercise using the newest acquisition is planned for 2019.

Operational failure

In the course of constructing its massive pipeline network, NGC has adhered to international engineering codes and standards. This diligence, paired with a state-of-the-art Supervisory Control and Data Acquisition (SCADA) software, significantly reduces the risk of operational failure on the lines. NGC's SCADA system, which is monitored on a 24-hour basis by the Company's Control Operators, keeps track of the pressure profile of the network. The system alerts the Company to any anomalies or process deviations that could disrupt operations, or dips that would indicate leaks. The 56" Cross-Island Pipeline (CIP) is also equipped with its own specialised leak detection system.

COMMITMENT TO SAFETY

NGC recognises the necessity of operating its network safely and takes every precaution to minimise risk. Asset Integrity Management is an axis of the business, as are innovation and improvement. As technological advancement gives rise to new methods and more effective tools to monitor and manage industrial infrastructure, NGC will continue to keep pace to maintain a best-in-class pipeline system. ■



Firefighters on site at Emergency Drill

HSSE at NGC: A YEAR IN REVIEW

As an organisation with its sights on global expansion and international benchmarking, NGC has earmarked safety as one of the main areas for strategic focus. To that end, the Company approached safety performance in 2018 with rigour and purpose, implementing several systems and initiatives that aimed to improve the safety culture and statistics over what obtained in 2017.

1. PROCESS SAFETY MANAGEMENT

NGC adopted the American Institute of Chemical Engineers Centre for Chemical Process Safety (CCPS) standard for Process Safety.

The main tenets of this standard are risk management, and the attentive development, sustenance and enhancement of operational discipline. The objective is to avoid disaster by keeping the product safely in the pipeline.

To assist with establishing a robust Risk-Based Process Safety (RBPS) Management System, 43 key personnel, including members of the executive leadership team, were trained in the Foundations of Process Safety. The newly trained group is expected to lead by demonstrating and committing to process safety advancements as the Company develops the operational excellence approach in its processes.



‘Destination: World-Class Safety’, was styled as an aeronautical journey to the heights of HSSE awareness.

The first phase – ‘Lift-Off’ – was initiated in 2017 with a week of activities that focused on the tenets of HSSE. The second phase – ‘Ascension’ – comprised over a dozen activities spread across three quarters of 2018. These included:

1. **Knowledge Café Road Shows:** Knowledge-sharing within the organisation was seen as an important way to build HSSE awareness. Four sessions were hosted to enlighten employees on:
 - Environmental Sustainability: The National Agenda
 - Taking Flight with RBPS
 - Personal Security: Cyber Crime and Gangs in Trinidad and Tobago
 - Wellness: Mindfulness for a Happier You
2. **School Fire Drill:** NGC conducted an assessment of the emergency response system at its partner school, Holy Faith Convent in Couva, to help the institution better prepare for and manage emergencies. The school’s fire alarm system was evaluated, as was response time in a drill exercise. Recommendations for improvement were submitted thereafter.
3. **Eco-Tours:** In a bid to build appreciation for the environment, employees were invited to bring

NGC has also taken the lead on establishing a formal Root Cause Analysis (RCA) process for its incident investigations by engaging Systems Improvement Inc., based in the US, to train 30 NGC employees in the world-renowned TapRoot RCA model.

A gap analysis of NGC’s current HSE and AI management systems has been completed against the standard 20 elements of Risk-Based Process Safety. A comprehensive implementation guide document is being finalised to close the gaps identified in 2018.

In 2019, there will be noticeable advancements in operational safety as RBPS Management begins to shape our processes.

2. HSSE FOCUS – DESTINATION: WORLD-CLASS SAFETY

Building a culture of safety within the organisation requires targeted interventions and routine engagement with the employee body.

In 2017, NGC launched a campaign of activities aimed at engaging employees on matters of health, safety, security and the environment. The campaign, themed



Employees were invited to participate in Eco-Tours at locations such as Asa Wright Nature Centre.

Photo by Kenneth Fournillier/Asa Wright Nature Centre.



their families along on Eco-Tours, which included turtle watching at the Grande Riviere Beach, bird watching at the Caroni Bird Sanctuary, and visits to the Asa Wright Nature Centre. In total, 219 persons participated in these expeditions.

4. **World Environment Day Celebrations:** In commemoration of World Environment Day, staff was encouraged to join the global fight to 'Beat Plastic Pollution'. Schools in fenceline communities benefited from EMA lectures and tours of the UTT Solar House in Point Lisas, while employees participated in a World Environment Conservation Challenge, where they were asked to produce photo portfolios demonstrating how they have been reducing their plastic consumption.
5. **Health Fairs:** To encourage employees in healthy living, a health fair was organised to educate and advise staff around important issues such as mental health, vision, nutrition, lung cancer and financial health.
6. **International Coastal Cleanup:** NGC once more joined the annual global effort to clean up our beaches, participating in an ICC event at the La Brea Station Beach, where more than 2100 pounds of garbage was collected and sorted for proper disposal.



Garbage sorting at La Brea Station Beach

NGC is committed to the identification of the root causes of PVAs with the aid of modern fleet management technology and analytics to inform policy and drive behavioural change as needed.

3. SAFETY MANAGEMENT

i. Preventable Vehicular Accidents (PVAs)

For the period January to November 2018, NGC recorded 10 Preventable Vehicular Accidents (PVAs), down from previous totals of 29 (2016) and 16 (2017). Based on analysis of the incidents, several areas were identified for improvement:

- Fleet management strategy
- Operational journey management plans
- Human factors
- Team work and decision making.

NGC is committed to the identification of the root causes of PVAs with the aid of modern fleet management technology and analytics to inform policy and drive behavioural change as needed. The ultimate goal is:

- To save lives and to reduce the risk of life-altering injuries within our workforce;
- To protect our organisation's human and financial resources; and
- To guard against potential company and personal liabilities associated with accidents involving employees driving on company business.

ii. Review and Revision of the Company's Safe Systems of Work, including:

- Confined space entry
- Control of hazardous energy
- Permit to work
- Ground disturbance
- Job hazard assessments.

In 2019, NGC will focus on the roll-out, retraining and implementation of those systems.

iii. Workplace Inspections

This safety system was introduced to:

- Identify existing and potential hazards;
- Recommend corrective actions for hazards and monitor to closure; and
- Ultimately prevent incidents, injuries and illnesses within the workplace.

iv. **Let's Connect**

The 'Let's Connect' safety system was introduced as a mechanism whereby employees would be encouraged to spot and discuss safe and unsafe behaviours and practices among their colleagues. Tied to individual performance metrics, 'Let's Connect' reporting aims to:

- Encourage employees to be their 'brother's keeper';
- Provide an opportunity for employees to learn about each other's job tasks;
- Encourage employees to recognise and commend safe work practices; and
- Provide employees with the opportunity to identify areas for continuous improvement.

The Company has been trending well above targets for 'Let's Connect' reporting, which is indicative of positive change in safety awareness.

4. TESTING OF NGC'S EMERGENCY MANAGEMENT SYSTEMS

This year, a Full-Scale Emergency Response Drill was held on November 14th based on the scenario of a rupture on NGC's 24" pipeline near the Picton Valve Station in Penal.

The objectives of this drill were:

- To test NGC's Communication Protocols
- To assess the capabilities of the Incident Control and Management Teams
- To assess Mutual Aid Capabilities
- To test NGC's Incident Management Team's Business Continuity focus

The evaluation of this exercise revealed that there have been considerable improvements in the management of the emergency and support systems, relative to the outcomes of a similar drill conducted in 2017.

Opportunities for further improvement have been identified, including the introduction of crisis management software that can transmit email and telephone notifications to all emergency responders. Such technology can significantly increase emergency management efficiency.

5. SHAPING THE ENERGY SECTOR

NGC continued to take a lead role in the Point Lisas



Mark Loquan (2nd from right) participates in a panel discussion at the AMCHAM HSSE Conference

Energy Association (PLEA) HSE Committee and was key in revising the way PLEA supports the Safe To Work (STOW) initiative. The Company was also influential in encouraging knowledge-sharing in safety, apprising its industry associates of learnings from an incident in 2017, and actively participating in safety 'deep-dives' at Atlantic LNG.

In addition, NGC participated in the AMCHAM HSSE conference as an exhibitor and presenter.

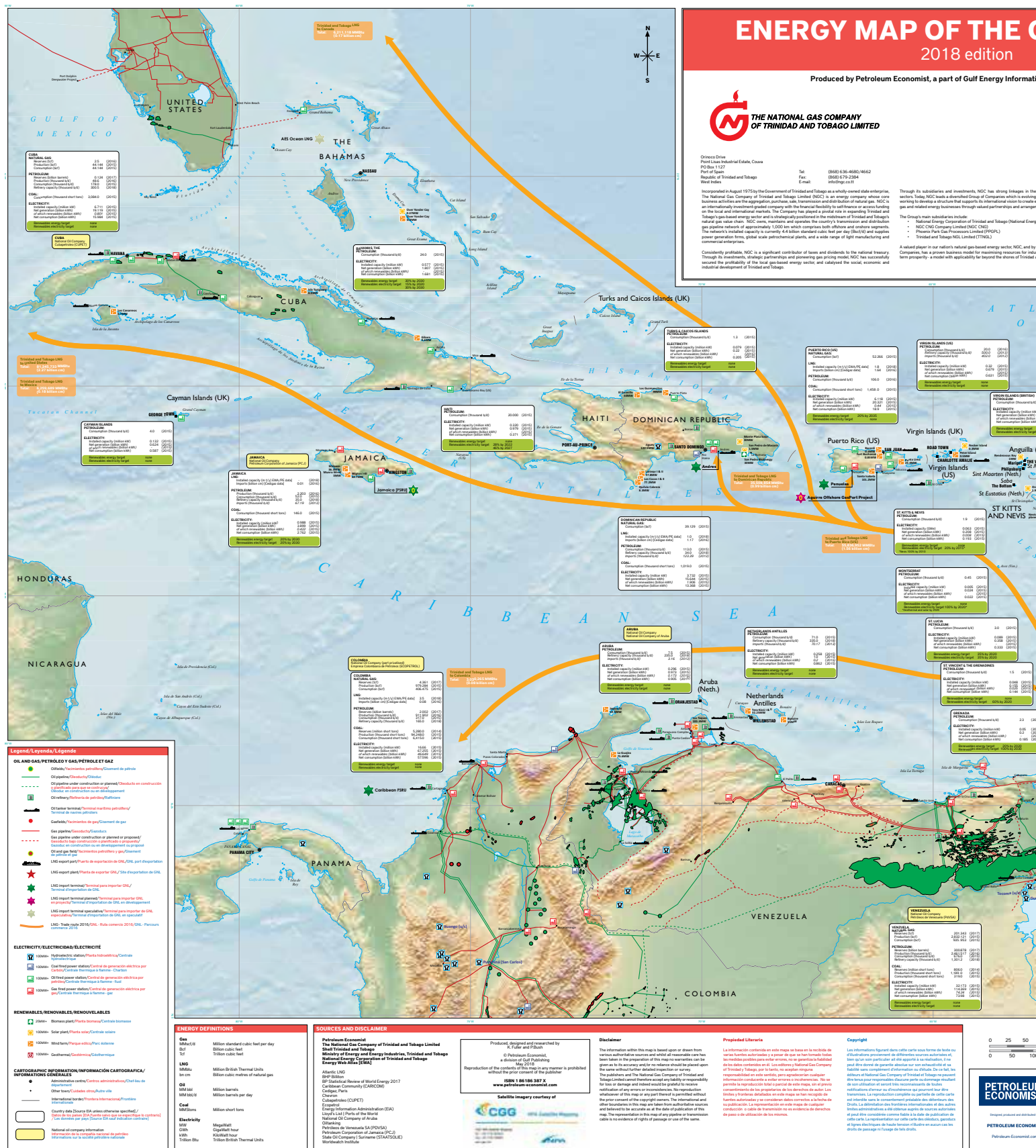
6. SECURITY INITIATIVES

NGC's has continued to work closely with and provide support to the Energy Sector Security Initiative (ESSI). The Company participated in the national exercise "Fused Response 2018"- a bilateral crisis response training initiative of the Governments of Trinidad and Tobago and the United States designed to test emergency response capabilities and identify gaps to be addressed.

NGC also continues to work with the South East and South West Security Councils, as well as the Point Lisas Estate Security Council to strengthen the collaborative effort towards security intelligence gathering and crime prevention initiatives.

2019 AND BEYOND

Moving into 2019, NGC maintains its keen focus on HSSE performance. The Company is committed to meeting and surpassing international standards for HSSE and building a strong and pervasive safety culture among its employee body. ■



2019

Region in Transition | CONTINUED

CARIBBEAN

in, in association with:



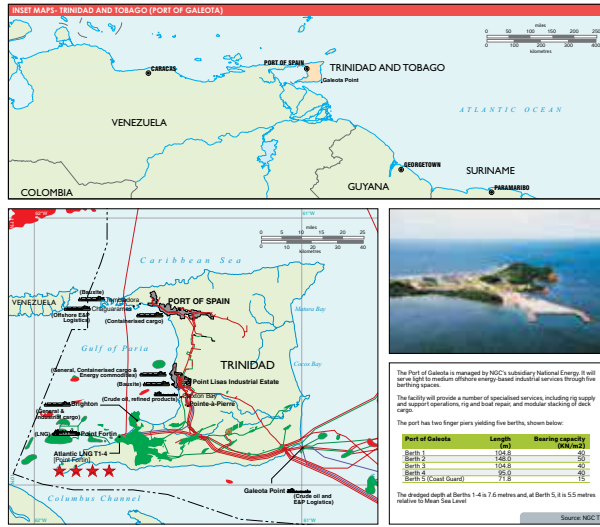
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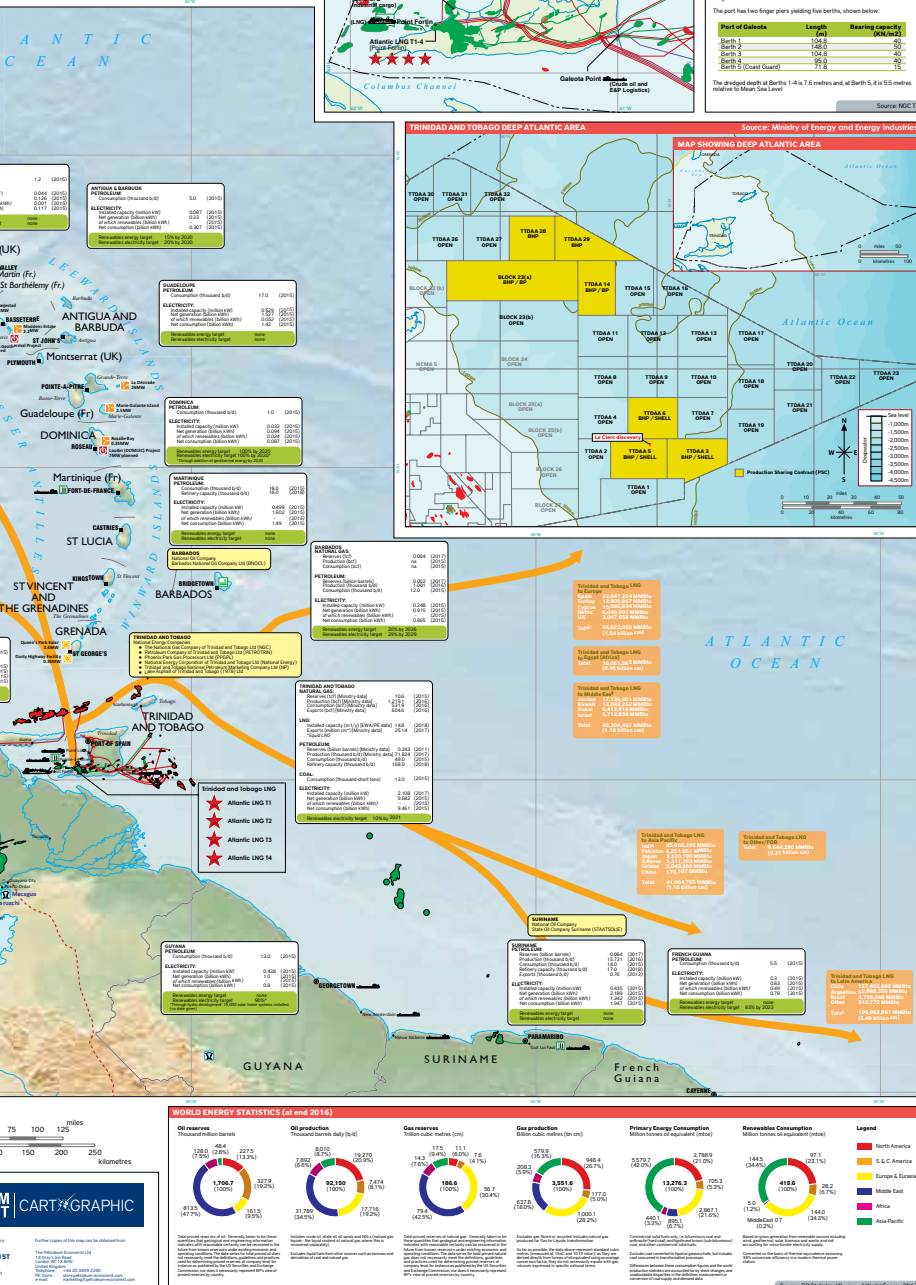
Region in Transition

MAPPING
CARIBBEAN
ENERGY

For over 24 years, NGC has been partnering with industry stakeholders and cartographers at Petroleum Economist to produce specialist maps that have become a seminal resource for energy sector stakeholders. These publications, known as Energy Maps, have illustrated, in useful detail, how energy resources are distributed and utilised in the region.

This year, NGC and Shell Trinidad and Tobago, along with the Ministry of Energy and Energy Industries (MEEI), collaborated to deliver the latest iteration of the Caribbean Energy Map, which they launched at the 2018 Gas Exporting Countries Forum (GECF) in Port of Spain, Trinidad. As with previous versions of the publication, the map is overlaid with statistics that include reserves, production, consumption, refining capacity, exports and imports of crude, natural gas and coal; as well as installed capacity and net consumption of electricity.

Unique to this edition, however, is data on renewable energy usage and targets across the region. This inclusion is a reflection of the environmental ethos of our time. Importantly, the data signals a regional transition to cleaner energy, with renewable technologies gaining ground in policy and application.





The 2017 hurricane season highlighted the need for climate change action

WHY THE REGION NEEDS RENEWABLES

The biggest argument in favour of transitioning away from fossil fuels is that the planet is in desperate need of abatement action to curb climate change. The past four years have been the hottest on record, and the World Meteorological Organisation has predicted that global temperatures could rise by 3 to 5°C by the end of the century at current warming rates.¹ This is an apocalyptic prospect if we consider the UN's warning that if temperatures increase by more than 1.5°C, the risk of extreme and catastrophic weather events will markedly rise, endangering hundreds of millions of lives and livelihoods.²

The 2017 hurricane season was particularly traumatic for the Caribbean region, and made it abundantly clear

that the archipelago of small islands is vulnerable in the face of extreme weather. This vulnerability makes climate change action a matter of survival for the Caribbean, which currently relies heavily on fossil fuels.

In addition to the environmental gains to be derived from harnessing renewable energy, these technologies can also help build economic resilience in the region. With the majority of countries being net importers of fuel, the region is at the mercy of international markets, both in terms of price and supply. Renewable technologies afford a degree of energy independence as they allow countries to meet their energy needs with locally and freely available resources. This will inevitably liberate capital for development and ensure economic stability even when oil and gas prices are high.

¹ <https://www.theguardian.com/environment/2018/nov/29/four-years-hottest-record-climate-change>

² <https://www.theguardian.com/environment/2018/oct/08/global-warming-must-not-exceed-15c-warns-landmark-un-report>

2019

Region in Transition | CONTINUED



ACHIEVERS IN GREEN ENERGY

Guyana

Despite its recent colossal hydrocarbon finds, Guyana is determined to become a leader in the fight against global warming by becoming the first 'green' state in the Caribbean and South America.³ The country has set ambitious renewables targets, aiming to have a substantial amount of power generated from green sources by 2025.⁴ Thus far, several solar, wind and hydropower projects are already underway, largely focusing on electrifying the country's vast and underdeveloped interior. Of these, solar has gained the most traction.

In Guyana's hinterland, many indigenous communities have lived with poor access to power and other resources

for their homes, schools, health centres and businesses. For many, flame torches, battery-powered lanterns and mini-generators were the main sources of light and heat for years. Now, the government is looking to connect and develop these communities by implementing renewable energy projects that can give them access to a more reliable power supply. Under the government's Hinterland Electrification Programme, solar panels were introduced in several communities, and residents can now count on up to nine (9) hours of power supply per day. This has allowed students to do and achieve more at schools, health centres to better preserve drugs, and families to save money on fueling generators.⁵

In a bid to build on the benefits already accruing and further develop the country's interior, larger scale solar farms are either planned or in the development phase.

³ <https://guyanachronicle.com/2018/06/17/renewable-energy-the-future-of-guyana>

⁴ Ibid

⁵ <https://dpi.gov.gy/solar-energy-transforming-guyanas-hinterland/>

One such farm has already been completed at Mabaruma, Region One, and will provide over 700 residents and commercial customers with an improved electricity supply, running to 16 hours in the first instance, and eventually reaching 24-hour availability. Once officially commissioned, this 400-kilowatt farm will use a hybrid system supported by a generator on cloudy days.⁶

Other solar farms are planned for Lethem in Region Nine (Upper Takutu-Upper Essequibo); Mahdia in Region Eight (Potaro-Siparuni) and at Bartica in Region Seven (Cuyuni-Mazaruni).

In addition to these, smaller scale solar applications have been implemented. Government buildings, including

ministries, schools, and health centres, are being outfitted with solar photovoltaic panels, to reduce government's dependence on the national grid. As at June 2018, 70 buildings were already equipped with such panels, resulting in 1.86 gigawatts of power savings, with plans to outfit a further 74 buildings over the course of the year.⁷

Guyana is indeed on track to expand its use of solar energy, as the country is now a member of the International Solar Alliance and has a US\$15 million line of credit at its disposal.⁸ This funding will be used to identify and electrify more indigenous communities, allowing the country to achieve development and growth with negligible carbon footprint.



Guyana is indeed on track to expand its use of solar energy, as the country is now a member of the International Solar Alliance and has a US\$15 million line of credit at its disposal

Barbados

Embracing solar energy does not necessarily mean producing power for a centralised grid, or even powering an entire household. In Barbados, citizens have been employing solar technology with great success for many years for one particular purpose – water heating.

The government estimates that approximately 30,000 households on the island have water heaters. With a population of under 300,000, this figure speaks to substantial penetration of the technology. In fact, the

International Energy Agency ranked Barbados in 2015 as the number one country in the world in terms of capacity of heating in operation per 1,000 inhabitants.⁹

The country's foray into solar water heating began in the 1970s, motivated by the severe international oil shocks which drove the price of the imported fuel skyward. To save on heating costs, one Canon Andrew Hatch of Christian Action for Development made a solar water heater out of an old oil drum and fixed it to the roof of his church. This prototype eventually led to the founding of a solar water heating company, and a fledgling industry

⁶ <https://dpi.gov.gy/mabaruma-solar-farm-to-be-commissioned-soon/>

⁷ <https://guyanachronicle.com/2018/06/17/renewable-energy-the-future-of-guyana>

⁸ Ibid

⁹ <http://www.solardynamicslimited.com/>



Wigton Wind Farm, Jamaica

© The Gleaner Co. (Media) Ltd.

which was supported by government incentives.

The capital and carbon gains soon became apparent. According to the United Nations Environment Programme, as far back as 2002 Barbados saved 15,000 metric tonnes of carbon emissions — and over US\$100 million — from the 35,000 solar water heating systems installed at the time.¹⁰ Some 2015 estimates put savings at 65 to 92 million kilowatt-hours annually, with a consumer value of BD\$23–32 million (US\$11.5–16 million) per year.¹¹

Although consumer uptake is high, public education about the benefits of using solar power has remained one barrier to even greater penetration of the technology, in both heating applications, and for domestic

electrification. Still, the small island has over eight (8) megawatts of installed solar photovoltaic capacity in private use, facilitated by the existence of government-backed incentives such as reduction in equipment and installation costs, a vigorous public education campaign, skills training, and guaranteed low-interest financing to homeowners, businesses, and suppliers.¹²

Jamaica

Jamaica has been cutting away at its fossil fuel dependence, making notable strides in renewable energy: solar, wind and hydropower account for between 15 and 20% of the country's energy supply.¹³

¹⁰ <https://www.caribbean-beat.com/issue-132/barbados-solar-energy-get-hot#axzz5a8XhkNNj>

¹¹ Ibid

¹² Ibid

¹³ http://www.jamaicaobserver.com/opinion/renewable-energy-on-a-roll-in-jamaica_143778?profile=1096

Unlike some other Caribbean islands whose intentions for wind energy have been thwarted by geography, Jamaica has both the resources and land space to make wind work, and there are sizeable facilities in operation. Wigton Windfarm Limited was established in 2004 as a subsidiary of the Petroleum Corporation of Jamaica (PCJ), and operates the largest clean energy facility of its kind in the English-speaking Caribbean. The Wigton facility, located in Rose Hill, Manchester, began operating with a 20.7 megawatt (MW) capacity, which expanded to 38.7MW in 2010 and 62.7MW capacity in 2016.¹⁴ The PCJ estimates that this farm reduces national oil consumption by more than 37,100 barrels annually and results in yearly savings of approximately J\$400 million.¹⁵

Wigton is not the only large-scale wind facility on the island. BMR Energy developed, owns and operates the largest private-sector renewable energy project in Jamaica. Owned by Sir Richard Branson of the Virgin Group, BMR Energy commissioned the 36MW facility in 2016. The site, some 90km west of Kingston, hosts 11 turbines which generate about 120,000 megawatt hours of energy per year for approximately 25,000 customers. This is the equivalent of 3% of Jamaica's energy demand.¹⁶

According to BMR Energy, the energy produced at this facility offsets emissions from fossil fuel sources to the tune of 66,000 tonnes of carbon dioxide equivalent per year, which roughly equates to taking 13,000 vehicles off the road annually.¹⁷ These savings will grow exponentially over the lifespan of the facility, with the company bound in a long-term power purchasing agreement with Jamaica Public Service Company to provide affordable power for 20 years.

LEARNING TOGETHER

Although the region collectively has some distance to travel before national targets for renewables integration can be met, the existence of successful green energy installations in the region brings those targets within reach. Though each country has different socioeconomic, political and geographical circumstances to navigate in the process, there are enough similarities to make models of renewables adoption transferrable and adaptable. In that regard, the key to the successful achievement of national targets will be intraregional collaboration in the spirit of fraternity. After all, we are all fighting the same battle, and our collective existence is at stake. ■

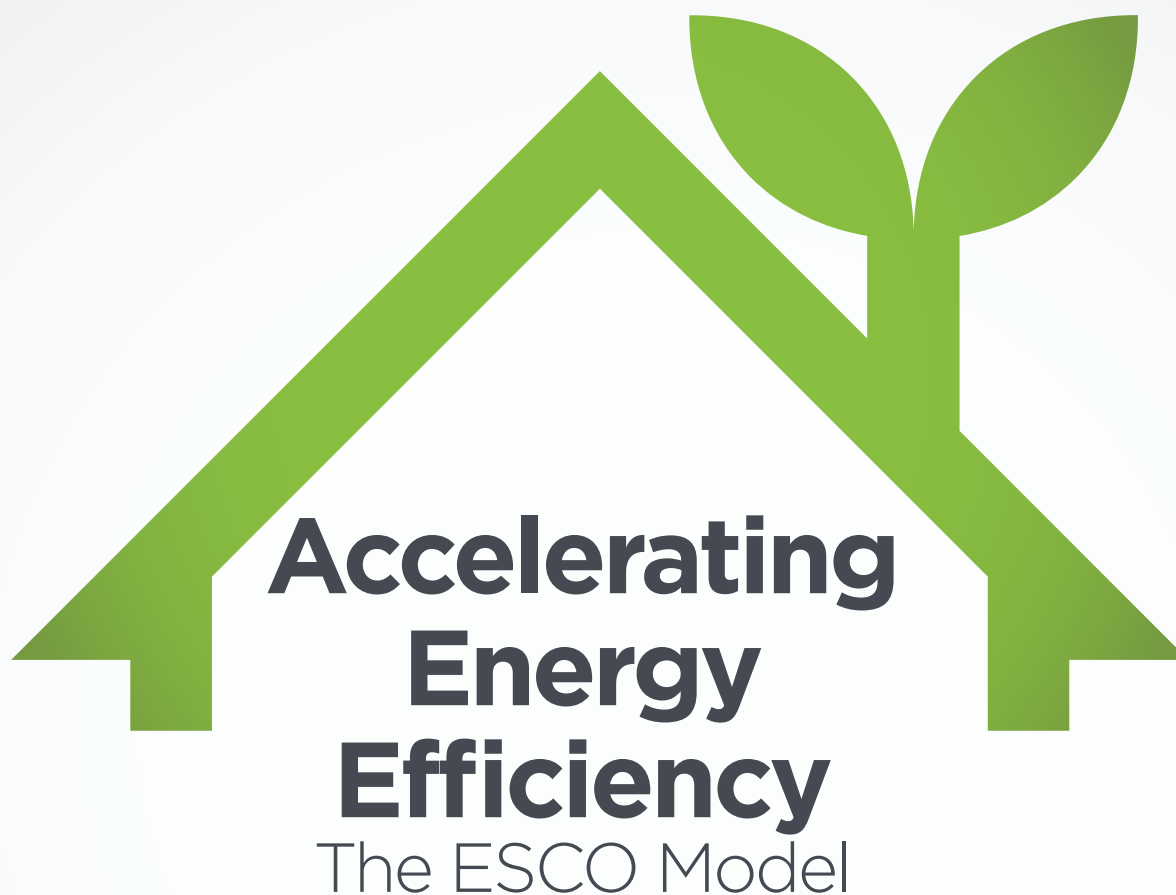


¹⁴ http://www.jamaicaobserver.com/news/preparations-under-way-to-list-wigton-windfarm-on-stock-market_149670?profile=1373

¹⁵ <https://www.pcj.com/renewable-energy-development/>

¹⁶ <https://bmrenergy.com/projects/jamaica-wind/>

¹⁷ Ibid



Accelerating Energy Efficiency

The ESCO Model

OVERVIEW

ENERGY efficiency has been identified as a natural first step towards developing the platform for the cultural change that would lead to alternative energy being fully embraced and integrated into this country's energy mix. However, consideration of energy efficiency implementation, particularly in a heavily industrialised country such as Trinidad and Tobago, raises several questions.

Firstly, is energy efficiency good for business? Does it have a positive impact on the bottom line or is this purely altruistic? What mechanisms will be established to encourage and support the process of energy efficiency implementation? How will energy and cost savings, if any, be measured?

In recognition of this, in December 2015, Trinidad and Tobago was one of over 120 countries to sign the Paris Agreement to combat climate change by taking, inter alia, energy efficiency measures to reduce the production

of greenhouse gases. To achieve the goals of the Paris Agreement, countries have committed to reducing global dependency on fossil fuels long before these finite resources are expended.

The Government of the Republic of Trinidad and Tobago (GoRTT) has set a target of 10% power from renewables by 2021. While certainly achievable, this objective may prove to be a real challenge, as moving towards a 'greener' Trinidad and Tobago will require a major societal paradigm shift. Additionally, renewables will require the appropriate legislative framework to support implementation, regulation and standardisation of the new industry. Infrastructure to facilitate energy capture, storage and distribution will need to be installed for commercial and domestic use. These changes will undoubtedly challenge some of our cultural norms, as citizens and firms will be forced to adopt a considered approach to energy usage.

In 2011, National Energy conducted an energy efficiency study of companies operating at the Point

Lisas Industrial Estate. The recommendations of the audit were presented to the Ministry of Energy and Energy Industries (MEEI). Further, National Energy has conducted extensive research into energy efficiency implementation globally and in the region and endorses the Energy Services Company (ESCO) model as a viable option for Trinidad and Tobago in the thrust towards developing a sustainable energy sector.

What is an ESCO?

An ESCO is an organisation capable of conducting energy audits; making recommendations on energy efficient systems and practices; installing energy efficient machinery and equipment; and monitoring the performance of energy efficiency systems and equipment to determine the savings realised in terms of both energy and cost. The aim of an ESCO is to help firms and households improve their operations to reduce energy consumption and save on energy expenditure. For Trinidad and Tobago, reducing the use of natural gas for fuel or power generation allows natural gas volumes to be redirected to more value-added uses, such as downstream petrochemical production.

The ESCO business model allows a customer to benefit from a reduction in energy costs (savings) after an initial investment and repayment period. Figure 1 highlights a typical ESCO business model where the ESCO, during implementation, is paid a performance fee for efficiency upgrades. Once the period of engagement is completed, the client retains all the savings from the upgrades that were undertaken.

There are several ESCO models, with two of the most popular ones being the Guaranteed Savings Model and

Figure 1: Typical ESCO Business Model

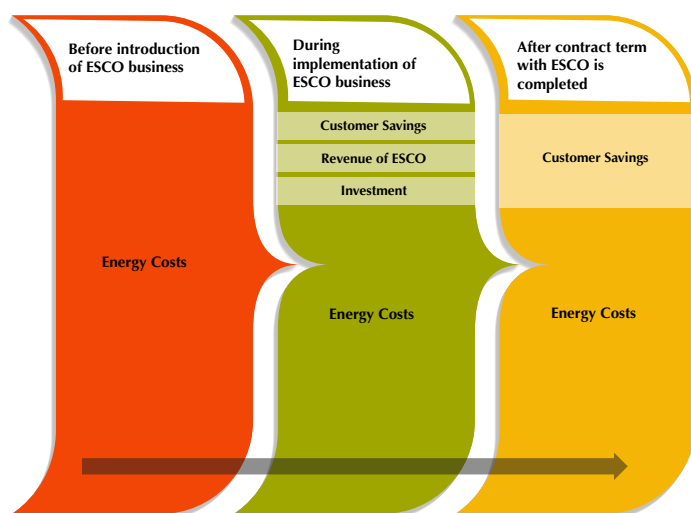
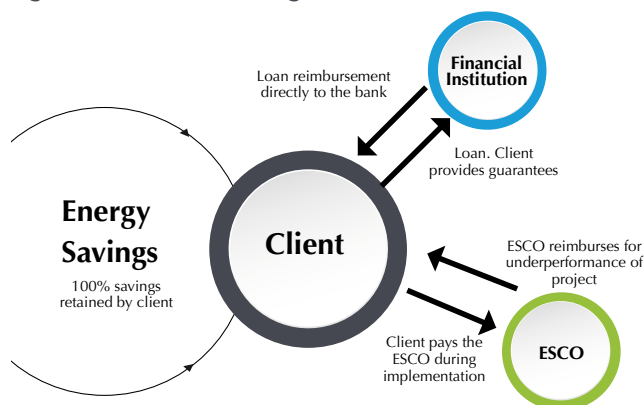


Figure 2: Guaranteed Savings Model

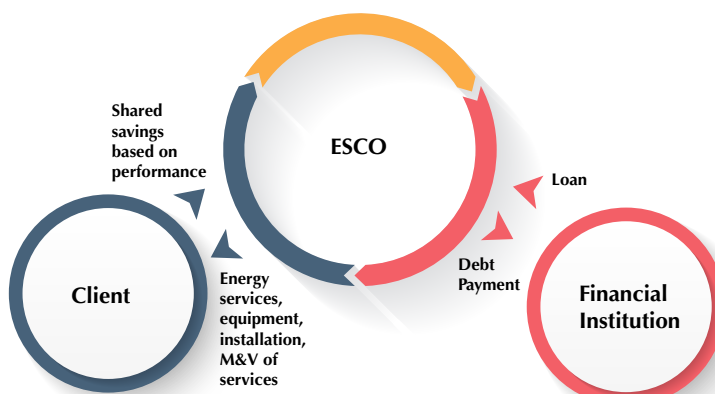


the Shared Savings Model. The Guaranteed Savings Model (Figure 2) works by allowing the client to retain 100% of the savings generated by the energy efficiency project. However, the project loan is guaranteed by the client and repaid directly to the financial institution, while technical risk is covered by the ESCO, so that the client is reimbursed if the project performs below expectations. The ESCO receives payment during implementation of the project and the equipment is owned by the client.

In the Shared Savings Model (Figure 3), the ESCO assumes the risk by taking a loan for the project and installing the equipment. Savings realised from the project are then shared between the client and the ESCO, allowing the ESCO to benefit if surplus savings are generated.

The ESCO concept is fully supported by GoRTT via approved energy efficiency incentives in the Finance Bill of 2010. Here, GoRTT introduced a 150% tax allowance for companies engaging the services of certified ESCOs and a 150% depreciation allowance for ESCOs who acquire plant and equipment in carrying out EE audits. In addition, GoRTT has already reduced or removed import duties on specified products having low energy consumption.

Figure 3: Shared Savings Model





Accelerating Energy Efficiency | CONTINUED

The ESCO concept was also identified as one of the initiatives that need to become operationalised according to the MEEI-led Sustainable Energy Roadmap 2021-2030, that was co-developed under the EU Technical Assistance Facility. This can be achieved once a decision is made by the MEEI regarding the regulatory framework within which ESCOs are to operate, for companies engaged in energy efficiency activities to access the tax credits.

National Energy posits that the operationalisation of the ESCO concept requires structured governance and coordination. A study of countries that have successfully increased energy efficiency uptake point to, among other things, the adoption of the Super ESCO concept.

Energy Efficiency and ESCO Sector Development

In 2012, the MEEI established an Energy Service Company Certification Committee to assist in advancing the Government Sustainable Energy Programme. Members included the MEEI, Trinidad and Tobago Bureau of Standards, Trinidad and Tobago Electricity Commission, the University of Trinidad and Tobago, the Trinidad and Tobago Green Building Council, the Accreditation Council of Trinidad and Tobago and the Board of Engineering.

National Energy held discussions with ESCOs operating in Trinidad and Tobago, Latin America and the Caribbean including Energy Dynamics, ECONOLER and Efficiency One. These discussions illuminated some of the challenges faced by ESCOs in developing the new industry as independent private operators. It was found that given Trinidad and Tobago's culture of relative risk aversion in terms of financing and the unique nature of performance-based contracts, the ESCOs have received limited support from local financial institutions.

Clients are also hesitant to invest internal capital in energy efficiency projects, since project costs are high and payback periods tend to be long. As with any fledgling industry, ESCOs have encountered scepticism and trepidation, due to the small number of local operators and the desire for guaranteed returns on investment. With the already lingering issue of a lack of implementation of the ESCO accreditation, the operationalisation of energy efficiency initiatives seems even more daunting. This therefore calls for a more coordinated approach to advancing energy efficiency locally.

In March 2018, National Energy's examination of the feasibility for implementation of a coordinated ESCO (Super-ESCO) Model saw the Investment Facilitation team visiting the Petroleum Corporation of Jamaica (PCJ) – more specifically, the Renewable Energy and Energy Efficiency (REEE) team and the Wigton Wind Farm – for open discussions about their experience with energy efficiency programmes and development of Jamaica's renewable energy potential respectively.

Commencing November 2016, PCJ, in partnership with the United Nations Development Programme (UNDP), embarked upon a US\$12 million renewable energy and energy efficiency project designed to reduce energy costs in six public hospitals. In addition to implementation of wind demonstration projects at two rural schools, the three-year project focuses on:

- Institutional capacity strengthening through training standards and certifications;
- Support for regulatory development of energy and related legislation and;
- Economic and fiscal instruments through the promotion of ESCO industry and an energy performance contracting model for the implementation of solar power systems and energy efficient retrofits.

The innovative ESCO financing model eliminates the need for the institutions to find start-up costs to fund turnkey renewable energy and energy efficiency systems under the project. PCJ, as the ESCO, will make the upfront investment and subsequently recover its investments through earnings gained from the energy savings achieved. Based on the results from the public sector, the intent is to perfect the model for wider implementation across commercial and residential customers.

It is important to note that PCJ, as a state entity, was able to be the state's Public Sector ESCO and benefit from collectively embarking on a suite of otherwise individual efficiency upgrades, thereby increasing operational and administrative efficiencies and reducing costs.

This co-ordinated approach and its ability to efficiently provide the critical resources that would otherwise not be accessible to a single entity, is one of the many reasons why National Energy believes that the Super ESCO programme currently being developed is critical to unlocking the full potential of energy efficiency in enterprises locally.

Together with NGC, National Energy is therefore embarking on a Super ESCO pilot project that will involve selected light industrial and commercial customers. It is envisioned that, by targeting these customers for a pilot study, the Super ESCO can provide a mechanism for accelerating the implementation of energy efficiency measures across these users, and provide valuable lessons for expansion of the programme to other sectors. ■



Thinking Future

NGC TRANSITIONS TO SUSTAINABILITY REPORTING

Sustainable development refers to a process of thoughtful growth that enables societies to meet their needs today without jeopardising the viability of future generations. The global compact to grow by this principle is elaborated in **17 Sustainable Development Goals (SDGs)** that have been set and agreed by members of the United Nations General Assembly.

THESE SDGs are targets for nations to meet by 2030 that tackle a broad range of development issues such as poverty, hunger, health, education, climate change, gender equality, water, sanitation, energy, urban growth and social justice.

Each goal – such as achieving food security or ensuring inclusive and equitable education – subsumes targets that must be met for the overarching goal to be realised. These targets cannot be handled by governments alone – they require the collective effort of corporate and civil society.

Indeed, businesses and corporations have an important part to play because many development ills can be directly or indirectly traced to their policies and activities (think: unequal opportunities in the workplace, irresponsible disposal of waste, deforestation, and like practices). For this reason, many corporate entities have begun to report more openly about their operations, by way of publications called *Sustainability Reports*.

Sustainability Reporting is a mechanism of account that enables companies to share information on their economic, governance, environmental and social per-

formance in a given year, relative to the SDGs and targets.

Pegged to the SDGs, guidelines for such reporting ask companies to interrogate and share how their business affects their value chain, the environment and their stakeholders, both positively and negatively. It is an introspective process that forces organisations to look at the bigger picture of their business. The outcome document, a Sustainability Report, consequently gives an honest and holistic picture of a company's impact in its space of operation, and on the global development targets.

NGC begins Sustainability Reporting

Sustainability Reporting is the new benchmark in global business. Business without conscience is no longer tolerated by consumers, so any company worth its salt makes every effort to ensure a fair supply chain, show sensitivity to the environment, and demonstrate some measure of humanitarian spirit. Sustainability Reporting allows these companies to then share their achievements, and areas for improvement, with the public.

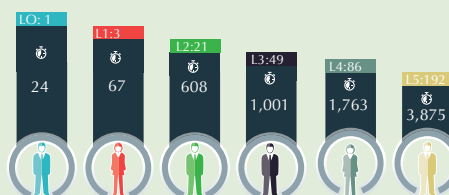
Traditionally, NGC has given account of its business

Snapshot of the data profiled in Sustainability Report



*Levels and Description

- L0 PRESIDENT
- L1 VICE PRESIDENTS
- L2 MANAGERS
- L3 ASSISTANT MANAGERS/HEADS
- L4 SUPERVISORS
- L5 INDIVIDUAL CONTRIBUTORS
- 🕒 TRAINING HOURS



TOTAL NUMBER OF EMPLOYEES 2017

703



PERMANENT STAFF 570
CONTRACT STAFF 133

PERMANENT (FEMALE) 215
CONTRACT (FEMALE) 47
PERMANENT (MALE) 355
CONTRACT (MALE) 86

TOTAL NUMBER OF NEW HIRES 2017

16



PERMANENT STAFF 10
CONTRACT STAFF 6

PERMANENT (FEMALE) 6
CONTRACT (FEMALE) 1
PERMANENT (MALE) 4
CONTRACT (MALE) 5



performance via Annual Reports, which largely give a quantitative assessment of performance in a calendar year. From these reports, the public can learn how much money was earned in sales, how much was passed to government through taxation, how much the asset base of the Company has grown over a year. Although introductory editorials from the Chairman and President have given some context to the numbers and highlighted developments over the reporting period, the Company has recognised the need to go deeper. After all, of greatest interest to the public is how its numbers translate into value added to or subtracted from society.

The transition into Sustainability Reporting (as a supplement to Annual Reports) is indicative of NGC's commitment to help the people of Trinidad and Tobago truly understand the role that NGC plays in the economy, and how the business qualitatively impacts all citizens. Since a Sustainability Report highlights both the strengths and shortcomings of the organisation, it is a 'truth document' that will help build stakeholder trust. Trust is also important as NGC works toward internationalising its operations. The Company needs to meet global benchmarks for transparency and accountability to build trust in its brand and win business.

On another level, the decision to produce these reports will serve to strengthen internal processes. To meet the defining criteria for these reports – as established by bodies such as the Global Reporting Initiative (GRI) – certain data and metrics must be included. The organisation is therefore bound to track and measure outputs that it may not have done in the past. Gaps in the data needed will spotlight where business units fall short and compel them to set new targets. Year on year, the Company will be able to methodically track its progress through key indicators and more effectively assess its growth as a business. In short, the rigours of Sustainability Reporting will make for a more focused and accountable organisation.

Of course, these reports will also underscore NGC's contribution toward the global SDGs and help the Government of Trinidad and Tobago track its own progress toward achieving national targets in the state enterprise sector. They will ultimately help the country appreciate its connection to the whole, and shoulder its responsibility, however small, in the global development agenda.

NGC's first

In July 2018, NGC published its first-ever Sustainability Report, covering the period January to December 2017. Its first attempt has been guided by the GRI standards

and covers the core areas for baseline Sustainability Reporting. As NGC builds its reporting capacity, it will move to widen the ambit of reporting to include the metrics that characterise more fulsome reports. The ultimate goal is to produce a publication in full compliance with GRI standards that is externally audited and assured.

This inaugural publication is themed 'Different Notes, One Sound', centred around the collaborative effort required of separate work units to deliver a solid company performance. Reported in this publication, inter alia, is information on:

1. LOCAL CONTENT STATISTICS AT PROJECT SITES
2. POLICIES DEVELOPED
3. HEALTH AND SAFETY STATISTICS
4. WASTE DISPOSAL PRACTICES AND QUANTUM
5. TRAINING, DEVELOPMENT AND EMPLOYEE TURNOVER
6. EMPLOYMENT DEMOGRAPHICS
7. COMMUNITY DEVELOPMENT INITIATIVES

2019 - embedding the process

Moving forward into 2019, NGC will continue to report on all aspects of sustainability performance but also focus on embedding the Sustainability Reporting process into the organisation in two main ways:

1. Promoting education and awareness among key departments on the importance of Sustainability Reporting, the reporting process, requirements and ways in which the information required for the Sustainability Report could also be useful for departmental monitoring and reporting;
2. Integration of indicators used for Sustainability Reporting into the Company's internal monitoring and reporting system. This will ensure that information required for the process is captured, collated and reported, and done so in the format that aligns with the reporting requirements.

NGC also hopes to register its Sustainability Report on the Global Reporting Initiative (GRI) International database which will offer "international profiling... for Sustainability Reports in an easily accessible user-friendly archive, while at the same time contributing to the comprehensive pool of data used for sustainability research and trend analysis that drives the sustainability agenda."¹

NGC is pleased to publish this inaugural report as proof of the Company's aspiration to the highest international standards in business, and its commitment to responsible, transparent operations. The publication can be electronically accessed at www.ngc.co.tt

¹ <http://database.globalreporting.org/register-report>



**TO REFLECT ON THE BEAUTY
THAT SURROUNDS US HERE IN
TRINIDAD AND TOBAGO**

Ducks perch on a railing with soldiers' precision at the Wild Fowl Trust, Pointe-à-Pierre. Photo by Sherwin Williams



THE NGC GROUP OF COMPANIES
