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Energy... Creating Value, Touching Lives!

What is the value of Trinidad and Tobago's energy resources? Is its value measured in millions of barrels of crude oil under the ground? Is it measured by the Henry Hub spot price of natural gas? National Energy takes the view that the real value of the country's energy resources lies not in the mere monetisation of hydrocarbons, but rather in the benefits generated from the sale and utilisation of these commodities for the wellbeing of citizens. In other words, the value of our energy is determined not by its ability to fetch a price, but in its ability to touch our lives.

Trinidad and Tobago's unique energy story began in 1908 when the first commercial oil well was drilled at Guapo, Point Fortin. It was not until the 1950's, however, that petroleum production began in earnest, resulting in a shift of the then largely agrarian economy towards becoming an economy driven by oil. The 1970's would see the monetisation of natural gas, a product previously flared as it was considered a nuisance by-product of the drilling process.

Generation of natural gas revenue would necessitate the formation of The National Gas Company of Trinidad and Tobago (NGC) in 1975 and National Energy Corporation of Trinidad and Tobago (National Energy) in 1979 to advance potential markets for natural gas. This development thrust resulted in the formation of the Point Lisas Industrial Estate and the establishment of a burgeoning downstream petrochemical sector. In short order, Trinidad and Tobago could boast of being the largest single producer of methanol and ammonia in the world and, by the 1990's when LNG was added to the energy landscape, the leading supplier of the commodity to North America.

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EDITORIAL

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Most of us are familiar with the facts recounted above as the energy industry has performed creditably well in marketing Trinidad and Tobago as an investment destination to the world. Where the energy sector has not done as well, however, is in the area of public education. To most citizens, the energy sector is still viewed with some trepidation and as the domain of highly technical minds, which seems far removed from ordinary citizens.

This view is far from the truth as the energy sector has been and still is largely responsible for the quality of life we enjoy. Powered by the energy sector, which contributes 44% of Gross Domestic Product, Trinidad and Tobago enjoys universal primary and secondary education with a literacy rate of 98.8% as stated by the Trinidad and Tobago Central Statistics Office. The country also possesses a competitive manufacturing sector and plans are in the works for the further downstream expansion of melamine which is being produced locally. Though the energy sector only directly employs 3% of the labour force, through indirect employment several industries depend on energy for their existence.

The question thus arises as to why the energy sector continues to be seemingly misunderstood and underappreciated. One possible answer is that industry players have revelled in their sense of elitism, not recognising the need to continuously engage the general public, our major stakeholder. We have also insufficiently communicated with the public about how they can partner with energy companies to ensure a sustainable energy future that is both prosperous and diversified.

National Energy is embracing the challenge of bringing energy closer to the people. In this issue we look at some of the ways in which the energy sector is creating value and touching the lives of the citizens of Trinidad and Tobago. EDITORIAL

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Trinidad and Tobago **Energy Conference 2014**

This year's annual Energy Conference hosted by the Energy Chamber of Trinidad and Tobago was held at the Hyatt Regency, Port of Spain from 3 - 5 February 2014. The theme of the conference was "Winning in an Evolving Energy World."

The conference featured three aspects:

- Pre-event Welcome Ceremony and Feature Address by Senator the Honourable Kevin Ramnarine, Minister of Energy and Energy Affairs (MEEA), followed by plenary sessions
- Trade Show
- Green Energy Day

National Energy Corporation of Trinidad and Tobago Limited (National Energy) participated in the Energy Pavilion amongst other State Energy Agencies – Ministry of Energy and Energy Affairs (MEEA), The National Gas Company of Trinidad and Tobago (NGC), Petroleum Company of Trinidad and Tobago Limited (PETROTRIN) and Petroleum Marketing Company of Trinidad and Tobago (NP).

This year's booth design included user-friendly touch screen displays which allowed conference participants and delegates to learn more about the participating companies' operations and contributions to the energy value chain from upstream to downstream.



Energy Conference Opening Ceremony, from left: Powergen Chairman Indarjit Singh, Trinidad Generation Unlimited Chairman David D'Andrade, National Energy President Dr. Vernon Paltoo, Minister of Energy and Energy Affairs the Honourable Kevin Ramnarine, NGC Chairman Roop Chan Chadeesingh, National Petroleum Ag. C.E.O. Kevin Mootilal and Permanent Secretary in the Ministry of Energy and Energy Affairs Selwyn Lashley.



In his keynote address, Minister Ramnarine echoed defining statements, including:

• Policy formulation and the importance of local content in our energy sector. Local companies in the energy services sector must be afforded a fair chance to benefit from the resurgence of activity in our upstream sector.

• Increase in exploration and production activity.

National Energy values its most esteemed resource: the people. As such, the Company's corporate goals include employee satisfaction and development, customer and stakeholder satisfaction, enhancing leadership capabilities and optimising the processes that govern the Company's operations.

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Dr. Vernon Paltoo, President - National Energy and Mr. Kern Dass, President - NESC sign MOU.

- Arresting the decline in oil production.
- Greater industry collaboration.
- Adapting to survive and prosper in order to win in an evolving energy world.
- The nearing of completion of the Panama Canal expansion project, which will have consequences for the global LNG trade.
- Public education in order to foster a better understanding and appreciation of the energy sector.

On Day 2 of the conference, Mrs. Marleen Lord-Lewis. Vice President - Operations, National Energy provided an update on the projects under development. The presentation also included National Energy's focus on the diversification and sustainability of the energy sector of Trinidad and Tobago. Mrs. Lord-Lewis also seized the opportunity to explain the Company's new brand identity.

Projects being worked on were highlighted, which included the project status for the Natural Gas to Petrochemicals project, Gasfin LNG, the Metaldom steel plant and rolling mill and the Chemtech Limited formaldehyde/melamine marine

cluster which are earmarked for Union Industrial Estate (U.I.E.), La Brea.

Based on the proposed timeline for the execution of these projects, there was a deliberate focus on the generation of employment and creation of spin-off businesses from such economic activity. The people of La Brea and environs stand to benefit from the works that are planned for these projects. As mentioned in the Minister's speech, Mrs. Lord-Lewis echoed the Company's intention to ensure that investors maximise the use of local content and services in all aspects of project development and implementation.

The next generation of renewable energy was also mentioned including wind resource assessment, solar energy lighting and the installation of solar stills and photovoltaic systems in schools and community centres throughout Trinidad and Tobago.

Port Galeota – the flagship infrastructure project - was highlighted. This facility would serve the upstream energy sector with a modern, specialised and sustainable port and is expected to be operationalised in 2014. Updates were also provided for the Brighton Port Master Plan Study and the reconstruction

of Berth 2 at La Brea. Subsequently, the Company's strategic and operational plans for 2014 were highlighted, which were centred on the continuous facilitation of gas-based projects and related infrastructure.

While National Energy continues to work for the benefit of the citizens of Trinidad and Tobago, the Company's corporate social responsibility initiatives were also emphasised. National Energy values its most esteemed resource: the people. As such, the Company's corporate goals include employee satisfaction and development. customer and stakeholder satisfaction, enhancing leadership capabilities and optimising the processes that govern the Company's operations.

In conclusion, it was strongly felt that National Energy's new brand identity and commitment to the people of Trinidad and Tobago were effectively showcased.

National Energy has illustrated the Company's intention to continue collaborating with the public, private and state sector organisations to facilitate the growth and development of the energy industry in Trinidad and Tobago.

Building Capacity through Strategic Alliances

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Capacity building has been the corner stone of National Energy's project development. In previous issues, Pioneer has discussed National Energy's commitment to building capacity within its fence-line communities, and the strategic action plan that the Company embarked on in 2013 with its theme of "Building Capacity, Minimising Risk".

Due to the significant impact of capacity building on the Company's operations, National Energy has retained this theme into 2014, as it prepares to officially open Port Galeota in Guayaguayare and is pursuing the expansion of Union Industrial Estate in La Brea.

To meet the human resource demands for these projects, in particular Port Galeota, National Energy solidified its partnership with the National Energy Skills Centre (NESC) on Friday 24 January, 2014, by participating in a ceremonial signing at the NESC Head Office in Pt. Lisas.

The ceremony signalled the continued collaboration between the two companies, as NESC will provide essential training for suitable candidates in the Mayaro/ Guayaguayare community in preparation for the commencement of operations at the Port.

National Energy has had a long-standing partnership with NESC over the years, given NESC's mandate to "...provide the necessary training modeled around the skill expectations of new plants targeted for the energy

and energy related industries..." More importantly, National Energy's mission states that the Company leverages its expertise through "strategic alliances."

In 2013, National Energy collaborated with NESC to provide Roustabout training to 22 persons from the Mayaro/Guayaguayare area. In 2014, there will be a progression for those persons who received Roustabout training, as well as the start of a six-module stevedoring training programme for 20 persons.



Students receive hands-on stevedoring training.

At the ceremony, National Energy President, Dr. Vernon Paltoo, expressed his gratitude to NESC and NESC's President Mr. Kern Dass for the company's continued support of National Energy's capacity building initiatives. National Energy will also work with other institutions in fulfilling other capacity building initiatives within its fence-line communities as the Company contributes towards building sustainable communities.

National Energy celebrates 2013 Milestones



National Energy was incorporated in 1979 to continue the work first started by the Coordinating Task Force in monetising the country's natural gas resources and developing and managing industrial and marine infrastructure. National Energy was involved in the construction and operation of the early petrochemical plants, and the port and marine infrastructure which services all plants at the Point Lisas Industrial Estate.

In 1999, National Energy, a whollyowned subsidiary of the National Gas Company of Trinidad and Tobago Limited (NGC), became an independent entity within the NGC Group of Companies with a mandate "to develop and manage suitable infrastructure in order to facilitate and promote the various activities relevant and appropriate to natural gas-related operations."

Most recently this mandate was refined even further with National Energy taking on the responsibility for new energy-related and downstream development, broadening its scope to meet the needs of the ever growing and evolving local energy industry.

With the support of the Ministry of Energy and Energy Affairs and parent company The National Gas Company of Trinidad and Tobago Limited (NGC), National Energy has taken a proactive approach to the promotion of Trinidad and Tobago's energy brand to local and foreign investors, while continuing to execute the development of energy projects and infrastructure.

In 2013 National Energy sought to further position the Company as "a global leader in the development of sustainable energy industries," by adopting a new brand identity, transitioning the Company from National Energy Corporation (NEC) to National Energy.

This fresh and modern brand image is aimed at further positioning the Company to achieve the following goals in the medium to long term:

- To engage in a diverse range of activities associated with the energy sector in line with Government's mandate.
- To develop an international brand image.
- To become a more integrated energy company with the ownership of assets in energy-related entities.
- To become an international provider of energy services and logistics planning, especially for emerging energy provinces.

These objectives, together with the Company's new brand identity, will ensure that National Energy continues to provide the quality of service to which Trinidad and Tobago has become accustomed.

ENERGY INDUSTRY DEVELOPMENT

In April 2013, a Project Development Agreement for a Natural Gas to Petrochemicals Complex was executed among the following seven parties:

- Government of the Republic of Trinidad and Tobago (GORTT), via the Ministry of Energy and Energy Affairs (MEEA)
- National Energy Corporation of Trinidad and Tobago (National Energy)
- The National Gas Company of Trinidad and Tobago (NGC)
- Mitsubishi Corporation (MC)
 Mitsubishi Gas Chemical
- Company Inc. (MGC) • Neal and Massy Holdings Limited (N&M)

Phase 1 of the project is the construction of a methanol and dimethyl ether (DME) facility. Project development activities, including detailed engineering, have commenced. Additionally, National Energy in conjunction with Phoenix Park Gas Processors (PPGPL), MC and N&M have been exploring a number of downstream and associated projects which have led to the execution of a Memorandum of Understanding (MOU) among the parties for a feasibility study for a mono-ethylene glycol (MEG) facility. This project will convert ethane from natural gas to MEG.

OPERATIONS

In May 2013, National Energy held a Stakeholder Forum for its maritime stakeholders in an effort to better understand the needs of its customers. During the forum the Company announced several new initiatives that were adopted including a change in Towage rates/tariffs.

- LABIDCO realised a greater than 100% increase in net profit for the financial year 2013. This was largely due in part to increased revenue streams from the marine services sector. Work also progressed on major repairs to the Port Facilities. Tender action, related to the repairs, was initiated for repairs to Zone 1 and to Berth 2. The preliminary re-design of Berth 2, Brighton Port, is complete.
- The Company achieved a significant milestone in the form of Town and Country Planning (TCPD) approval for development of land at Union Industrial Estate (UIE). Phase 1 of the UIE Drainage Project is currently under construction.
- Receipt of a reclamation license for Port Galeota and Brighton Port. Port Galeota is expected to be operationalised in 2014.
- Receipt of an Annual Verification Statement of Compliance regarding the Company's Port Security Plans from the Designated Authority (Trinidad and Tobago Coast Guard) was received. Ten ISPS mandatory awareness sessions were conducted for Users/Contractors working on the Savonetta Piers.



Women learn the art and business of hair care in aesthetics workshop.

 National Energy is proud to have achieved a zero critical injury record for completion of the following major works:

- Steel Sheet Pile Installation
- of Berths 1 5 and tieback
- Sandblasting works

beam Berth 1

RESPONSIBILITY

• Concrete prefab works/coping

• Installation of channel markers

• An RFP was issued for the preparation of a Review and Assessment Report (RAR) for the Pt. Lisas South and East Industrial Estate. Environmental Monitoring and Reporting was completed at the Port Galeota Development Project and an Environmental Audit was conducted of the Kaizen Bio-remediation Facility, La Brea.

CORPORATE SOCIAL

As per National Energy's Corporate Social Responsibility Pillars (sport, culture, capacity building, youth development and environmental sustainability) we were able to:

• Implement 100% of the Company's CSR calendar of activities.

 Assist in attracting possible investors for the 2013 deep-water bid round at Energy Investment Roadshows held in Houston, Texas and London, England in October and November, respectively, which were successful.

- Develop a Stakeholder Engagement Plan for the Mitsubishi Project.
- Host 16 meetings with internal and external stakeholders during the year.
- Train 200 people in various disciplines in the Company's fenceline communities of La Brea and Mayaro/Guayaguayare.

LOOKING AHEAD

As National Energy looks forward to 2014, the management and employees met in January to set the stage for the business over the coming year. At that meeting the team discussed the major areas of strategic focus for 2014 which include:

- Operationalisation of Port Galeota
- Start of construction of the Mitsubishi Project
 Optimization of revenues
- Optimisation of revenues and expenditure
- Continued collaboration with the Ministry of Energy and Energy Industries (MEEA)

With these clearly defined focus areas, National Energy is poised to positively impact the expansion of the energy sector into the future. (09)

National Energy Signs Monumental MOU



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National Energy has signed a Memorandum of Understanding (MOU) with Canadian company Reunion Gold Corporation (Reunion Gold). The MOU endorses the collaboration between the two companies to evaluate the potential development of a silico-manganese plant in Trinidad and Tobago.

David Fennell, Chairman of Reunion, stated: "This is a significant development for the Company. While Matthews Ridge as a stand-alone mining operation is an attractive investment opportunity, we believe that the construction of a silico-manganese plant in Trinidad and Tobago to be supplied by Matthews Ridge ore may potentially allow us to create a vertically integrated operation which could become one of the world's lowest cost producers of silico-manganese."

Reunion Gold's attraction to Trinidad and Tobago rests in its proximity to Guyana. The country also offers numerous benefits including competitive power costs, deep sea port facilities, dedicated areas for industrial projects and proximity to silico-manganese markets.

Reunion Gold is a mineral exploration company engaged in the exploration and development of the Matthews Ridge manganese project located in the North West District of Guyana, South America.

Silico-manganese (SiMn), a ferroalloy with high contents of manganese and silicon, is made by heating a mixture of the oxides manganese oxide (MnO₂), silicon dioxide (SiO_2) , and iron oxide (Fe_2O_2) , with carbon in a furnace. It is used as a deoxidiser and an alloying element in steel.

The MOU endorses the collaboration between the two companies to evaluate the potential development of a silico-manganese plant in Trinidad and Tobago.

The Installation of Solar Stills and Photovoltaic Cells in Secondary Schools in Trinidad

Students will gain practical knowledge, skills and abilities through lessons that integrate renewable energy and energy efficient technologies with Information and Communication Technology (ICT) education, as well as activities in Science and Technology Education, utilising related technologies installed in the schools.



PV installation at North Eastern College

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As part of the Government's Medium Term Policy Framework 2011 – 2014, the Government of the Republic of Trinidad and Tobago has highlighted the development of Green Industry and Alternative Energy Sources as part of its goal of "Building a Competitive, Innovation-driven Economy."

One such project aimed at integrating this concept is the introduction of renewable energy technologies into 21 secondary schools in Trinidad. This project has been designed with collaboration among the Ministry of Education (MoE), the Trinidad and Tobago Electricity Commission (TTEC), the Education Facilities Company Limited (EFCL), the University of Trinidad and Tobago (UTT) and the Ministry of Energy and Energy Affairs (MEEA) and would see the installation of solar stills and photovoltaic (PV) cells to provide distilled water for the science laboratories and power for small loads in the libraries.

Students will gain practical knowledge, skills and abilities through lessons that integrate renewable energy and energy efficient technologies with Information and Communication Technology (ICT) education, as well as activities in Science and Technology Education, utilising related technologies installed in the schools. This project was facilitated by the Energy Industry Development (EID) Department and is currently being implemented through the Infrastructure, Planning and Development (IPD) Department of National Energy.

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01 Students give their all in track events
02 Winners' Circle
03 Students look on at the events
04 Schools line up for March Past inspection
05 Overall Winners, Vance River RC School
06 Bess Red Mango!
07 Winner of Calypso competition, Mellissa Rampersad-Griffith goes to work with her hit song, "Ah Working"
08 Midnight Robber
09 Dame Lorraine
10 Staff enjoy the lime
11 Is a Food Ting!

La Brea Zonal Primary School Games











National Energy Carnival Celebrations: "Is a Carnival Ting"













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The Role of New Business at National Energy





Figure 1: Operations Group at National Energy.

Current business activities existing at the La Brea Industrial Estate include the leasing of industrial estate lands, port operations, bioremediation services, with the facilitation of logistics services for offshore activities, pipe import storage and coating and importation of aggregates. The LABIDCO Estate is the home of the country's first Fabrication Yard and associated dock used for the fabrication, construction and export of offshore platforms (Figure 2).

The site also provides space to cater for the needs of Trinmar's current business activities. As such, synergies and increased efficiency can be obtained by expanding LABIDCO's services to offshore logistical services for drilling and workover operations at the Brighton Port.



Figure 2: Port Galeota Phase 1 (July 2013).

In keeping with National Energy's thrust to develop new energy-based projects, there will also be a need to provide new ports, marine and estate infrastructure to support such business activities. This responsibility resides within the Operations Group, whose structure and composition is illustrated in Figure 1.

In 2012, National Energy undertook a restructuring exercise which included the reorganisation of the Operations Group. The following provides an overview of the roles and responsibilities of the various departments within the Operations Group, including the New Business Department.

The role of the Business and Technical Support Department (BTS) is the overall planning of new and essential infrastructure requirements. BTS is responsible for facilitating the delivery of major projects through effective planning and creating engineering design solutions. The Infrastructure. Planning and Development (IPD) Department is responsible for the construction of assets by utilising modern project management techniques. Further to the physical creation of the asset, the Operating Assets Department (OAD) would be charged with managing their

commercial, operational and maintenance viability for optimum profitability. Managing all existing assets currently under the Company's portfolio, including the petrochemical piers, tugs, the Pt. Lisas harbour and ISPAT dock, falls under the purview of the OAD. The Loss Prevention and Sustainability (LPS) Department has overall responsibility for ensuring that all activities comply with the relevant environmental, health, safety and security aspects of project planning, execution and operation.

Today we feature the role of the New Business Department. One of the key functions of this department includes the implementation of strategies for achieving new business goals and key targets for the assets managed by the Operations Group. The New Business Department also has responsibility for the development of economic justifications for these new business opportunities. In conjunction with the other departments within the Group, as appropriate, New Business also coordinates efforts amongst all relevant agencies related to the establishment of new estates and marine infrastructure.

With regard to estate and port operations, National Energy currently manages the operations of the La Brea Industrial Development Company (LABIDCO) Estate, a joint partnership between the National Gas Company of Trinidad and Tobago Limited and the Petroleum Company of Trinidad and Tobago Limited. This facility is fast becoming an industrial hub for local and international investors.

One of the key functions of this department includes the implementation of strategies for achieving new business goals and key targets for the assets managed by the **Operations Group.**

Operating Assets (Marine Terminal Operations Towage & Harbour Operations



Union Industrial Estate (UIE) is a 150-hectare industrial estate that is located in La Brea and was established to cater for the needs of industrial customers. Current proposals under development include investments such as petrochemicals, energy-based manufacturing, renewable energy, metals processing and mid-scale liquefied natural gas projects. As such, there is a projection of an increase in estate and port activity at that location.

Port Galeota, located on southeastern tip of Trinidad is another port under the purview of National Energy. This facility is expected to be operationalised in 2014. The port was conceptualised and built to cater for the needs of the upstream energy sector operators (Figure 3). Led by the Business and Technical Support Department, a second phase of Port Galeota is currently being designed to provide further logistical and support services for the energy industry, especially related to deep sea drilling.

Based on Trinidad and Tobago's attractiveness as an investment location, there is a growing need for expansion of estate and port operations. Consequently, there is a strong requirement for a commercial approach to such business activity. Expansion and development of such infrastructure would inevitably impact on existing businesses,

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Figure 3: Aerial View of Berths and Fabrication Yard at LABIDCO (2013).

stakeholders and people. Additionally, community groups are becoming more cognisant of employment and other economic opportunities in their respective areas. In this regard, the New Business Department and the Corporate Communication & Administration Department will be working together to ensure that cordial relations are built and maintained amongst all stakeholders, businesses and communities for the sustainable development of our fence-line communities.

Mr. Nigel Woodsley was appointed to the position of Manager - New Business in November 2013. He brings with him a wealth of experience, which includes over 12 years of managing property and real estate portfolios, including development planning.

He is an advocate for relationship management, fostering strong relations with stakeholders. Nigel also worked at the Town and Country Planning Division (TCPD) of the Ministry of Planning in 1999.

Mr. Woodsley is a Registered Planning Professional with the Trinidad and Tobago Society of Planners, whose qualifications include a BA Geography (Physical Planning Major), MSc Planning and Development and is currently completing his practicum for an MBA (1st Cohort) in Sustainable Energy Management at the Arthur Lok Jack Graduate School of Business.

When asked about his immediate deliverables in this new portfolio, his response included the development of a strategic plan for LABIDCO Estate, organisational restructuring of LABIDCO's operations and operationalisation of Port Galeota, to ensure continued growth and development of the various sectors that utilise the assets developed and managed by National Energy.

He also has plans to treat with outstanding tenant issues, ensuring that there is a firm but cordial approach to integrating the commercial, operational and stakeholder relations of National Energy's on-site operations. Mr. Woodsley did not hesitate to reemphasise that National Energy's business activities and, by extension, the national economic agenda can only be sustainable if proper communication and strong relations with all stakeholders are harmonious and progressive.



Nigel Woodsley, Manager - New Business

Applications of Dimethyl Ether (DME)

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DME Truck.

DME is one of the most promising alternative automotive fuel solutions among the various ultra clean, renewable and low-carbon fuels under consideration worldwide.

The Proposed Integrated Natural Gas to Petrochemical Complex in Union Industrial Estate, La Brea being developed by Caribbean Gas Chemicals Limited (CGCL) is expected to produce approximately 1,000,000 tonnes of methanol and 100,000 tonnes of Dimethyl Ether (DME) per annum.

DME is a clean, colourless gas that is easy to liquefy and hence transport. DME is derived from many sources, including renewable materials (biomass, waste and agricultural products) and fossil fuels (natural gas and coal). It has remarkable potential for use as an automotive fuel, electric power generation, and in domestic applications such as heating and cooking.

DME is one of the most promising alternative automotive fuel solutions among the various ultra clean, renewable and low-carbon fuels under consideration worldwide. DME can be used as a fuel in diesel

and gasoline engines and gas turbines and both engine and vehicle manufacturers, including Nissan and Volvo, have developed heavy vehicles fuelled with 100% DME.

Recently, a five tonne ISUZU truck powered only by DME arrived in Trinidad and was on show at the Japanese Embassy for demonstration purposes.

As an automotive fuel, when compared with petroleum-derived diesel, DME's performance demonstrates a number of significant benefits:

- Ultra low exhaust emissions
- No particulate matter (PM); very low nitrous oxides (NOx); no sulphur oxides (SOx)
- Low CO₂ emissions
- Low engine noise

(17)



- High fuel economy
- High well-to-wheel efficiency
- Thermal efficiency equivalent to diesel engine performance
- Ignition characteristics equivalent to diesel engine performance

The reduction or elimination of particulate emissions, also commonly known as "soot" or black smoke, is another important benefit, as diesel engines running on 100% DME have demonstrated smoke free combustion, while engines using a DME/diesel fuel blend have demonstrated significant reduction of soot.

Often described as "synthetic LPG", DME can be blended with LPG (in a proportion of up to 20%) for domestic cooking and heating, without modifications to equipment or distribution networks.

Growth in DME's use for domestic applications is expected to increase sharply as DME use and blending becomes more widespread within the large and growing LPG market - especially in developing countries where portable (bottled) fuel is providing a safer, cleaner and more environmentally friendly fuel for cooking and heating.

DME has a performance comparable to natural gas when used for the production of electric power, and it has been approved by manufacturers such as General Electric, Hitachi and Mitsubishi as a fuel for use in gas turbines. DME is an efficient alternative compared to other energy sources for medium-sized power plants, especially in isolated or remote locations where it can be difficult to transport natural gas and where both the construction and operation of liquefied natural gas (LNG) regasification terminals is not viable.

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National Energy Lends a Helping Hand



The ingrained culture at National Energy has always been to lend assistance to those in need and 2013 was no exception.



Dr. Ralph Gonzales, Prime Minister of St. Vincent & the Grenadines commends ODPM Team.

The ingrained culture at National Energy has always been to lend assistance to those in need and 2013 was no exception.

As part of its Corporate Social Responsibility initiatives, and its commitment not only to its fence-line communities but to the citizens of Trinidad and Tobago, National Energy increased its charitable giving last year and supported several key organisations. Some of these organisations included the Trinidad and Tobago Cancer Society and the Just Because Foundation through the Company's "Think Pink" initiative; Couva Home for the Aged

and the charitable organisation Is There Not a Cause in their efforts to bring relief to the people of the Eastern Caribbean who were affected by the severe weather conditions that occurred in December 2013.

While all of these causes are significant and deserved equal attention, the devastation experienced by the residents of St. Vincent struck a chord with the employees of the Company. They collected canned food items which were handed over to the Is There Not a Cause team who distributed foodstuff to residents. One of National Energy's employees, Keron Sooklal of the Loss Prevention & Sustainability Department, was so moved by the tragedy that he volunteered his time to the effort and travelled to St. Vincent from December 2013 to January 2014. Keron, a member of the Trinidad and Tobago Defence Force Reserves, was specially selected along with two engineers to lend technical assistance to the Government of St. Vincent regarding their day to day relief operations.

Working through the ODPM, the Trinidad and Tobago team left on 31 December 2013 on a specially chartered sailing of the TT Spirit to carry across over US\$0.5 million in disaster relief items, which ranged from baby formula to heavy equipment. At that time Keron described the devastation in St. Vincent as the worst he had ever seen as the island suffered widespread landslides and flooding. The collapse of over ten major bridges rendered roads impassable and added to the difficulty in getting much needed supplies to affected residents. Many citizens were displaced from their homes and were housed in shelters.

However, Keron commended the organisations on the ground, including NEMO (the equivalent body to ODPM), Red Cross and ODPM, for their swift response to the disaster.

In 2014 National Energy will continue to promote Corporate Social Responsibility and partner with organisations to help those less fortunate.



St. Vincent devastated by severe weather.

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Developing Youth through Music



Mayaro Secondary, winners of secondary schools category.

Born out of the need for an avenue for the children of Mayaro and Guayaguayare to showcase their musical talents, the first ever Southeast Schools' Steelpan Festival was held on Friday 21 February 2014 at the Mayaro **Government Primary School Grounds.**

Music filled the atmosphere above while 400 pairs of little feet danced on the earth below to the sweet sounds of steel. The children of Mayaro and Guayaguayare were celebrating their own version of junior 'Panorama'.

Born out of the need for an avenue for the children of Mayaro and Guayaguayare to showcase their musical talents, the first ever Southeast Schools' Steelpan Festival was held on Friday 21 February 2014 at the Mayaro Government Primary School Grounds. The event, which was hosted by National Energy in collaboration with Pan Trinbago, saw five primary and two secondary schools vying for first place and the right to be called Champions of the Southeast Region.

Schools drew for positions at 1:15 p.m. after which the programme was formally opened by Ms. Wendy Seow, Manager - Corporate Communication & Administration. In her opening remarks, Ms. Seow thanked Pan Trinbago for their willingness to partner with National Energy to put on the event. She also thanked NGC, Hydro Tech Limited, Coastal Dynamics,

Neal & Massy Wood Group and PETROTRIN who came on board to sponsor T-shirts for the participating schools. Mr. Rudo Forteau of Pan Trinbago also expressed his organisation's continued commitment to working with companies like National Energy for the advancement of steelpan in our nation's schools. Mr. Andy Paul of Mayaro Government Primary thanked National Energy for its dedication to building the community and providing the opportunity for the children to showcase their talent.

The competition got underway with the primary schools performing first. Mafeking Government performed in first position giving a credible rendition of Lord Kitchener's Tribute to Winston Spree Simon. Mafeking Government was followed by Mayaro Government and Ortoire RC who played Shadow's Bass Man from Hell and Machel Montano's Happiest Man

Alive, respectively. Guayaguayare RC then gave an energetic performance of Kitchener's Pan in A Minor and St. Thomas RC closed off the primary schools category with their interpretation of the folk song, Every Time I Pass.

Mayaro Secondary performed first in the secondary category showing their skills with Ken 'Professor' Philmore's Pan by Storm while Guayaguayare Secondary took on Corey Iron by Lord Shorty.

Parents and students who had come to support their schools cheered loudly after each performance, creating an atmosphere of friendly rivalry. At the end of the keenly contested competition, Mayaro Government Primary and Mayaro Secondary emerged winners in the primary and secondary school categories. They lifted their trophies to the joy of their supporters who took great pride in the achievement. Each school received an appearance fee with the champions receiving an additional \$5,000 each.

Councillor for Mayaro/Guyaguayare, Mr. Kyron James praised National Energy for following through on its promise to host the event which had been suggested at a community stakeholder meeting held in January 2014. He commended the Company's organising team for making this dream a reality in such a short time.

In hosting the festival, National Energy took its commitment to the development of the youths of Mayaro and Guayaguayare one step further. Based on the response to the Southeast Schools' Steelpan Festival and the high level of musicianship displayed by the students, this event is undoubtedly earmarked to become an annual showcase for the youth of Mayaro and Guayaguayare.



Young pannists in action.

In hosting the festival, National Energy took its commitment to the development of the youth of Mayaro and Guayaguayare one step further.



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WELCOME TO THE FUTURE OF ENERGY.

YOUR ENERGY.

National Energy

CORPORATION OF TRINIDAD AND TOBAGO

Our new look harnesses the elemental nature of energy and speaks to the potential for exponential growth as an organisation and a people. The name proudly displays the national colours of Trinidad and Tobago as we are ever mindful that our duty is to the nation and its citizens.

This updated brand encompasses natural and human energy, working in tandem, driving us as a people towards expansion of our energy sector beyond the borders of Trinidad and Tobago.

National Energy Corporation of Trinidad and Tobago Limited is a wholly owned subsidiary of The National Gas Company of Trinidad and Tobago Limited (NGC). For more than 35 years, we have been involved in the development of the natural gas based industry and associated infrastructure, while providing quality service to our stakeholders.

We are National Energy... the future of Energy.

10 Questions with Mr. Gregory Sealy

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In this issue of the Pioneer, we will feature Mr. Gregory Sealy -Manager of Human Resources and Strategic Planning.

Pioneer: How long have you been at National Energy?

Gregory: I have been at National Energy for one year and seven months.

Pioneer: Can you describe your current position?

Gregory: I am responsible for leading, defining, crafting and implementing the Company's 'people strategy'. This means ensuring that the goals and objectives of the Company are achieved through the people and that all employees are satisfied, properly trained and happy to work at National Energy. Part of my job includes ensuring that Human Resources (HR) and training plans are well established across the Company and that these plans are properly aligned to corporate objectives. I am also responsible for making National Energy an employer of choice in Trinidad and Tobago.

Pioneer: What do you like most about your job?

Gregory: There's always something happening and there's never a dull moment. I also truly enjoy working closely with the members of my team. your field? **Gregory:** Young persons interested in being successful as an HR professional need to develop business acumen since this makes you a stronger HR person. They would also need to gather experience and knowledge in the area of Industrial Relations as this is a good platform for any HR professional. It can be a rewarding career.

Pioneer: If you could choose another career what would it be? Why?

Gregory: I would choose a career in law. My experience with Industrial Relations has provided me with an affinity for law. People say that I have the mind and aptitude for it.

Pioneer: Who are your role models? Whv?

Gregory: I admire Nelson Mandela. He demonstrates true servant leadership and leading from behind. This is exemplified by his legacy. On the flipside, I admire Donald Trump and his shrewdness, business acumen, no nonsense approach and firm decision making capability.

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Pioneer: What advice would you give young persons interested in entering

Pioneer: What are your pet peeves?

Gregory: Disrespectful people.

Pioneer: What is something that most people do not know about you?

Gregory: Most people may not know that I am an extremely devoted father to my kids.

Pioneer: What are your hobbies?

Gregory: Reading. I read extensively and nowadays enjoy going to the gym.

Pioneer: If you had to give advice to others, especially young people, what would it be?

Gregory: Put a premium on your education. However, when you get to the workplace, put a premium on your experience and professional development.





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