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We are
National
Energy



We Are National Energy!



On June 25th, 2013 National Energy launched its new brand identity at the Hyatt Regency Trinidad to the media and the company's energy partners. The following is an excerpt from the welcome speech given by National Energy President, Dr. Vernon Paltoo, to commemorate the occasion.



"From its historic birth, this company (National Energy) was entrusted with a great responsibility; one that has impacted heavily on our nation's GDP, and the daily lives of the people of this country. From day one, we took that responsibility seriously; staying committed; and realising the vision. Over the years, as the agency responsible for new energy-related and downstream development, we broadened the scope and grew from strength to strength; expanding and developing into the brand you see before you today... National Energy.

(Ladies and Gentlemen) In 1979, who would have believed that the energy industry would have taken the shape it has today? It took flexibility and resilience to shape the history of this organisation. And as we move into the future, it will take courage and creativity, innovation and inventiveness, new technology and visionary leadership, to ensure the National Energy brand is imprinted on our national consciousness...

Since then, the sky has been our limit. Today we are well positioned, as the force that will drive the expansion of the energy sector into the future. The company is taking a proactive approach to promoting Trinidad and Tobago's energy brand, regionally and internationally, as well as continuing to execute the development of energy projects and infrastructure, under the dedicated leadership of the Hon. Minister of Energy and Energy Affairs, Senator Kevin Ramnarine...

In this context, we have embarked on this re-branding exercise, transitioning from National Energy Corporation to National Energy. At this point, I must state for clarity that the official legal name of the organisation remains National Energy

Corporation of Trinidad and Tobago Limited. However, we believe that the new logo, as well as the new identity as National Energy encompass the infinite movement and power of energy... from the vigour and vitality of the people of Trinidad and Tobago, to the evolution and redefinition of the energy sector... We are 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 time frame:

- 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.

(Ladies and Gentlemen), we are certain that this new image, together with these focused objectives, will ensure that National Energy is ready and able to take Trinidad and Tobago along a path of sustainable development and growth."



WELCOME TO THE FUTURE OF ENERGY

Revealing the new brand identity of National Energy Corporation of Trinidad and Tobago



National Energy President Dr. Vernon Paltoo welcomes stakeholders at the company's rebranding media launch

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Welcome to the Future of Energy-National Energy



Minister of Energy and Energy Affairs The Honourable Senator Kevin Ramnarine at the Launch of National Energy's new brand image

National Energy proudly launched its new brand identity at the Hyatt Regency Trinidad, on Tuesday June 25th, 2013. The brand, which personifies the company's mandate to actively pursue energy based projects, marine and logistics business opportunities regionally and internationally, was well received by the media and energy industry partners in attendance.

In his Opening Remarks President of National Energy, Dr. Vernon Paltoo, invited stakeholders to embrace the new brand identity, saying that this new image together with National Energy's focused objectives "Will ensure that National Energy is ready and able to take Trinidad and Tobago along a path of sustainable development and growth."

His sentiments were echoed by the Minister of Energy and Energy Affairs, Senator the Honourable Kevin Ramnarine who, in his Feature Address, commended the company on its new brand identity and expressed his confidence in National Energy's ability to carry out the Government's energy mandate.

The vision for this new brand image was born out of the need for National Energy to translate the company's vision and goals into a message that resonates with the company's various publics. The conceptualisation of this new identity started in 2012.

"National Energy is ready and able to take Trinidad and Tobago along a path of sustainable development and growth."

- Dr. Vernon Paltoo
President of National Energy

The conceptual artists gathered information from the company's stakeholders asking questions like:

What should be the future impact that National Energy Corporation makes globally? What does the word energy mean to you as a person? Where will NEC be in five years and

What would the world be missing without NEC?

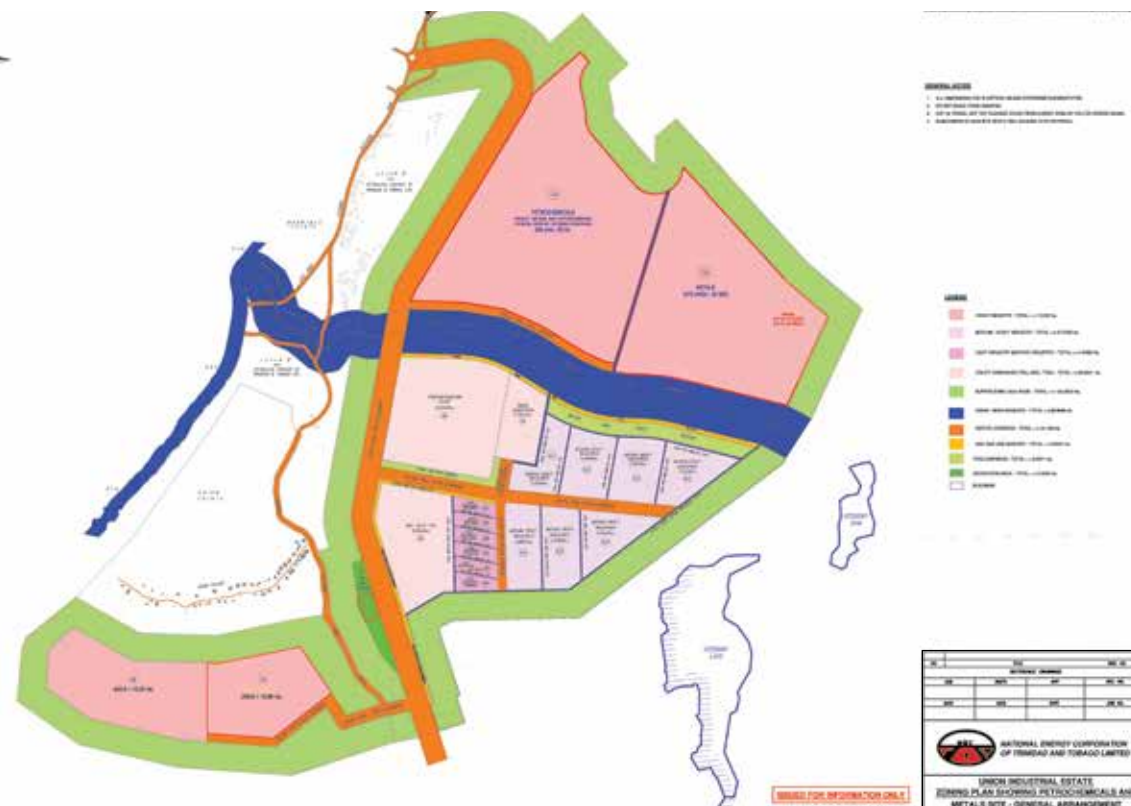
Using this information they explored the potential of various forms of energy including the sun, lightning, waves and infrared light. They also looked at the energy of our people from creativity to cultural expression.

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 displays the national colours of Trinidad and Tobago proudly, 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.

We are National Energy and this... is the future of energy!

US\$850 Million Investment for the Trinidad & Tobago Energy Sector



Satellite image of Mitsubishi Project Site

The signing of the Project Development Agreement on April 8th, 2013 for the establishment of a petrochemical complex, at Union Industrial Estate, La Brea, to produce methanol and dimethyl ether (DME) was hailed as a major milestone in Trinidad & Tobago's quest for further diversification of the energy sector and sustainable growth of the economy. The project will also auger well for development of the South-Western peninsula and will play a significant part in promoting local content through the participation of a local conglomerate.

THE PROJECT

The Natural Gas to Petrochemicals project will be pursued in several phases. The first phase of the project will involve the use of one hundred million standard cubic feet per day (mmscf/d) of natural gas to produce one million metric tonnes per annum of methanol and one hundred thousand tonnes per annum of DME.

The cost of this phase is estimated to be US\$850 Million, with construction expected to begin by second quarter, 2014. The plants are anticipated to begin operation by second quarter 2016. Peak employment during construction will be approximately three thousand people. During operations, permanent employment is expected to be around one hundred and eighty persons, with a similar number indirectly employed.

In the second phase of the project, the investors will consider the production of acetic acid, acrylonitrile, mono ethylene glycol (MEG) from syngas and/or ethane extraction. MEG could have an integral role in advancing additional downstream manufacturing operations, such as automotive coolants, polyester fibre and poly ethylene terephthalate (PET) resin.

Subsequent phases of the project will be aimed at utilising natural gas beyond primary derivatives and taking

the steps to go further downstream into secondary and tertiary derivatives and eventually narrowing the gap to link our energy and manufacturing sectors.

THE INVESTORS

The consortium comprises:

- Mitsubishi Gas Chemical Co. Inc.
- Mitsubishi Corporation
- Neal and Massy Holdings Limited

Shortly after the signing of the Project Development Agreement, the investors formed the Caribbean Gas Chemicals Company (CGCL), as a locally registered company to oversee the project development phase of the project.

THE PRODUCTS

Methanol and DME will be the two products produced during the first phase. Key market trends are summarised in Figure 2.

METHANOL

The proposed methanol facility will be the eighth methanol plant to operate in Trinidad and Tobago and will utilise proprietary technology from Mitsubishi Gas Chemical Co Inc. that is currently employed in 10 plants across the world.

Although primarily produced from methane found in natural gas, methanol can also be produced from any carbon-based source, including coal, municipal wastes, landfill gas, wood wastes and other sources. Methanol is a highly versatile compound, with applications in almost every aspect of daily living. Uses range from automobile body panels, paints, windshield washer fluids, polyester fabrics to particle board, fertilisers, silicone sealants, polyester carpet, PET plastic bottles, oriented strand board and acetylsalicylic acid (ASA) medication.

Key Methanol Properties

- A clear colourless liquid at normal temperature and pressure
- No odour in low concentrations
- Evaporates when exposed to air
- Dissolves completely when exposed to or mixed with water

DIMETHYL ETHER

DME has been an approved consumer product propellant for over sixty years. It is considered to be environmentally friendly, as there are no emissions when burnt (due to the absence of carbon-carbon bonds that produces smoke particles), does not deplete the ozone and has minimal impact on water quality.

Methanol dehydration (indirect) and Direct Synthesis (direct) are the two methods that can be used to produce DME. The indirect method is a two-step process that first converts hydrocarbons to synthesis gas (syngas). The hydrocarbons can be sourced from multiple sources that include natural gas, coal, heavy residues from refineries, organic waste or biomass. Synthesis gas is then converted into methanol in the presence of a catalyst with subsequent methanol dehydration in the presence of a different catalyst, resulting in the production of DME. Technology providers include



Figure 2: Key Market Trends on Methanol and DME

Mitsubishi Gas Chemical, Lurgi, Haldor Topsøe and Toyo Engineering. The indirect method is the most common process and will be the process adopted in the proposed DME plant.

Alternatively, DME can be produced through direct synthesis, using a dual catalyst system that permits both methanol synthesis and dehydration in the same process unit, with no methanol isolation and purification. According to the licensors, the elimination of the intermediate methanol synthesis stage provides efficiency advantages and cost benefits.

DME offers significant potential in four main areas:

- LPG/ DME blend for domestic and industrial applications
- Power generation
- Fuel for diesel vehicles and
- Feedstock for producing olefins.

A diverse team comprising personnel from various state agencies and the Consortium is currently exploring marketing options and possible areas for maximising the use of DME locally and within the Caribbean region.

Key DME Properties

- A colourless gas at normal temperature and pressure
- Slightly sweet odour
- Similar physical properties to LPG – thermally stable, flammable, forms visible flame
- No soot emitted during combustion

KEY PROJECT DEVELOPMENT ACTIVITIES

A final investment decision is expected by March 2014.

However, in order to accomplish this, several essential contracts and approvals are required that include acquiring the Certificate of Environmental Clearance from the Environmental Management Authority and project financing.

A critical success factor would be to obtain buy-in from the community in which the plant is expected to operate. To this end, investors have already begun to engage key community stakeholders and share plans for the development of the projects. Continued dialogue with the community, with assistance from National Energy is also being encouraged.

In the recent past, National Energy has adopted a new project development model which is in-line with its new brand identity. Community involvement is key to successful project implementation. In this regard, National Energy would continue to play a critical role in working with investors and the other key project stakeholders.

For further details, please visit:

- www.mgc.co.jp/eng/index.html
- www.mitsubishicorp.com/jp/ja/csr/
- www.neal-and-massy.com/
- www.aboutdme.org

- **RECRUITING PERSONS FROM THE FENCE LINE AREAS TO MANAGE AND OPERATE THESE OFFICES** - This was a notable and strategic decision by National Energy as it has helped the company gain trust among persons in the community. A familiar "face" that lives in the same area, with knowledge of the same woes, can definitely provide deeper insight into issues affecting the communities.
- **USING THE LIAISONS TO DISSEMINATE TIMELY, CREDIBLE, ACCURATE, AND RELEVANT INFORMATION WITHIN THE COMMUNITIES** - National Energy recognises the importance of keeping the community informed of any decisions which may affect the residents, directly or indirectly. Timely dissemination of information also gives the communities opportunities to provide feedback about concerns they may have with new or on-going operations within the area. This communication can take various forms such as regular Focus Group meetings and Community Newsletters which are all coordinated by and contributed to by the Liaisons.



National Energy Community Liaison Officer for La Brea, Reay Greaves, interacts with students at a school visit in La Brea

- **DEVELOPING PROGRAMMES WHICH BUILD CAPACITY WITHIN THE COMMUNITIES** - During the company's budget planning period, the Corporate Communication Unit meets with the Community Relations Liaisons and community groups in each area to determine the best programmes and activities to be implemented in the following year. These programmes and activities are structured in keeping with National Energy's Corporate Social Responsibility (CSR) pillars for sustainable development: "Capacity Building, Education, Sports, Youth and Culture." The Liaisons are responsible for implementing the approved programmes.

The critical success factor of National Energy's community relations strategy is stakeholder engagement and relationship building in ensuring that the company obtains a social licence to operate. In this regard, the Community Relations Liaisons will continue to play a pivotal role in implementing programmes, and hosting activities that increase National Energy's goodwill in its fence-line communities.

The Community Relations Liaisons will continue to work with key stakeholders to minimise real and potential risks to National Energy's sustainable operations.

The Rough Road of Community Relations



"Dey Block D Road!!!" How many times have you heard that cry?

Usually such an exclamation would refer to protests in either the La Brea or Mayaro/Guayaguayare area fence-line communities of National Energy. If you are an employee of National Energy, you may have heard about such an occurrence probably after your arrival at the office. That's usually any time after 7:00 or 8:00 a.m. What you may not know is that the members of the Corporate Communication Unit, specifically the Community Relations Liaisons, would have been working since the wee hours of the morning gathering intelligence on the ground in an effort to rectify the situation.

"Blocking" usually means prohibiting access to the company's operations by tenants, employees or customers, which results in loss of revenue and above all, inconvenience to many. This scenario is a sad reality for National Energy.

Our company's records will show that within the last eighteen (18) months, there have been minimal disruptions to its operations in both the La Brea and Mayaro/Guayaguayare communities. This, of course, did not happen by the "roll of a dice." Minimising this risk is a direct result of structured community relations strategy-developed and implemented by the Corporate Communications Unit. This strategy includes:

- **OPENING COMMUNICATION CENTRES IN LA BREA AND MAYARO/GUAYAGUAYARE-** These offices were opened in 2010 with the aim of providing an avenue for persons within the communities to provide feedback on any concerns they may have with National Energy's operations within their areas.



Mitsubishi Consortium Engages the Communities



Trinidad and Tobago is on the verge of welcoming a new project into the country. This project is a Natural Gas to Petrochemical Plant, to be constructed at the Union Industrial Estate, La Brea. The project is headed by Caribbean Gas Chemical Limited (CGCL), a consortium consisting of the Government of Trinidad and Tobago, Mitsubishi Corporation, Mitsubishi Gas Chemical Company Inc., Neal and Massy Holdings Limited, The National Gas Company of Trinidad and Tobago (NGC) and National Energy Corporation of Trinidad and Tobago (National Energy). This consortium is a locally registered and operated company which has been given the mantle of overseeing the project development phase of the project.

As with any company coming into a community with plans of 'setting up shop', it is imperative that a social license from the community

is obtained as the community is seen as the most important stakeholder. To gain this social license and promote Corporate Social Responsibility (CSR), the consortium has been meeting with various groups and village councils to get their opinions and concerns on not only the plant, but also on the benefits they hope to derive from its construction and operations. The importance of this early engagement is to promote credibility, trust, transparency, legitimacy, and to open communication avenues between the consortium and the communities. These meetings are fully endorsed by National Energy as CSR is a core value of the company, and also aides in promoting harmonious symbiotic relations with all stakeholders.

As of July 17th the consortium has held meetings with the Vance River, Union, Sobo, Vessigny and La Brea

Village Councils. The Rousillac Village Council meeting will be held on Tuesday, 23rd July, 2013. The meetings are cordial, open forums where feedback is encouraged from attendees. Questions are answered and noted by both parties in an effort to address the concerns of the communities. Some of these concerns include sustainable development, employment, CSR initiatives and infrastructural development. Meetings and consultations with the various groups will continue as the consortium makes every effort to have meaningful stakeholder participation.



A student addresses the audience

the lives of young people. Over the past 39 years he has seen many participants of JA's 'The Company Program' grow up to become prominent members of the local business community.

Mr. Lewis views youth development as a tremendous opportunity for corporate citizens. He explained, "The majority of educated citizens are employed in organisations. Through youth training, companies have an opportunity to participate in educating their future workforce. An investment in youth development is in corporate citizens' best interest." Mr. Lewis believes that the businesses can help reinforce positive values, "Finding out who they are and their value is a challenge for our youths. We must help teach them that success is measured by how much value they bring to their environment."

PHILIP JULIEN – CHAIRMAN, HEROES FOUNDATION & BIG BROTHERS BIG SISTERS TRINIDAD AND TOBAGO

As a young man returning to Trinidad and Tobago after studies abroad, Philip Julien was moved by the sense of hopelessness he found among youths of this country. This prompted him to form the Heroes Foundation 10 years ago with the main objective of creating an enabling cycle of transformation in the nation's youth so they can become the next generation of heroes. He described the foundation's goals saying, "Young people don't see a meaningful future. We are trying to show them that goodness comes to those who

create it. A hero is someone who puts society before self." Mr. Julien is of the view that corporate citizens can take the lead in youth development by investing in mentorship, "This goes beyond writing a cheque. Time must also be invested in our young people."

In our discussions with these youth development practitioners, a common thread has emerged—there is not only a role, but also a responsibility for corporate citizens in youth development. Corporate citizens stand to benefit from a more informed civil society that sees the organisation as a partner. Companies that invest in youths will also benefit from the ideas, innovation and energy that youths inherently have to offer. Research has also proven the positive impact of youth development programs such as Big Brothers Big Sisters on productivity and staff morale as employees see their organisation in a favourable light.

At National Energy we are committed to youth development through support of NGOs and CBOs with a solid track record of effectiveness. Based on the feedback from the Youth Forum in 2012 and 2013, youths are demanding more from corporate citizens—more time, more information and more focus on young people. We are excited about the Youth Forum initiative and look forward to expanding this program in 2014 as we firmly believe that the future of our nation's energy is our nation's youth.

¹CSO – Trinidad and Tobago 2011 Population & Housing Census Demographic Report

Youth Development – Is There a Role for Corporate Citizens?



“This event helped me to be sure of what I want to be. It helped me to realise that it is time to be serious.”

“It showed me where I can go to sign up for the course I want to take.”

“I know now I can improve and accomplish things in life.”

These are a few of the comments made by youths who attended this year's edition of D.R.E.A.M. –the Youth Forum hosted by National Energy for young people age 15 to 18. Through the Youth Forum and other programs, National Energy continues to incorporate youth development as a major facet of our community involvement thrust. Given that youths between the ages of 15 to 24 comprise approximately 16% of the national community¹, they represent a significant stakeholder group which the corporate world cannot afford to ignore.

But what exactly is youth development and where does the responsibility lie for developing our youths? The University of Minnesota Extension Centre has described youth development as the process of growing up and developing one's capacities. According to the centre, youth development is inevitable and thus, emphasis should be placed on ensuring positive youth development. Positive youth development caters for the physical, emotional,



Cross section of attendees at National Energy Youth Forum in La Brea

social and intellectual growth of young people, resulting in them becoming responsible adults who can contribute to society.

We all know the old proverb, *it takes a village to raise a child* which implies that all stakeholders in the community must work together to ensure positive development of our youths. However, given the country's high level of crime and juvenile delinquency, it would appear that somewhere along the way, the child has been neglected by the proverbial village. As key stakeholders in the community, corporate citizens have not only an important role to play, but also a responsibility to our young people who are impacted directly and indirectly by our business activities. Simply put, it is the right thing to do.

The impetus however, for organisations to participate in youth development need not be purely altruistic. There is a growing body of evidence that supports investing in young people as a means of not only growing social capital, but also as good business. The Pioneer spoke with three (3) individuals who have championed the cause over the years, to get their perspectives on how corporate citizens can become more involved in the process of positive youth development.

DON LA FOUCADE – INSPIRATIONAL CONSULTANT/ AUTHOR, IN FULL FLIGHT

Don La Foucade has been working with young people for over 14 years, having been the Manager responsible for the RBC Royal Bank Young Leaders program, one of the most celebrated youth development initiatives in the region. He is also currently involved with the 'Soaring Inspite Of...' tour sponsored by Republic Bank in which he has delivered motivational talks to thousands of secondary school students throughout Trinidad and Tobago. Mr. La Foucade was the feature speaker for National Energy's Youth Forum in 2012 and 2013 at Mayaro.

From his experience over the years, Mr. La Foucade sees low self-esteem as the major challenge facing our youths and he believes that corporate citizens like National Energy can help to fill the gap. Commenting on the importance of corporate participation, Don stated, "Society resembles what we put into it and the youths are the future leaders of society. Youth development is a means of building a more civil society." Mr. La Foucade feels that corporate bodies also need to do more in the area of follow-up programs to further capitalise on initial contacts made. He observed, "Youths translate nobody listens into nobody cares. We must show our care and concern by supporting youth development."

J. ERROL LEWIS – EXECUTIVE CHAIRMAN, JUNIOR ACHIEVEMENT TRINIDAD AND TOBAGO (JA)

J. Errol Lewis gave a motivational address at National Energy's Youth Forum held at Point Fortin East Secondary on 08th May, 2013. As both a product of Junior Achievement's financial literacy program and now Executive Chairman of JA with responsibility for Trinidad and Tobago, he can personally attest to the positive influence of youth development in



- 01 The NEC Pioneer and the NEC Voyager at the Port of Pt. Lisas
- 02 The Operations Team at the commissioning of National Energy's new vessels
- 03 National Energy Chairman Mr. Roop Chan Chadeesingh addresses attendees at National Energy brand identity launch
- 04 Minister of Energy and Energy Affairs Senator the Honourable Kevin Ramnarine chats with National Energy President Dr. Vernon Paltoo and BPTT's Vice President of Communications and External Affairs Giselle Thompson

New Additions to the National Energy Fleet



01



02

Rebranding



03



04

National Energy Welcomes CNG Vehicles



National Energy's fleet of CNG Vehicles



National Energy Chairman Mr. Roop Chan Chadeesingh views the engine of a CNG vehicle along with National Energy President Dr. Vernon Paltoo and Neal and Massy CEO Mr. David Jardim

National Energy has embraced CNG as the transportation fuel of the future with the addition of seven new CNG vehicles to its fleet, with the promise of 15 more to be added later this year.

This initiative by National Energy is in direct support of the Government's plan to encourage citizens to make the transition to this cleaner, more economical form of fuel. CNG is currently half the price of Super gasoline and reduces harmful emissions such as Carbon Dioxide and Nitrogen Oxides as much as 35% and 30% when compared to traditional fuels.

Speaking at the recently held ceremony on May 3rd 2013, National Energy Chairman Roop Chan Chadeesingh indicated that National Energy plans to embark on a campaign to "hypnotise" the nation into converting vehicles to CNG. He went on to congratulate National Energy on its new acquisitions and commended the company for its initiative.



Parrotfish among seagrass beds in Guayaguayare Bay

Health Organisation's (WHO) guidelines for ambient air quality. This is reported on a quarterly basis.

SHORELINE MONITORING AND MANAGEMENT AND STAKEHOLDER ENGAGEMENT

While conducting the EIA it was determined that there was a possibility of the project impacting the coastline of the Guayaguayare Bay, through changes due to erosion and accretion along the Bay.

Although the impacts assessed through numerical modelling techniques were not significant enough to warrant implementation of mitigation measures along the shoreline such as groynes, breakwaters, beach nourishment, it was deemed imperative that a Management and Monitoring Plan be established to detect any changes along the shoreline as well as to implement prescribed mitigation measures such as engineering (hard or soft) and non-engineering solutions and provide an on-going mechanism for consultation with affected stakeholders should the need arise.

Measurements and observations on the attributes of the beach are monitored on a monthly basis and parameters include measurements of waves, tides and weather conditions.

Stakeholders are consulted within the framework of the Stakeholder Engagement Plan which essentially provides a road map for engaging with stakeholders. The Stakeholder Engagement Plan principles, though enshrined in the CEC for the project, established a framework for dialogue

between National Energy and the community for on-going consultations. Stakeholder Consultation activities are compiled, documented and reported on a monthly basis.

SUSTAINABILITY

National Energy also engages in other sustainability driven initiatives such as partnering with regulatory agencies and providing environmental education and awareness seminars for students within the community. The company also invests in the Guayaguayare Community, and in particular stakeholders such as the fisher-folk and community residents.

Through the implementation of environmental management and monitoring programs to reduce National Energy's environmental footprint, the company has embarked on a path towards pro-active environmental management. These initiatives go beyond compliance towards environmental stewardship and sustainability for this and future generations.

REFERENCES

Coastal Dynamics Limited. 2008. Environmental Impact Assessment for the Galeota Port Development Project.
Council for Scientific and Industrial Research(CSIR). 2001. An introduction to Sustainability Assessment and Management. Durban: CSIR.

negatively impact upon water quality. Mitigation measures undertaken during the dredging and land reclamation phase entailed the use of silt curtains to control the movement of sediment, a dredging management plan, implementation of a storm water management plan and a spill contingency plan to minimise the risk of spills and hence contamination arising from the port development project.

Water quality surveys are undertaken bi-monthly for a variety of parameters including nitrates, phosphates, dissolved oxygen, heavy metals, turbidity and hydrocarbons and these parameters are compared to United States Environmental Protection Agency (USEPA) water quality standards for the maintenance of marine aquatic life.

AIR QUALITY MANAGEMENT

The maintenance of clean air quality is of utmost importance for maintenance of ecosystem health, and that of human beings, sensitive environmental receptors as well as the health and safety of workers on site. During the execution of the project, air quality is managed through the implementation of several mitigation measures, namely



Water quality monitoring buoy deployed at Guayaguayare

dust management through regular site wetting, covering of truck loads and regular maintenance of diesel powered equipment and machinery. Air quality is monitored on a monthly basis for parameters such as particulate matter (dust), nitrous oxides, sulphur dioxide and Volatile Organic Carbons (VOCs) for compliance with EMA's Draft Air Pollution Rules and the World

National Energy was granted a Certificate of Environmental Clearance (CEC #1283/2005) for the establishment of a marine terminal/ port facility and a fishing port at Galeota on June 15th, 2009.

This CEC outlined several conditions which underpin the foundation for National Energy's environmental management framework for this project. A comprehensive environmental monitoring program is currently being undertaken to ensure that this project is executed in an environmentally sustainable manner. This program has been implemented since March 2010.

The following provide an overview of the environmental management and monitoring activities undertaken by National Energy in Guayaguayare Bay in an effort to mitigate the impacts of the Port Galeota Development Project in the areas of Biodiversity, Water Quality, Air Quality and Shoreline Monitoring and Management and Stakeholder Engagement.

BIODIVERSITY MANAGEMENT

Guayaguayare Bay is rich in biodiversity due to the presence of wetland systems, terrestrial habitats and seagrass beds. The integrity of these ecosystems is necessary for the maintenance of the vital services they provide particularly the nursery functions for commercially important fish species and shoreline stabilisation. National Energy aims to conserve these habitats through quarterly surveys to assess changes in the health of mangroves during the all phases of the development. Similar quarterly surveys are undertaken for seagrass beds and benthic (ground dwelling) macrofaunal communities.

WATER QUALITY MANAGEMENT

Water Quality within the Guayaguayare Bay is of critical importance to the sustenance of coastal ecosystems as such, it is vital that execution of the Galeota Port Development Project does not

Environmental Management at the Galeota Port Development Project



Mangrove survey in progress

The most widely accepted definition of sustainable development is "the development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs" (Brundtland Commission 1987). In this articulation, sustainable development seeks to establish a path along which development can progress while enhancing the quality of life of people, and ensuring the viability of the natural systems on which that development depends (CSIR 2001).

A significant part of National Energy's mandate is the sustainable management of the environment in which it operates. The company is vested with the conceptualisation, promotion, development and facilitation of new energy-based and downstream industries in Trinidad and Tobago. One such development was the modernisation of the Galeota Port and construction of a Fish Landing Facility at Guayaguayare Bay.

The Galeota Port Development Project is comprised of two major components; the development of a modern specialised energy port facility at Galeota Point which is to occur in two phases; Phase 1 which is currently on-going, as well as the construction of the Fish Landing Facility along the Guayaguayare Seawall completed in 2012.

Guayaguayare Bay is of significant social, economic and environmental value due to the diversity of natural habitats that exist along the Guayaguayare coastal area. Extensive mangrove communities and seagrass beds provide food and habitat for many species, including crustaceans and fish as well as providing ecosystem services such as the recycling of nutrients, trapping of sediment and stabilising the sea bed and coastline. In addition, many commercially viable fish species targeted by South-East Trinidad fishermen are dependent on these submerged habitats, for either food, shelter or nursery habitat during the critical juvenile stage.

Given the proximity of the port development project to sensitive marine habitats, and the dynamic nature of the coastline of Guayaguayare Bay, the Environmental Management Authority determined that a Certificate of Environmental Clearance (CEC) and Environmental Impact Assessment study (EIA) was required. After an extensive and consultative review process,



Aerial view of the Galeota Port

Galeota Port- Opening the Doors to Opportunity



Located on the south east coast of Trinidad in the oil-rich community of Mayaro/ Guayaguayare is the Port of Galeota. This state of the art facility, currently being constructed by National Energy, is a multi-purpose facility that will cater specifically to the offshore needs of the exploration and production operators. The Port is expected to be the logistics hub for the energy sector, and is targeted to capture the projected demand for services based on new upstream project activity in the deep and ultra deep plays off the Trinidad coast as well as the regional activity in the off shore areas of French Guiana, Suriname and Guyana. The potential business activity that would be generated through operations at the Galeota port will be contributing to growth in revenues for Trinidad and Tobago.

The port is being constructed in two phases. Phase 1, which is currently

being built at a cost of US \$80M, will comprise a 200 metre-wide turning basin with a draught of 7.6 MSL including four berths with the following lengths:

- 104 metres (Berth 1 & 3)
- 148 metres (Berth 2)
- 102 metres (Berth 4)

The facility will provide a number of specialised services including:

- Rig supply operations
- Rig and boat repairs
- Modular stacking of deck cargo
- Marshalling area of storage
- Maintenance and fabrication
- Tank farm storage for drilling muds
- Waste management facilities
- Delivery of material by sea to/from Galeota

There will be an additional berth to be utilised by the Trinidad and Tobago Coast Guard for the provision

of maritime security for cargo entering and exiting the facility.

Port Galeota presents limitless possibilities which have already caught the interest of local, regional and international energy companies.

The commercial start-up of Phase 1 port operations is scheduled for the second quarter of 2014.

The preliminary design for Phase 2 of the Galeota Port has been initiated with a view to advance design-build work in 2014.

National Energy Promotes Energy-Based Manufacturing at CIF



National Energy President, Dr. Vernon Paltoo welcomes attendees to panel discussion organised by National Energy at CIF Forum. In the background L-R Merlyn Rennie-Brown, Baajnath Sirinath, Gil Danker

The third annual Caribbean Investment Forum (CIF) was held at The Hilton Trinidad and Conference Centre from June 10th to June 11th, 2013. The event organised by investTT; Trinidad and Tobago's investment promotion agency under The Ministry of Trade, Industry and Investment; brought together Government and stakeholders in the non-energy sector to discuss new business and investment prospects. As part of the discussion, National Energy organised a segment entitled 'New Opportunities in Energy-Based Manufacturing' moderated by National Energy President Dr. Vernon Paltoo. The discussion focused on the linkages between energy and manufacturing in Trinidad and Tobago.

One of the featured panellists was National Energy's Vice President of Energy Industry Development, Ms. Merlyn Rennie-Brown. In her presentation, Ms. Rennie-Brown discussed the options available for energy based manufacturing in Trinidad and Tobago and included a look at National Energy's role in the promotion of the country's energy brand.

Other members of the distinguished panel included Gil Danker, Chairman of Dor Industries in Israel and Baajnath Sirinath, Executive Chairman

of The Neal and Massy Energy and Industrial Gases Business Unit. Mr. Danker shared the Israeli experience in developing a manufacturing industry from energy-based products, while Mr. Sirinath discussed the development of energy-based manufacturing industries in Trinidad and Tobago focusing primarily on the proposed Natural Gas to Petrochemical Complex to be located at the National Energy managed Union Industrial Estate (UIE) at La Brea.

National Energy is proud to have been associated with the annual Caribbean Investment Forum.

Understanding the Energy Value Chain – Part 2

Upstream: Competitive Bid Rounds



In the previous issue of the Pioneer, we highlighted one of three (3) recent bid rounds offered by the Ministry of Energy and Energy Affairs (MEEA) to prospective exploration and production companies. In this issue, we would like to highlight the prospects of the 2012 offshore and 2013 onshore bid rounds, and the potential impacts on the business activities of the National Energy Corporation of Trinidad and Tobago Limited.

COMPETITIVE BID ROUND-2012

In 2012, six (6) deep-water blocks were offered by the MEEA for the granting of Production Sharing Contracts (PSCs). Those blocks were TTDA 1, TTDA 5, TTDA 6, TTDA 28 and TTDA 29 and Block 25(a). This bid round was regarded as one of the most successful, as a total of twelve (12) bids were received for the five (5) blocks offered. BHP Billiton emerged as the winner of four (4) blocks - TTDA 5, TTDA 6, TTDA 28 and TTDA 29. TTDA 1 was not acquired since candidates were unable to meet the benchmark requirements. No bids were received for Block 25(a). Activity related to the award of these PSCs is expected to generate an investment of at least US \$564.82 million in the mandatory first phase and approximately US \$1,024 million in the subsequent phases.

The success of the 2012 bid round may be attributed in part to the revision of incentives offered by the MEEA. In 2012, only six (6) deep-water blocks were offered compared to eleven (11) offered in 2010. There was also increased international marketing and promotion in 2012. The 2012 bid round also highlighted some procedural changes, for example, in the 2010 bid round, participants had to purchase data packets for each individual block separately, whereas, in 2012, one data packet containing information on all the offered blocks was made available. This made it easier and more cost effective for interested parties to participate in the bidding process.

ONSHORE BID ROUND - 2013

In February 2013, the blocks offered comprised of approximately 150,000 acres, consisting of the Rio Claro Block (74,954 acres), the Ortoire Block (44,731 acres) and the St. Mary's Block (37,760 acres). The MEEA formally launched the 2013 Trinidad and Tobago On-shore Bid Round on May 16th, 2013.

While these blocks are primarily categorised as potential oil reserves, there is a possibility that some of the fields may contain natural gas. The bid acreage offers a range of opportunities related to

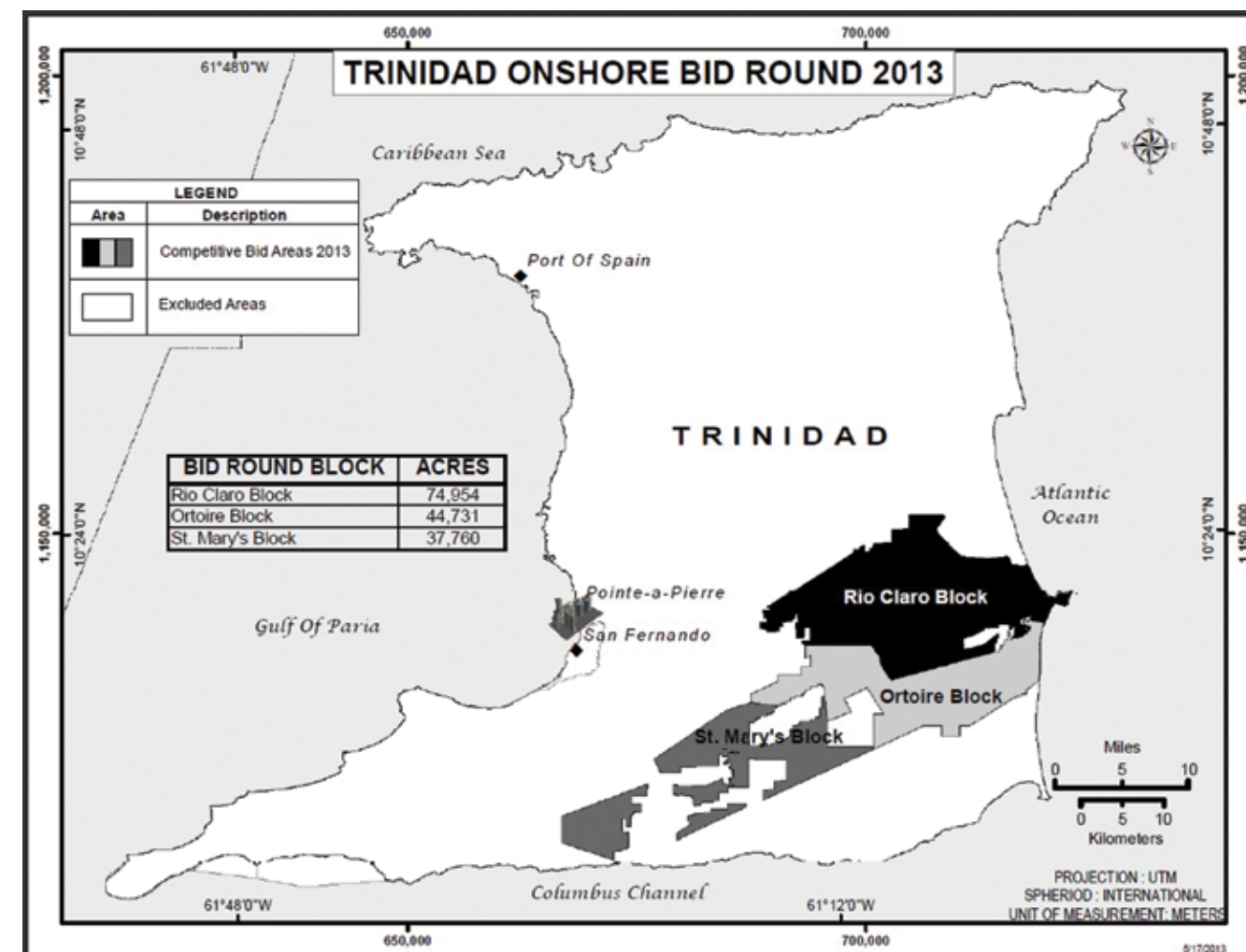
block sizes, production potential and hydrocarbon play types. This bid round would have several distinguishing features including the application of 3D seismic technology, which would significantly reduce the risk of exploration and development by improving subsurface interpretations.

The successful bidder(s) would be issued Exploration and Production Licences and would also enter into a Joint Operating Agreement (JOA) with State-owned oil company, the Petroleum Company of Trinidad and Tobago Limited (Petrotrin). Petrotrin would also have a 20% stake in all three blocks on offer.

Competitive bid rounds in Trinidad and Tobago are a stringent process aimed at selecting appropriate candidates for exploring the nation's oil and gas resources. PSCs are designed to be mutually beneficial to GORTT and prospective companies. The result of the 2012 bid round indicates that the initiatives undertaken by the MEEA are improving overall participation and interest in the energy sector. The offering of the onshore blocks in 2013 is expected to improve Trinidad and Tobago's oil production capacity and the prospects for the local energy industry.

It is expected that there would be a high level of interest in the latest

The success of the 2012 bid round may be attributed in part to the revision of incentives offered by the MEEA.



onshore bid round from companies already operating in Trinidad and Tobago as well as new entrants. The 2013 land-based bid round is yet another strategy by the MEEA to arrest the decline in oil production.

Sources:
The Energy Platform, 2013
(The Ministry of Energy and Energy Affairs)
Upstream Insight, September 2012
(Wood MacKenzie)
Ministry of Energy and Energy Affairs

Map of Bid Round Blocks

Managing Change



Due to the growth of technology, modern organisational change is largely motivated by exterior innovations rather than internal moves.



“Change will not come if we wait for some other person or some other time. We are the ones we’ve been waiting for. We are the change that we seek.”

— Barack Obama
President of the United States

Change in our dynamic business environment is constant. The capability to lead and manage organisational change is a critical and necessary competency for business leaders. In this regard and in light of the rebranding exercise and introduction of our Company’s new brand identity, National Energy Corporation of Trinidad and Tobago is in the process of implementing our own Change Management process. This is timely and necessary in transitioning our organisation, individuals, and teams from their present state to a desired future state.

In our present day business environment, organisations face rapid changes. Issues such as globalisation, recession and the constant innovation of technology result in an evolving business environment. In addition developments such as social media and mobile adaptability have revolutionised business, initiating the need for change, and change management. The growth in technology also has a secondary effect of increasing the availability and therefore accountability of knowledge. Easily accessible information has resulted in unprecedented scrutiny from stockholders and the media. With the business environment

experiencing so much change, organisations must also learn to become comfortable with change as well. Therefore, the ability to manage and adapt to organisational change is an essential ability required in the workplace today.

Due to the growth of technology, modern organisational change is largely motivated by exterior innovations rather than internal moves. When these developments occur, the organisations that adapt quickest create a competitive advantage for themselves, while the companies that refuse to change get left behind resulting in a drastic decrease in profit and market share.

Organisational change directly affects all departments from the entry level employee to senior management. The entire company must learn how to handle changes to the organisation.

When determining which of the latest techniques or innovations to adopt, there are four major factors to be considered:

- Levels, goals, and strategies
- Measurement system
- Sequence of steps
- Implementation and organisational change

Regardless of the many types of organisational change, the critical aspect is a company’s ability to win the buy-in of their employees on the change. Effectively managing organisational change is a four-step process:

- Recognising the changes in the broader business environment
- Developing the necessary adjustments for the company’s needs
- Implementation of relevant employee training programmes, based on organisational changes and change management
- Winning the support of the employees

Organisational change management should begin with a systematic diagnosis of the current situation in order to determine both the need for change and the capability to change. The objectives, content, and process of change should all be specified as part of a Change Management plan.

Change management processes may include creative marketing to enable communication between changing audiences, as well as deep social understanding

about leadership’s styles and group dynamics. As a visible track on transformation projects, Organisational Change Management aligns groups’ expectations, communicates, integrates teams and manages people training. It makes use of performance metrics, such as financial results, operational efficiency, leadership commitment, communication effectiveness, and the perceived need for change to design appropriate strategies, in order to avoid change failures or resolve troubled change projects.

Successful change management is more likely to occur if the following are included:

- Effective communication that informs various stakeholders of the reasons for the change (why?), the benefits of successful implementation (what is in it for us?) as well as the details of the change (when? where? who is involved? how much will it cost? etc.)
- Devise an effective education, training and/or skills upgrading scheme for the organisation
- Counter resistance from the employees and align them to the overall strategic direction of the organisation

- Provide personal counselling (if required) to alleviate any change-related fears
- Monitoring of the implementation and fine-tuning as required

As we proceed with the Change Management process at National Energy Corporation of Trinidad and Tobago Limited, let us remember the words of the United States President Barack Obama:

“Change will not come if we wait for some other person or some other time. We are the ones we’ve been waiting for. We are the change that we seek.”

National Energy Sailing into the Future



A wind of change is blowing through National Energy and like seasoned mariners, the Operating Asset Team has deftly and confidently adjusted its sails to match the direction of growth in the operation of National Energy's marine assets.

'A happy customer is a returning customer'—that's National Energy's philosophy, and we have determined that customer fulfilment can only be achieved through the delivery of improved customer service. Judging from the highlights of the Stakeholder Engagement held in May 2013 under the theme '*Customer Service – Always in Focus*', National Energy is on target as the company upgrades and expands the marine services it offers. These services are being customised to meet the needs of the ever-growing marine industry and are geared towards total customer satisfaction.

Already commanding 70% of Trinidad and Tobago's local towage market, National Energy over the last two years further strengthened the company's position by replacing three older-model marine vessels with two new custom built additions. The vessels arrived in April 2013 and since being put into operation the Launch, NEC Voyager, is already making waves. The vessel is a DAMEN built FCS 1605 Fast Crew Supply launch with a capacity of 21 passengers, a top speed of 29 knots and is propelled by twin water jets. Users frequently commend the service, crediting it as a top notch launch. The vessel offers all the requisites of a superior, launch service—*fast, reliable, comfortable yet safe*.

Any other company may have deemed it sufficient to have its vessels certified as 'fit-for-purpose'. Not so for National Energy; the company has gone one step further to offer a 'Super Shuttle Service',



A cross section of stakeholders at the Operations Department Stakeholder Engagement

which allows for scheduled departure times from the Port of Point Lisas base. The end result for the customer is predictability, fewer delays and greater efficiency. A review of launch charges is underway with the aim of offering more attractive launch packages. National Energy urges our regular launch users to stay tuned.

The second new addition to National Energy's fleet of vessels, The NEC Pioneer, is a DAMEN built Stan Tug 1606 with a bollard pull of 16 tons. The conventional design vessel is outfitted with the latest navigational and operational control technology. NEC Pioneer now augments the 'pushy cat' service as it joins sister vessels, NEC Industry and NEC Legacy – both of similar specifications. Having seen an increase in customer demand for pushy cat sized units at local ports, namely at Chaguaramas, Labidco, Claxton Bay and YARA, National Energy has listened and responded in a timely manner with the addition of the NEC Pioneer. Moreover, we are now looking to reduce transit costs to customers from our central base by establishing National Energy marine bases in north and south Trinidad.

These two (2) new acquisitions will enhance National Energy's capabilities as the company now boasts a complement of nine (9) state-of-the-art, modern marine vessels. They serve to cement National Energy's position as the number one local harbour marine service provider, and will allow the

diversification of the company's services which includes local and regional harbour towage, anchor-handling, rig relocation, load-out operations, rig standby operations and offshore bunkering support.

National Energy is also introducing flat rate charges for users of the Point Lisas Port. The consistency of flat rates allows clients to enjoy accuracy in billing forecasts and the easy comprehension of final invoices. Other local port users are set to enjoy this facility in the not too distant future. Additionally, marine services have been expanded to include garbage removal. This service, coupled with the other ancillary marine services National Energy continues to offer such as transport of stores, ship spares and provisions, lubes and oil, ensures that our clients receive a total quality service.

The company is also poised to unveil a 360 degree service encapsulating all levels of customer service. Customers can anticipate improved dissemination of information through our Online Bulletin Board and Drop Box as the company recognises that feedback from customers is critical to providing a superior service. Customers will also be able to enjoy ease of communication through the company's online Customer Feedback Form.

Service is at the forefront of National Energy's goal to achieving operational excellence and the company's predicts calm seas ahead. All aboard!

10 Questions with Terrence Boodoosingh



In this issue of the Pioneer we feature Mr Terrence Boodoosingh, who is currently the Head Operations (Ag) at National Energy. Over the years, he has held various positions at National Energy, including Marine Coordinator, Marine Technician, Supervisor Planning and Logistics and Port Captain. Terrence was also the head chef representing National Energy at this year's carnival cookout at NGC. Terrence shares some of his experience and advice with the readers of the Pioneer.

Pioneer: How long have you been at National Energy?

Terrence: October 2013 will make it 10 years. Currently I am the acting Head of Operations.

Pioneer: Can you describe your current position?

Terrence: Due to the restructuring effort, Marine Terminal Operations and Towage and Harbour Operations have merged to form Operating Assets. This has changed, to some extent, my scope of work. My job currently entails ensuring that National Energy marine related assets are properly maintained and fully operational. There is a crewing contract with an agency for approximately 100 crewmen; my responsibilities also extend to ensure their efficiency and that their safety and well-being are treated as priority. I also give interviews (laughs)... like this one!

Pioneer: What do you like most about your job?

Terrence: There are varying facets, but overall it's the 'EPIC' factor – Exposure, People, Ingenuity and Challenges. Working at National Energy in different positions, through mandate changes and with an array of personalities provides challenges that I am willing to deal with, not only to attain a workable resolution, but also for personal/spiritual development.

Pioneer: What advice would you give to young persons interested in entering your field?

Terrence: The maritime industry in Trinidad and Tobago is maturing. The need for 'educated' and 'intelligent' support cannot be overstated. To anyone interested in venturing into the maritime fraternity - the future of the industry is yours to shape, acquire your knowledge and experience on a global level if possible, become intimate with International Regulations and Guidelines and of course - give it your best.

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

Terrence: Quite honestly, I would not choose another career. I started off in this industry as a young cadet aboard a Merchant Marine vessel. Of course it came with its share of anxieties/challenges but it was an excellent experience. The exposure and opportunities that came with sailing, I do not think I would be able to get in any other industry. I travelled all around the world, for free (laughs), learning about different cultures and sampling different things, dishes included (smirk).

Pioneer: Who is your role model? Why?

Terrence: I have to say my father. I have never told him that but I guess

he knows from the way I live my life and the relationship we share. He led by example, his mannerism and conduct around his peers and family, the way he treats my mother.

Pioneer: What are your pet peeves?

Terrence: I think over the years, I have become a bit tolerant of others and try to put things in perspective. However, I dislike it when I am having a face to face conversation with someone and they are texting.

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

Terrence: I would like to keep it that way.

Pioneer: What are your hobbies?

Terrence: I like outdoor activities, cooking, hiking, fishing, going to the beach. When it is raining I like to read a good book.

Pioneer: What motto do you live your life by?

Terrence: My father used to say "When you live your life, do it in such a way so that you are not a burden to anyone." I also live by "Find your spiritual potential and project it for the betterment of everyone."

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