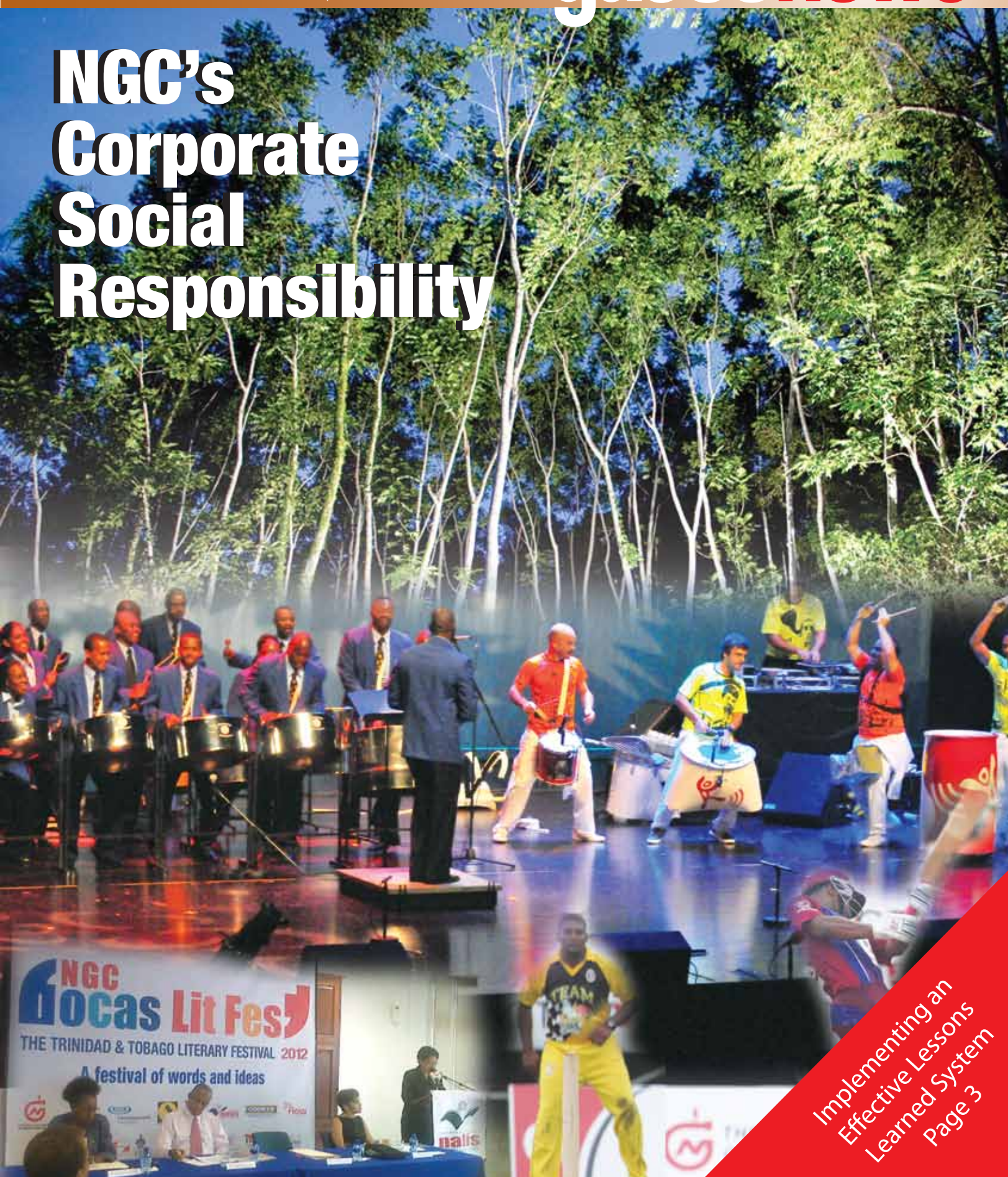


NGC's Corporate Social Responsibility



Implementing an
Effective Lessons
Learned System
Page 3

June 2012

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Map Presentation to Minister of Energy -From L to R: Dominic Rampersad – VP Accounting, PPGPL; Krysta De Lima – Chief of Staff, BGTT; Senator the Hon. Kevin Ramnarine; Maria Thorne – President (Ag) NGC and Vincent Pereira – President, BHP Billiton.

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6



11



12

EDITOR'S NOTE

Changes at the Helm –
NGC Welcomes New President,
Indar Maharaj 2

MARKET DEVELOPMENT

Implementing an Effective
Lessons Learned System 3

Sustaining Success by
Building Teams 6

NGC NEWS

Minister and Former
Chairman Visit LFP Site 9

T&T Energy Map 2012 Presented
to Minister of Energy 9

Works Continue on Liquid
Fuels Pipeline System Project 10

NGC bids adieu to its
Chairman Larry Howai 11

PPVS Project – 1.2 Million
Safe Man-hours Worked 11

NGC Re-Certifies Eight
Vertical Separators 12

New Condensate Facility
for Abyssinia 12

NGC Holds First
Contractors' Forum 12

Tanzanians Come Calling 15

CORPORATE SOCIAL RESPONSIBILITY

CSR: The Conduit
Between Resource
and Resourcefulness 16

NGC and Bocas Lit Fest:
An Unrivalled Pair 19

NEC NEWS

Galeota Port 20

Galeota Fish Landing Facility 21

NEC Creates Energy
Industry Department 22

Feasibility Study for
Severstal Consortium Project 22

INDUSTRY NEWS

LNG Facility Proposed
for La Brea Industrial Estate 23

MOE Says T&T Ready
to Assist in Gas Development 23

T&T in Talks with Barbados
for Supply of Natural Gas 23

LNG Carrier Named
after Point Fortin 24

Shale Gas Causes Sharp Drop
in T&T's LNG to the US 24

T&T's LNG Exports to
Japan on the Increase 24

CHANGES AT THE HELM – NGC WELCOMES NEW PRESIDENT, INDAR MAHARAJ

The June 2012 issue of *Gasco* opens with a warm welcome to the new President of NGC, Indar Maharaj and a fond farewell to former President S. Andrew Mc Intosh. Both are men whose backgrounds are steeped in the dynamics of the energy sector, albeit with different focuses. In his address at the Caribbean Investment Forum in May 2012, Mr. Maharaj ended his speech with the following quote from Cesar Chavez, the American activist:

“Once social change begins, it cannot be reversed. You cannot uneducate the person who has learned to read. You cannot humiliate the person who feels pride. You cannot oppress the people who are not afraid anymore. We have seen the future, and the future is ours.”

The choice of this quote bespeaks Mr. Maharaj's outlook and the kind of human resource friendliness he will be bringing to NGC. Mr. Maharaj was appointed President of NGC in April 2012 and has behind him 31 years' experience in the energy sector. In addition to a B.Sc in Chemical Engineering, he also has an MBA in Finance and Business from the University of Lincoln, United Kingdom.

Mr. Maharaj replaced Andrew Mc Intosh who became part of the NGC team on March 9, 2009 after the retirement of Mr. Frank Look Kin. Like Mr. Maharaj, Mr. Mc Intosh also had over 30 years' experience in industry and under his watch, several initiatives were implemented such as the Strategic Succession Plan and Framework, the creation of an Office of Strategy Management (OSM) and the Individual Performance Contract and Personal Development Plans.

Our new man at the helm has been described as an “energy expert.” Interestingly, he has spent most of his career in close proximity to NGC's offices. “I could almost see the office I now sit in from my car on my way to work!” he says with a smile. “Life is both strange and wonderful like that.”



*Indar Maharaj
President, NGC*

Mr. Maharaj is proud that he is a south boy, born and bred. After graduating from Presentation College, he went to the University of the West Indies where he pursued a B.Sc. in Chemical Engineering. He subsequently earned a post-graduate diploma in Management before completing a Masters in Business Administration with a specialization in Finance from Lincoln University in the United Kingdom.

Mr. Maharaj began working in the Point Lisas Industrial Estate in 1981 and his last position was Plant Manager at the Point Lisas Nitrogen Limited, where his initial years were spent in the highly technical engineering field, but that was to change as the energy sector itself evolved. As he rose through the echelons to top management positions, Mr. Maharaj found he was becoming more interested in the challenges of leadership and imparting his knowledge to the teams he headed.

The new President, who is also Chairman of the Water and Sewerage Authority (WASA), is confident that he can confront the challenges and tap the

huge opportunities which lie immediately ahead for NGC. Indeed, NGC's global foray into the embryonic energy markets in Africa and elsewhere, where the NGC model is attracting great interest, is building in momentum. Several recent visits by Tanzanian delegations have cemented the imperatives of an MOU which was signed in 2011.

In a wide-ranging speech at the recently concluded Caribbean Investment Forum (CIF) Mr. Maharaj spoke about NGC's role as a “one-stop-shop” within the local energy sector for diverse processing needs, and regionally in the supply of natural gas. Expounding further, he noted that NGC is in the position to be able to promote and offer investors value-added investment opportunities through the further processing of ammonia, methanol and ethane/propane. Other opportunities, he said, existed through urea-ammonia-melamine and gas to propylene projects.

Within the Caribbean region, Mr. Maharaj said there were a number of initiatives to offer natural gas to neighboring countries. NGC has taken pioneering and participatory roles in these initiatives, examples of which include the Eastern Caribbean Gas Pipeline project and small scale LNG. NGC's participation in these and other projects will further investment opportunities in gas using industries in other countries.

He endorsed the philosophy of the Government of Trinidad and Tobago in creating and maintaining an investor-friendly environment that is mutually beneficial. He added that NGC would continue to stand by its Vision “To be a valued Partner in the Global Energy Business” and Mission “To create exceptional National value from Natural Gas and Energy Business.”

On behalf of the entire NGC family, we say, “Welcome Mr. Maharaj!”

IMPLEMENTING AN EFFECTIVE LESSONS LEARNED SYSTEM

Albert Einstein once said “The definition of insanity is doing the same thing over and over again but expecting different results.” This definition finds resonance in most of us because we know, instinctively, that mistakes are not supposed to be repeated. As human beings, we are supposed to learn from past mistakes and put things in place to prevent them from recurring. In other words, we must learn the lessons that our experience has taught or is trying to teach us. At a company level this translates into putting an effective “Lessons Learned System” in place.

The National Gas Company (NGC) is in the early stages of implementing a Lessons Learned System. Although lessons learned guidelines are a component of the Company’s Project Management Methodology (PMM), there have been challenges in getting project teams to deliver properly documented lessons learned.

What is a Lessons Learned programme?

Lessons Learned are known by various names in the project management fraternity, such as Project Post Mortem Analysis, Post Project Review or Post Implementation Review, and the definition of lessons learned varies somewhat depending on the title given to the activity. Notwithstanding variations in title, the intent of these activities remains the same, i.e., continuous improvement of the project organization.

One definition accepted by the American, European and Japanese space agencies is worthy of consideration:

By DANFORD MAPP, Manager PMCU; ERNEST ESDALLE, Assistant Manager Construction Services; SHERISSE HUGGINS, Contract Administrator; and ABIDAH MOHAMED, Electrical Engineer, NGC

“A lesson learned is knowledge or understanding gained by experience. The experience may be positive, as in a successful test or mission, or negative, as in a mishap or failure. Successes are also considered sources of lessons learned. A lesson should be significant in that it has a real or assumed impact on operations; valid in that it is factually and technically correct; and applicable in that it identifies a specific design, process or decision that reduces or eliminates the potential for failures and mishaps, or reinforces a positive result.”

It is also beneficial to companies to take heed of the lessons learned by others; in fact, according to an article published by the PM Network of the Project Management Institute, Fortune 500 companies lose an estimated US\$31.5 billion each year because they don’t share knowledge. But there is much resistance to the sharing of such ideas among companies, especially those competing in the same market.

It must always be borne in mind that even negative experiences are an invaluable part of the Lessons Learned system. If things go well, lessons are learned; if things do not go as well as planned, lessons are learned which may prevent similar scenarios from ever happening again. This occurs throughout the life of the project or endeavour in which a team is engaged.

Why establish a Lessons Learned programme?

Changes in the business environment are constantly taking place, and any company or organization that wants to survive and remain competitive, much less grow and thrive, needs to be both responsive and proactive. That entity must utilize all available tools, techniques and weapons to win this constant battle. An efficient and effective “Lessons Learned programme” is a vital weapon that belongs in every company’s arsenal, regardless of its size. Unfortunately, this element is often undervalued. Companies that do make this error, however, soon find themselves repeating the mistakes they have made in the past, at great cost to their efficiency, reputation, and bottom line.

The development of plans at the higher levels of the organization provides

In other words, we must learn the lessons that our experience has taught or is trying to teach us. At a company level this translates into putting an effective “Lessons Learned System” in place.

the road map for the wider organization to follow. The rest of the organization now has to ensure that the various projects embarked upon are aligned with the strategic plan. Projects must therefore be designed to achieve the specific competitive positioning as set out in the plan.

When arriving at an organizational strategy, the team must ask itself the following questions:

- What direction should the organization take?
- What are the decisions that need to be made?
- How and when should the decisions be implemented in order to achieve the desired effect?

These questions, in turn, arise out of and are supported by the answers to other questions, such as:

- What are our competencies and skills?
- Who are we and where are we as an organization?
- How did we get here?
- What are the strengths we can build on?
- In terms of the direction we want to take, what are our weaknesses?

The lessons of the past are key inputs in answering these questions. We may have an image in our minds as to how capable or ready we are to face the challenges that meet us as an organization, however, it is our experiences, what we have learnt from them and what changes we have made to the way we do our work that confirm whether our image of ourselves matches our reality. In other words, it is the way we implement our lessons learned that tell us who we really are.

Often, the answer to the question “Why are we where we are?” tends to reside with a few individuals in an organization. In order to overcome the risk of loss of this information, and to ensure that it is disseminated throughout the organization, the company must

For NGC, a key driver in the process of establishing an effective Lessons Learned System is the recently implemented strategy of assigning project sponsors and champions to various projects.

develop and implement ways to capture, document and use data collected from its past experiences in its thinking, planning and decision-making processes.

The Project Management connection

The application of PM tools and techniques provides the framework for undertaking the aforementioned activities. When a Project Management Methodology (PMM) is applied there is a structured way in which the company planning processes are conducted and how the information generated is documented and disseminated.

The application of a PMM in this process does not imply that the planning process flows smoothly from one step to the next. It is an iterative process that moves backward and forward before a final decision is arrived at. The PMM, however, can be used to formally capture and record all decisions made.

Additionally, provided that said methodology is applied to all ongoing projects, it also provides tools and techniques for the capture of the data required to aid the strategic thought and decision-making processes (in the form of historical data or lessons learned from previous projects). The project data captured can support the creation of lessons learned files, which in turn support the decision-making process.

The Lessons Learned process must be seen as a priority

The general feeling expressed about Lessons Learned is that it is a good thing.

It's good to learn from the mistakes and successes of the past. However, project teams are often under pressure to deliver their projects and, as such, their focus is on meeting the target milestones on their deliverables schedule.

There also seems to be an unspoken belief that the same mistakes cannot be made again. In their short-sightedness, some may say, “Well, the Project Manager was on that other project and he saw what happened, so naturally he will prevent it from happening again” or “The boss was so upset about what happened before that there is no way anybody will allow anything to go wrong this time.” Such ignorance and denial can cost a company dearly. Lessons Learned must be made as high a priority as any other element of a project.

For NGC, a key driver in the process of establishing an effective Lessons Learned System is the recently implemented strategy of assigning project sponsors and champions to various projects. They, as well as Executive Management, hold project teams accountable for delivering Lessons Learned documentation.

Keep It Simple and Streamlined (KISS)

It is difficult to engender the support of project managers and project teams if the Lessons Learned System is complicated, time-consuming or seen to be taking them further away from the delivery targets. The level of use is inversely proportional to the level of

difficulty: in other words, the harder something is to do, the less people are inclined to do it. This is even more so when time is short, resources are scarce or the project is slipping.

The components of NGC's prospective Lessons Learned System are straightforward, simple, and attainable. They are Capture, Disseminate, Utilize and Manage.

Expressed differently, the four elements are:

- a process for capturing the lessons
- a method for disseminating the lessons to relevant parties
- a procedure for ensuring that previous lessons learned are utilized on future projects, and
- a system for managing the Lessons Learned database.

Capturing Lessons Learned

If others in an organization do not know what another team has learnt, these lessons are worthless.

A company must remember to:

- Inform the project team about the importance of Lessons Learned at the start of the project, seek buy-in and remind them periodically.
- Make Lessons Learned a formal part of project reporting.
- Hold project managers and team members accountable for reporting Lessons Learned.
- Document Lessons Learned as soon as possible, with user-friendly tools and templates.

- Try amending current practice rather than changing it.
- Conduct a separate Lessons Learned meeting periodically.
- Practise openness rather than blame.
- Lead by example.
- Capture the root causes of lessons.
- Include all parties: suppliers, contractors, etc.

Supporting systems and procedures include the Project Issue Log and Project Risk Management Plan.

Disseminating Lessons Learned

Lessons Learned do not belong buried in a filing system somewhere, so that the intended benefits are never realized. They should be systematically stored and easily accessible. A dedicated database, both for the project and the organization, is a good practice.

It is important to:

- Make the database available electronically
- Include search capabilities, by project type, size, issue, etc.
- Distribute important Lessons Learned as soon as possible via management meetings, company notice boards and other forums.

Utilizing Lessons Learned

The third component of an effective Lessons Learned System is a process to ensure that previous lessons learned are utilized on projects going forward. To accomplish this, Lessons Learned should be incorporated into project

development, planning and execution, starting from the project initiation stage.

- Include the review of Lessons Learned as a definite step in the conceptualization and planning process.
- Include the review of Lessons Learned as a definite step in the Risk Management Plan
- Include the review of Lessons Learned in the Project Charter or other approval document
- Include activities to capture, document, store and share Lessons Learned in the Execution Plan, and required resources assigned.

Managing Lessons Learned

A company's experience and institutional knowledge are valuable, possibly priceless, assets. The Lessons Learned database is a key component of those assets, valuable enough to require the dedication of resources to develop, manage and maintain it and to keep it current and useable.

- Appreciate its value
- Assign resources for needed maintenance
- Liaise with Document Control Function, Project to Corporate

Lessons Learned must become a part of a company's best practices

Organizations around the world have come to realize the value of Lessons Learned Systems in increasing knowledge and minimizing the repetition of unfortunate events, and that they are well worth the time, effort and resources to develop and maintain them.

Implementing such a system will provide the organization with a road map to success that teams of any size, working on any project, can follow.

Excerpted from a paper submitted to 6th Biennial International Project Management Conference in September 2011, entitled BRIDGING THE GAP: Strategic Thought Transformed through Project Management. It is the combined effort of the abovementioned authors.

A company's experience and institutional knowledge are valuable, possibly priceless, assets. The Lessons Learned database is a key component of those assets, valuable enough to require the dedication of resources to develop, manage and maintain it and to keep it current and useable.



Working together as a team

SUSTAINING SUCCESS BY BUILDING TEAMS

You have heard the corridor conversations that take place in the kitchens and in the car parks of corporations which go something like this:

"This is not my job."

"We do not have enough resources."

"Less pay, less effort."

"That manager's attitude stinks."

If it is not in the individual performance contract, it is not going to get done!"

"It is not us, but them."

"I cannot stand Jane."

"I feel like a fish swimming upstream."

You might not have heard of the occasions when employees went as far as to write on their performance contracts odes that went like this, "Those who live in glass houses should not throw stones." Indeed. We can say that such a strong sentiment ought not to have been recorded on official company documents. In addition, the corridor statements

By GILLIA
LIVERPOOL-ROBERTS,
National Energy Corporation

should not form part of the day-to-day conversations of successful, professional teams.

In fact, neither the former nor latter conversations should be found within the bricks and mortar of companies. Yet, when they are they can be counterproductive since negative behaviours and attitudes can hinder a company's progress.

Therefore the challenge for leaders today is always to create and sustain a culture where employees are productive and focused on increased efficiencies in spite of adversities. Companies have to take time to listen to the voice of the employee and customer whether positive or negative, if they want to sustain success

and build a high-performing team.

In the political realm, The President of the United States of America, Barack Obama, spoke about the art of listening, at the University of Michigan on May 1, 2010. He said:

"For if we choose only to expose ourselves to opinions and viewpoints that are in line with our own, studies suggest that we become more polarized, more set in our ways. That will only reinforce and even deepen the political divides in this country. But if we choose to actively seek out information that challenges our assumptions and our beliefs, perhaps we can begin to understand where the people who disagree with us are coming from.... The practice of listening to opposing views is essential for effective citizenship. It is essential for our democracy."

In the corporate realm, research shows that the employee voice has a positive

effect on an employee's trust in his/her supervisors, organizational commitment, teamwork and satisfaction. Indeed, as noted in a SHRM poll, while only 46% of HR professionals reported that their organizations regularly collected feedback from employees through surveys, team sessions and meetings, an overwhelming majority of those who did not collect feedback felt this practice was beneficial to their organizations. The poll also highlights the importance of being open to suggestions and improvements offered by employees.

I have been fortunate to work for companies where the environment was characterized as professional and teamwork was the cornerstone in getting work accomplished within tight deadlines. It was not a choice; you simply had to work together. Unfortunately, there are occasions where there are strained relationships and partnerships within companies which can be frustrating. These times stood out as red herrings.

Strangely, successful sports teams share several things in common. Succeeding in sports is frequently defined as besting your opponents by being number one, exceeding your fans' expectations, and creating a growth experience for team members. Listening and seeking improvements are important attributes for successful sports teams.

Similarly, successful work teams strive to be best in class, delight their internal and external customers, develop innovative solutions to challenging organizational problems, and create an experience where team members learn, grow, and take great pride in their team's achievements. Both sports teams and work teams would sometimes experience adversities, conversations that are destructive. However, sports teams are required to develop strategies almost immediately to combat these hurdles and work teams can do the same.

One of the suggested ways to resolve this hurdle or leadership challenge

Strangely, successful sports teams share several things in common. Succeeding in sports is frequently defined as besting your opponents by being number one, exceeding your fans' expectations, and creating a growth experience for team members.

is simply to engage departments in teamwork that combines sporting activities for experiential learning.

National Energy Corporation of Trinidad and Tobago (NEC), recognizing that members of staff needed to develop their leadership and listening skills, embarked on several team-building retreats to equip their teams with the skills needed to work together to accomplish results. Some departments were able to engage in social events, others took a bigger step of team-building interventions. This unique approach combines outdoor team activities with classroom training.

Teams That Play Together Work Together

Employees retreat to a scenic, tranquil environment. Members participate in team outdoor activities such as dragon boating, water sporting activities, gaming activities such as Island Hopping and Sack Relay, to name a few. These sessions demonstrate the dynamics of team players.

It is my firm belief that the characteristics of an effective team are not the hard skills of industry or management expertise: most are attitudes rather than

skills. Successful team players are defined by the way they relate to their colleagues and the way in which they interact across a broad range of skill bases.

Our focus is a three in one approach.

Leadership & Team Dynamics:

Each employee's opinion and views on the team's performance counts! Strategic team-building efforts start with an assessment of the team's dynamics. Each participant is required to complete a personality assessment and a team dynamics questionnaire. This is given to all participants to determine personality type and whether the team is working together or, whether the team needs to increase open communication and relationship-building. Are team members actually hostile and mistrustful towards one another? Teamwork exercises will be used to alleviate these concerns and improve team performance. After competing and participating in these activities, we discuss leadership, conflict management, diversity and other business practices.

Customer Service: Customer feedback is important. The retreat

Teamwork will prove to bring extraordinary success to the future of NEC and Energy.



Meeting the public as a team showcases performance

incorporates an assessment of the department's internal and external customer service. This provides participants with an understanding of how they are perceived by their internal and external stakeholders, and a gap analysis.

Performance Deliverables:

Participants are also requested to identify their performance deliverables which would be aligned to the department's scorecard/objectives.

Employees would be able to apply the principles of teamwork upon their return to the workplace having participated in fun activities.

How do we measure success?

Team-building is not a quick fix and a team cannot be built in one day. However, success can be measured by

Teamwork exercises will be used to alleviate these concerns and improve team performance

improvements in baseline assessments such as employee benchmark surveys, customer service surveys, team dynamics questionnaires prior to the team-building workshop and after. Another way of measuring success is in the significant

increase in leadership performance.

Finally, the best way of measuring success is if after one to two years the conversations are as follows:-

"People matter here."

"I feel that my manager was firm and just."

"I feel comfortable working with Jane."

"I enjoy working on that team and I do not have a problem working the long hours."

"We are all in this together."

The team-building retreat is an investment towards ensuring efficiency and sustainability. NEC has registered a positive change in the way employees and supervisors interact, manage conflict and accept responsibility and accountability for deliverables. Teamwork will prove to bring extraordinary success to the future of NEC and Energy.



At the LFP site – Left to right: Wade Hamilton VP-Technical Services; Ernest Williams Project Manager; Neil Gosine Chairman NP; Senator the Hon. Kevin Ramnarine Minister of Energy and Energy Affairs and Larry Howai, Former Chairman NGC.

Minister and Former Chairman visit LFP site

On Saturday May 26, the media was invited to tour NGC's Liquid Fuel Pipeline System project site, situated at Frederick Settlement, Caroni with Senator the Honourable Minister of Energy and Energy Affairs, Kevin Ramnarine. Witnessing the event were the former Chairman of NGC Mr. Larry Howai; the VP Technical Services Mr. Wade Hamilton, the Project Manager Mr. Ernest Williams and other officials from NGC.

The Minister was given a detailed tour of the site, including the loading area, the main pipe rack, pumps and buildings. The Minister was very impressed with the project completed thus far by NGC, and said that for far too long, the facility remained a mystery to the local public. He stated that the objectives of the project are to transport gasoline, jet fuel and diesel fuel from Petrotrin to

The Minister was given a detailed tour of the site, including the loading area, the main pipe rack, pumps and buildings.

Caroni and jet fuel onwards to Piarco International Airport.

The Caroni LFPS is a world-class terminal storage and loading facility built for the routing of different fuels along the grid where they will be moved, stored and regulated. The main aim of this project is to reduce the need for Road Tank Wagons, thus making it safer to transport fuel.

T&T Energy Map 2012 Presented to Minister of Energy

On Friday, NGC, along with BGTT, PPGPL and BHP Billiton presented a framed map to the Honorable Minister of Energy and Energy Affairs, Kevin Ramnarine at the Ministry of Energy's conference room on Level 26. Another framed map was also given to the Permanent Secretary (Ag) Mr. Selwyn Lashley, to hang in his office or the reception area of the Ministry. This map, jointly sponsored by NGC, PPGPL, BHP Billiton and BGTT, is the fifth edition, the first of which was made in 1994 by NGC, BG, PPGPL and Petrotrin.

The Trinidad and Tobago Energy Map is produced by the respected cartography firm, Petroleum Economist based in London, England and sold globally through their marketing network. After 18 years, we are advised that our map still enjoys great marketability in the



Map Presentation to Minister of Energy -From L to R: Dominic Rampersad – VP Accounting, PPGPL; Krysta De Lima – Chief of Staff, BGTT; Senator the Hon. Kevin Ramnarine; Maria Thorne – President (Ag) NGC and Vincent Pereira – President, BHPBilliton.

digital world and the hard copies (folded maps) remain prized items in schools, universities, energy sector corporations and banks. Consequently, the maps remain premier marketing/brand items.

The Honorable Minister said that he was very pleased with the map, and delighted to be presented with an updated version. NGC was represented by Maria Thorne, President (Ag) and Christine Punnett, Head, External Communications. Also attending were Vincent Pereira, President and Carla Noel Mendez, VP- Corporate Affairs of BHPBilliton, Wendell Constantine – BG's Corporate Affairs Manager, and Dominic Rampersad, VP Accounting from PPGPL.

Works Continue on Liquid Fuels Pipeline System Project

Most aspects of the Liquid Fuels Pipeline System project continued at a satisfactory pace in the last quarter of 2011.

Pipeline

The 8" liquid fuels pipeline, which will

take gasoline, diesel and jet fuel from the Petrotrin compound at Pointe-a-Pierre to the Caroni facility, and jet fuel from Caroni on to Piarco International Airport, has long been completed.

Works continue on the installation of valve stations, which are located on each side of the Guayamare, Caroni and Couva rivers. Works at the latter two are nearing completion, but access road conditions have impeded progress at both Guayamare sites. A contract has been awarded for the construction of roads to the planned stations at Guayamare.

Caroni Facility

At the Caroni site, preparations continue. An entrance road is being constructed at the south-eastern side to allow access to the facility from the roundabout, which will reduce heavy traffic in the area. A second road is being constructed to allow access to the electrical sub-station that will serve the facility.

Site buildings are in varying stages of completion, with smaller ones such as the guard booths completed. The larger buildings include a Control Room, a

truck maintenance building where minor repairs to tank wagons and other vehicles can be effected, and a laboratory and equipment maintenance facility. At the laboratory, fuels stored at the site will be tested for quality and compliance with standards.

At the loading area, loading racks are being installed. Piping to the racks is almost completed and truck loading dispensers are in the final stages of completion.

One of the pipeline fuel receipt systems is about to be tested.

The fuel tanks have been completed, and the installation of piping between them is ongoing. Pumps have already been installed and piped.

The ring main fire prevention system has been installed and tested. This system will use different fire retardants, such as water or foam, depending on the type of fire.

The paving of the site is ongoing, with a substantial portion of the eastern side of the facility having been completed. The fence has been largely completed.

At the start of 2012, the Caroni portion of the project will have entered the pre-commissioning stage.

Petrotrin Site

At Petrotrin, the installation of tanks will be completed by February 2012.

The cross refinery pipeline and fibre optic cable are under construction and the electrical sub-station serving the site has essentially been completed.

Other works such as civil, mechanical and electrical will commence in the 1st quarter of 2012.

Piarco

NGC has awarded contracts for the performance of electrical, civil and mechanical works at Piarco International Airport, and these are being performed. The two new tanks have been constructed and are awaiting connection with the two existing tanks.

NGC Bids Adieu to its Chairman Larry Howai

NGC's former Chairman has taken up a new challenge and is now T&T's Minister of Finance. Mr. Howai has already served Trinidad & Tobago in diverse ways for over 30 years and he has the credentials to support his new role: a degree in Economics, qualifications as a Certified Management Accountant, as well as the extraordinary training which he acquired over the years as CEO of a major financial institution. As Chairman of NGC, National Energy Corporation, the E-Business Roundtable* and many other directorships, Minister Howai has his finger on the country's economic pulse.

Our new Minister speaks the language of global finance, while at heart he is a true son of the soil. As a founding member of United Way, a board member of Habitat for Humanity, as well as having had oversight of NGC's major social responsibility programmes, he is sensitive to where funds are needed for social programmes.

** A private/public sector partnership aimed at repositioning Trinidad and Tobago as a hub for ICT development in the Caribbean region.*



PPVS under construction

PPVS Project – 1.2 Million Safe Man-hours Worked

Team members of the Phoenix Park Valve Station (PPVS) project experienced a great sense of satisfaction as the project passed the 1.2 million man-hours mark without a lost-time accident. This follows the company's celebration of its milestone landmark of one million man-hours in the third quarter of 2011, and represents zero lost-time accidents over the course of the entire project.

The Site Interface Building, or Control Room, which was constructed by Super Industrial Services (SIS), has been completed. Mechanical works stand at about 93% completion, but operational issues with this aspect of the project have resulted in a slowing down in this area.

NGC has also been experiencing delays in the award of approvals from the EMA to perform hydro-testing of the system. These delays, according to reports, have been attributed to a shortage of staffing at the EMA. Once this approval is obtained, NGC will be ready to proceed with testing.

When major mechanical, electrical

and instrumentation works have been completed by Trinweld, actuators will need to be installed and connected to allow for the remote operation of valves. They will then be tested.

Final civil works, including the final grading, drainage and paving, are still to be done, as well as some mechanical works, including tie-ins between the new and existing systems.

A lightning protection system and a security system are to be put in place.

All outstanding works are expected to be finished without incident, which should result in the upgraded station being ready for use by the end of the second quarter 2012. However, once the plant is live, there will still be a few minor follow-up operations to be performed, such as fencing and grading.

The upgraded Phoenix Park Valve Station will be safer and will operate more efficiently than the existing station, and NGC's downstream consumer, Phoenix Park Gas Processors Limited, will receive a higher quality of slug-free product. The heavy gas liquids removed at the site will also provide NGC with a small revenue stream from the sale of this condensate.

NGC Re-Certifies 8 Vertical Separators

During the last quarter of 2011, NGC's Pipeline Integrity Department embarked on a re-certification project to refurbish, examine and re-certify eight of its vertical separators. These vital natural gas network assets separate heavy ends from the natural gas stream that would otherwise affect the quality of gas delivered to consumers.

The Pipeline Integrity Inspections Team headed the exercise with the support of other vital GT&D departments such as Pipeline Services and Pipeline Operations. The separators are located at Methanol III and IV, N-2000, Point Lisas Nitrogen Limited, Nu-Iron, Titan and Atlas Methanol, and Tringen I and were re-certified with no disruption of gas supply to those consumers.

The process involves the pressure washing and cleaning of internal and external areas to facilitate a detailed visual inspection, hydrostatic testing and bolt torquing of flanges, non-destructive examinations such as Ultrasonic Thickness Survey with Flaw Detection, Magnetic Particle Inspection, etc., and the eventual bio-remediation of all condensate and water resulting from the hydrostatic testing, which complies with all environmental standards for disposal of such liquids.

All procedures were carried out in accordance with existing guidelines and legislative requirements, including supervision by certified API 510 inspectors and OSH Authority personnel, and the provision of PLEA passports, drug testing certificates, permits to work, risk assessments and equipment inspection certificates.

Ten other vertical separators are scheduled for re-certification in 2012.

New Condensate Facility for Abyssinia

NGC is scheduled to begin construction on a new condensate storage facility near



its Slug Catcher Facility in Abyssinia, in the location of the defunct school building.

The project involves the construction of two storage tanks and related equipment near the BUD facility, and will replace the current practice of sending the condensate via a 6"-diameter liquids line to nearby Petrotrin storage tanks.

Civil works, which will begin in January 2012, will include the laying of a concrete foundation and the creation of a bund area, which will serve as a catchment area in the unlikely event of a spill. The facility will also have a dedicated control room and electrical room.

NGC holds first Contractors' Forum

NGC and its contractors met in the first of a series of Contractors' Forums to review challenges encountered on a number of construction projects over the past five years. The aim was to boost contractor performance and thereby ensure quality and cost-effective services. The inaugural Contractors' Forum was held at Cara Suites and Conference Centre in Claxton Bay on April 18 and attracted a substantial turn-out.

"What we are attempting to do as we go forward with this series of Contractors' Forums is to have discussion



NGC's Technical Team at Contractors' Forum

“It is a win-win for Trinidad and Tobago at the end of the day if we really want the industry to grow and we want employment...”

with contractors, alerting them about the issues that have arisen over the years, the lessons learnt and how we plan to mitigate some of these issues that have occurred going forward, and have better delivery and execution of projects,” said Mr. Wade Hamilton, NGC’s Vice President, Technical Services.

The 52 contractors representing 33 companies engaged in a vibrant question and answer session and heard presentations on:

- Standard Forms of Contract
- Project Management Controls
- Development of Contractor Standard Operating Procedures
- Project Insurance Requirement and Safety Matters

Presentations were made by Danford Mapp, Manager, Project Management Control Unit; Mr. Patrick Bynoe, Manager, Engineering and Construction Services (Ag.); Mr. Mark Alfred, Head, Insurance & Risk Management, and Ms. Antonia Lucky, Corporate Lead, Environment, Health and Safety.

Delivering opening remarks, Mr. Mapp said NGC sought to partner with its contractors for the benefit of both parties. “Sometimes our relationship doesn’t seem like a partnership as one side may wonder whether the other side understands all the expectations and issues. So we saw this as an important opportunity to meet with you, to share with you what are some of our upcoming



A cross-section of contractors who attended the NGC Forum

plans and what our experiences have been in the recent past, e.g. the level of support, agreement, cohesiveness among ourselves, our contractors, as it has not always been as we would wish. We want to engage with each other so that at the end of the day we are in a better place of understanding.”

Reviewing projects completed over the past five years, Wade Hamilton said that NGC faced a number of challenges with contractors, including their non-conformance to contract requirements and schedules, poor safety standards, costs overruns and high fees. He added that the Forum was aimed at continuous overall improvement of construction projects.

“One of the lessons learnt from the industry side is that we undertook too many projects at the same time ... it was stretching the industry in trying to get resources to complete projects and this caused some overheating. Now that we are in a ‘cool down phase,’ going forward it gives us time to put in place some of the things we needed to do in the big projects to assist you in improving performance and delivery on major projects,” Mr. Hamilton told the contractors.

He added that NGC as a state enterprise is mandated to have in place proper executing systems for timely delivery of projects and minimising costs overruns.

Contractors were also brought up-to-date on major projects that are ongoing including the Phoenix Park Power Station



NGC Contractors' Forum

upgrade, the Liquid Fuels Pipeline Project at Caroni and the Tobago Pipeline Project.

Mr. Hamilton said NGC is also focused on finding cost-effective ways of pipeline installation for the light industrial consumer sector, particularly the manufacturing industry and industrial estates that consume less than 5 mcf of gas daily.

Urging contractors to be realistic in their bids for pipeline installation for the light industrial sector, he said in attempting to reduce cost, NGC had moved away from carbon steel to high density polyethylene and using new technology such as the horizontal directional drilling to minimise open cuts

on the roads.

“It is a win-win for Trinidad and Tobago at the end of the day, if we really want the industry to grow and we want employment. We have to provide the supply of gas to these customers and high cost basically negates the whole effort in putting these systems in place. So what really happens is that when we get high costs for bids coming in for service supply connections, we would tell the customer, this is the cost for the installation...and then he turns away and says it’s not worth it... At the end of the day, NGC loses the customer and the contracting community loses when we do not proceed with the project,” Mr. Hamilton explained.

NGC is also developing pipeline and



Mr Patrick Bymoe, Manager – Engineering addressed the Forum

metering facilities for NP and Unipet for the distribution of fuel to the public.

Mr. Hamilton said NGC also plans to issue invitations for tenders later this year for the rehabilitation of its aging pipeline infrastructure, some over 30 years old. NGC was also looking at a cross-country pipeline to deliver more gas to new plants that are being proposed for the Point Lisas Industrial Estate.

He also reminded contractors that they were all required to be STOW (Safe to Work) certified in the latter part of the year.

Tanzanians Come Calling

In May, NGC hosted a high level group from Tanzania which comprised a mix of politicians, civil servants and energy sector technocrats who came to Trinidad and Tobago to gain a better understanding and first-hand experience of the natural gas production, processing and manufacturing sectors in Trinidad. With this exposure the delegation hoped it would be better equipped to put in place the legal, institutional and technical infrastructure required to achieve their national objectives in Tanzania, an East African nation that has recently discovered natural gas within its national borders.

During their six-day visit the principal activities were:

- Meetings with the Ministries of Trade and Industry; Energy and Energy Affairs, and Science, Technology and Tertiary Education. The delegation met Ministers Hon. Kevin Ramnarine, Stephen Cadiz and Fazal Karim.
- Presentations were made by NGC, NEC & PPGPL at the NGC Head Office. A bus tour of the Point Lisas Estate, Port Point Lisas and PPGPL facility was undertaken. Energy Officials met were: Indar Maharaj – NGC President; Eugene



NGC's VP Commercial Anand Ragbir greets the Chairman of TPDC, Michael Mwanda

Tiah – PPGPL President; Marleen Lord-Lewis – NEC Vice President, Business Development.

- Meetings with the T&T Energy Chamber, Trinidad and Tobago Manufacturer's Association (TTMA), and National Energy Skills Center (NESC)
- Meeting with the Geosciences, Petroleum Engineering and related faculties at UWI, where areas for future cooperation were discussed
- Meetings among the delegation's Weights and Measures team, NGC and PPGPL on Natural Gas and NGLs measurement issues
- Meeting between NGC's Legal Division and the group's counterparts to discuss legal documentation such as contract formulation and negotiation techniques
- Visit to Atlantic LNG Facilities at Pt. Fortin
- Visit to NGC's Beachfield Slug Catcher Facility in Guayaguayare

During the visit to the Minister of Energy and Energy Affairs, Mr. Halfani,

Director of Exploration, Production and Technical Services, Tanzania Petroleum Development Corporation (TPDC) introduced the group to the Honorable Minister saying that the purpose of the visit was a follow up to the signing of the MOU in November 2011. He said Tanzania wanted to learn from the experience of Trinidad and Tobago as to how to enter into contracts and/or deal with downstream/upstream issues.

Halfani also said that his country had no energy policy, gas law or regulations in place and he hoped that assistance would be provided in these areas as well. He emphasized that there was some urgency to get in full gear as the main energy issues were electricity and power generation and their impact on poverty and economic development.

Mr. Halfani added that 10-15 TCF of gas had recently been found offshore Tanzania, and his government was seeking the best ways to monetize the gas to alleviate the poverty in his country. Currently, Tanzania supplies or transports 120 MMscf/d of natural gas which was where T&T was 40 or so years ago.

CSR: THE CONDUIT BETWEEN RESOURCE AND RESOURCEFULNESS

Arts and Culture –
Sanfest



In the diverse arenas of Arts and Culture, Philanthropy (Donations, Deeds of Covenant to NGOs, etc), Sports (Basketball, Cricket, Cycling, Track and Field), Youth Development, Community Economic Development, CAER and Science Education, Facilities Development and Reforestation, NGC partners with the Government, NGOs and community groups to enhance the lives and environment of the citizenry of Trinidad and Tobago.

NGC is about more than natural gas. It can be deemed a pipeline between the wealth accrued from one of the nation's major natural resources – natural gas, and the people in its communities. In the diverse arenas of Arts and Culture, Philanthropy (Donations, Deeds of Covenant to NGOs etc), Sports (Basketball, Cricket, Cycling, Track and Field), Youth Development, Community Economic Development, CAER and Science Education, Facilities Development and Reforestation, NGC partners with the Government, NGOs and community groups to enhance the lives and environment of the citizenry of Trinidad and Tobago.

A holistic approach to community and national growth implies that all areas of human development must be

catered to, including the appreciation of the Arts, something that is perhaps not given as much attention as it should. The impetus behind the NGC Bocas Lit Fest for example is to encourage new writers in the region and bring back the joys of reading a well-written book.

As good words soothe, so does good music. This year NGC assisted 39 unsponsored steelbands, including Couva Joylanders, Gonzales Sheikers, La Brea Nightingales and Dem Boyz in Tobago. Their involvement broadens the Panorama festival as it gives more bands the opportunity to perform on our largest stage at the Queen's Park Savannah.

In May of this year, NGC in collaboration with Pan Trinbago sponsored and launched SteelFesTT 2012, the steelpan festival of Trinidad and Tobago, as part of its commemoration of the 50th Anniversary of Independence. The theme for the concert series, chosen by the late, esteemed, cultural stalwart and local intellectual Pat Bishop, TC, was "Steelpan – Uniting the Sounds of The World." Ms. Bishop envisioned in the music the confluence of geographical and ethnic identities. The repertoires were soulful combinations of local and foreign acts such as The Trinidad and Tobago Defence Force with the Brazilian band Patubate; Katzenjammers Steel Orchestra and Obini Bata, the all female Cuban band; The National Steel Symphony Orchestra of Trinidad and Tobago and Drums of India led by Pervali Jaya Bhaskar; and Neal & Massy Trinidad All Stars with the Chinese band Shenzhen Music.

In addition, there was a well attended four-day SteelFesTT Conference entitled



NGC Right on Track: tutorials for age group 8 -18 years

'Pan Globalization and Its Possibilities' which began with a tribute to Pat Bishop and contributions were given on the topics of Pan Globalization-Progress and Possibilities; Pan in Education; The Technology of Pan; Steelpan Music and Its Development; and The Evolution of Steelpan.

Local talent is apparently boundless and NGC recognizes this through its involvement in different genres within the performing arts. Audience enthusiasm at The Lydians concerts or at the annual Tobago Heritage Festival, T&T Film Festival, San Fernando Junior Arts Festival (SanFest) and the St. Augustine Chamber Orchestra makes our support meaningful. NGC became personally involved in the projects it sponsored: we developed a rapport with organizers and assisted in areas where we could provide the expertise in project management, construction and promotion.

In a more formal approach to education and learning, we have also offered skills training and taken community education projects from plan to reality, across the nation and in the villages and towns adjoining the NGC gas pipeline network. Some of these programmes are:

- Reading to Learn, an education programme targeting Southeast Port of Spain and Bon Accord in Tobago
- Emergency Medical Technician (EMT-B) for Mayaro and environs
- Tobago Plant Maintenance Programme
- Building Construction Technology (BCT) Programme
- Tobago Outboard Boat Engine Repairs Programme
- Bethel Empowerment Skills Training Programme (BESTP) Agri-Business Project, Sherwood Park, Tobago
- Character Education and Citizenry Development Programme (CECDP)

The CAER (Community Awareness



Performers at SteelFesTT 2012



Cricket – T20 Championships

and Emergency Response) Programme teaches schools and communities adjoining NGC's Rights of Way (ROW) about the risks associated with living near natural gas installations. The programme instructs persons on how to respond in the event of a natural gas or naturally-occurring disaster, for example, earthquakes and hurricanes. The rationale behind the approach is to empower members of the community to be first responders, the 'eyes and ears' of NGC, thereby allowing a quick response to contain and minimize risks to life, limb and property. Community members undergo a structured training programme, so that any reporting or disaster response is done in an effective manner. NGC is thus attempting, in its own way, to positively impact on the general national psychology.

A healthy mind should coincide with a healthy body. NGC has developed inhouse an innovative Right on Track programme, that targets young girls and boys, the objective being to identify young talent in track and field. Developed in 1999, Right on Track follows a structured, systemic, science-based development programme.

The NGC brand is associated on the nation's tracks, pitches, pools, fields and basketball courts all over the country – from the Primary School Track and Field Games in Moruga, St. Patrick and Caroni, NGC schools' basketball, the Eldwin Noel Games in La Brea, to the adults' NAAA Track and Field Championships.

Particularly exciting for the company has been "The Ultimate Power Play" in local cricket, in collaboration with the Trinidad and Tobago Cricket Board. Since 2011, Twenty-20 cricket has injected even greater zeal into the game for aficionados and players alike. NGC is the main sponsor of these competitions. Of major significance is the wider objective of the partnership between NGC and TTCB, which is to encourage the development of cricket at the youth, club and national levels.



Reforestation Policy – No Net Loss for NGC

In terms of environmental conservation and the creation of pathways to sustainable development, NGC is playing a major role. When the 56"-diameter Cross Island Pipeline Project, Beachfield Upstream Development Project and the Union Industrial Estate encroached on forested areas, NGC committed itself to replanting the forests lost during its pipeline and estate construction activities. NGC's Reforestation Programme has significantly replanted critically degraded forests at Grant's Trace, Guapo/Parrylands, Mayaro, Edward Trace and the Morne L'Enfer Forest Reserve with mixed hardwood seedlings and fruit trees in keeping with its "No Net Loss" policy. The programme uses community labour groups and contractors to carry out the replanting and maintenance works.

Apart from the organic approach to environmental conservation, NGC is actively involved in the improvement of

community infrastructure. Our Facilities Development Programme builds or refurbishes community centres, sporting facilities and residential homes for the elderly or orphaned children. The 2012 plan includes Caldrac Club (Couva), Joylanders' Pan Complex (Couva), Youth Training Centre Gymnasium (Arouca), Police, Scouts, Lions Headquarters (Couva) and the Leo Thompson Recreation Ground (Gasparillo).

The philosophy behind Corporate Social Responsibility is therefore embedded in the organizational culture of NGC. NGC has a track record of being a committed partner, facilitator and driver of social, economic and community development in Trinidad and Tobago. As the company continues to partner with institutions and communities to promote social and economic development on the ground, our united effort will redound to the benefit of both NGC and community, creating a better Trinidad and Tobago.



NGC Bocas Lit Fest Launch – Left: Maria Thorne, NGC President (Ag) with Marina Salandy Browne, Founding Director of the Bocas Lit Fest.

NGC and Bocas Lit Fest: An Unrivalled Pair

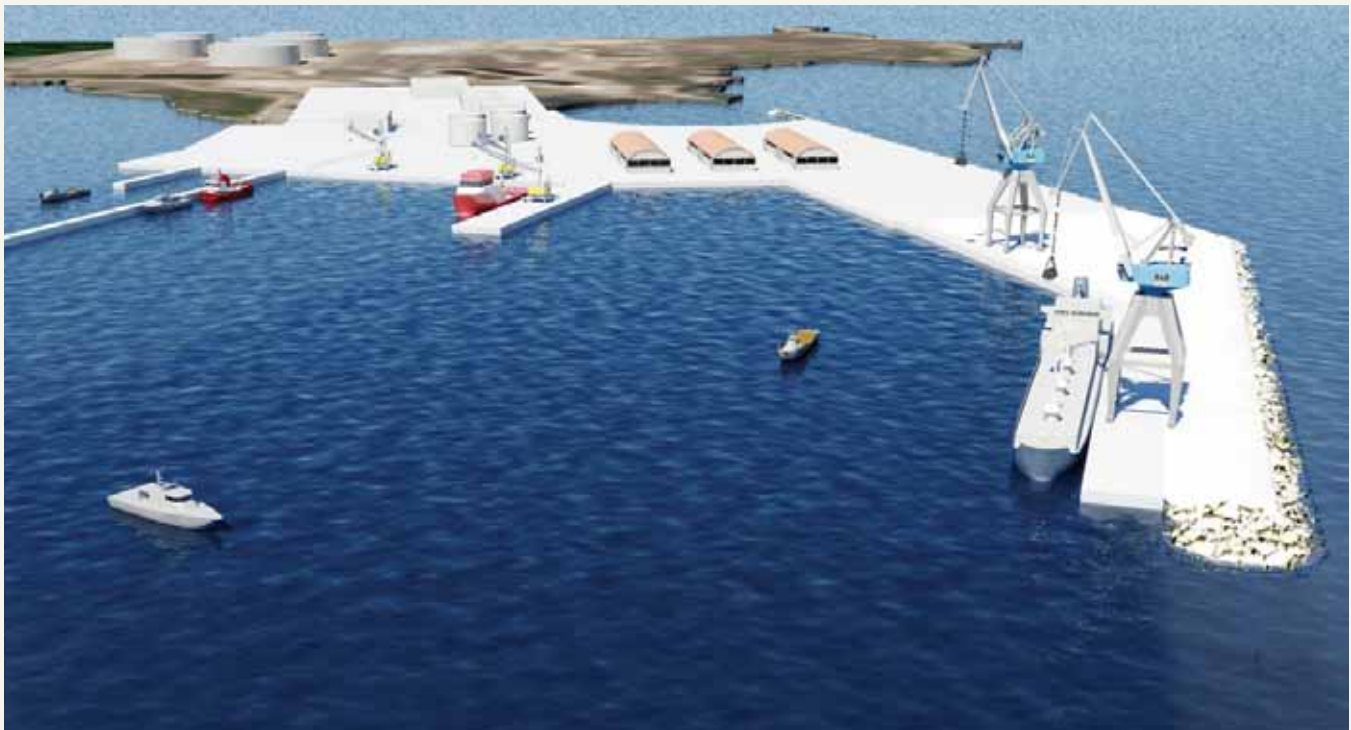
As a state-enterprise, NGC supports initiatives that are crucial to the development of Trinidad and Tobago such as the preservation of indigenous art forms. NGC seeks to involve itself in “legacy” projects, such as the NGC Bocas Lit Fest, which assist in the evolution of our culture. Innumerable benefits abound: from good literature on the shelf, stimulation of the natural creative impulse of our people to education outside of the school halls. The NGC Bocas Lit Fest is

unique among cultural events on the local literary calendar because of its focus on rewarding good writing, and promoting the pleasure of the written word. The desire is to encourage a return to the simple appreciation of reading through exposure to the literary works of Trinidad and Tobago and the wider world.

NGC is the custodian of one of Trinidad and Tobago’s most valuable natural resources – natural gas. Over the years, NGC’s Trinidad Natural Gas Model of Development has been observed with active interest around the world and the company maintains its commitment to

pursuing initiatives that will take the T&T brand global and show off our citizens’ professionalism, talent and drive. The NGC Bocas Lit Fest is just that.

In many areas of the T&T culture, NGC gives support where it is needed. NGC is well known for its two-decade sponsorship of the Lydian Singers, and every year NGC funds many of the unsponsored steelbands which could not make it to the Carnival Panorama competitions. In short, NGC contributes more than economic value. It is an intrinsic piece of the cultural fabric of Trinidad and Tobago.



Architect's rendering of the Galeota Port

Galeota Port

The master plan for Port Galeota consists of two phases. A contract was awarded to JV GLF Construction and Jan De Nul for Phase 1 only.

The main elements of the project are the construction of five new berths with associated infrastructure such as 15 acres of backland of which approximately seven acres will be obtained from reclamation.

It is a design/build contract, with designs done by design firms Halcrow and Technital in conjunction with JV GLF/Jan De Nul. Statutory approvals such as CEC, TCPD, dredging permits, etc., have been secured. A portion of the land earmarked for port construction (backland and access road) was previously leased to bpTT by the State. Through the office of the Commissioner of State Lands, NEC secured possession of the lands, which then facilitated the start of physical works on site. This process was completed late 2011.

NEC undertook rehabilitation works to the existing 1.2 km Coast Guard Road which would allow construction traffic to access the site safely. The operations were slightly complicated by the presence of two NGC natural gas pipelines, 24" and 18"/16" in diameter, which cross the Coast Guard Road at three locations.

In close collaboration with NGC, these lines were precisely located and temporary protection measures were implemented to allow the on-site delivery of sheet piles and other hardware. NGC has already submitted designs of its road-crossing detail to be incorporated in the design and construction of the permanent road which will be the main access to the port.

The contractor, GLF construction, has been performing mobilization works, such as setting up of temporary site offices, staging area, delivery of equipment such as piling equipment, drills, heavy equipment, etc.

BpTT's fire water pumps are located within the footprint of the project and

must be removed to facilitate piling works at Berth 1. BpTT has agreed to remove its fire pumps by the end of March 2012.

Soil boring indicates generally hard ground conditions; as a result, the contractor proposes to pre-drill before pile installation.

A test pile was driven to correlate ground conditions with data obtained from theoretical analysis to determine if the extensive pre-drilling regime is required in all areas.

Production driving of sheet piling at Berth 1 is scheduled to commence in mid-March 2012 and be completed by August. This would facilitate limited/phased use of the facility to existing users before the completion of the whole of the works.

The scope of works also involves the reclamation of approximately seven acres of sea bed, which will be utilized as port storage space to users. This operation will be carried out by Jan De Nul which has worked on projects such as Palm Island

in Dubai. The schedule start date for this activity is July 2012. On completion of the dredging and reclamation works, piling to the other four berths will follow in sequence.

A Coast Guard base, which has historically been present at the port, will also need to be considered. NEC is in discussions with the Coast Guard with regard to providing temporary accommodation for both vessels and personnel during the construction. Once the port is complete, one of the berths will be permanently dedicated to the Coast Guard for their use.

The new Galeota Port will provide all stakeholders within the energy industry, especially offshore operators, with logistical and transport services. This will eliminate the need for the transport of goods and services to east-coast and south-east offshore facilities from the north coast. Apart from energy-related facilities, the port will include a Customs

The new Galeota Port will provide all stakeholders within the energy industry, especially offshore operators, with logistical and transport services. This will eliminate the need for the transport of goods and services to east-coast and south-east offshore facilities from the north coast.

and Excise building and accommodation for pilots, maritime services and other such agencies.

NEC is wholly responsible for managing the construction of the new port. The project is expected to take 18 to 22 months.

Galeota Fish Landing Facility

Works at the Galeota Fish Landing Facility have been substantially completed. The facility is being constructed by NEC as a contribution to the fishermen and



Fish Landing facility at Galeota – An artist's impression

other related micro-entrepreneurs in the Mayaro/Guayaguayare area. It has been constructed on the site of the old facility, which was in poor condition.

During the months of January and February 2012, on-site buildings such as the cold storage building, net repair shed, locker room building, water storage and pump house building and toilet facilities will be completed. Civil infrastructure such as car parks, roads, retaining walls, etc., will also be completed.

The Ministry of Food Production, Land and Marine Affairs has expressed an interest in managing and operating the facility. They have requested minor items, such as the provision of a canteen, fencing and a covered vehicle loading bay at the cold storage building. NEC is in discussions with the contractor regarding the new items.

Completion of these additional items is expected to take place by the second quarter 2012.

The Galeota Fish Landing Facility will provide fisherfolk with a modern base of operations. It will include refrigerated fish storage, personal and bathroom facilities, and areas for equipment repair, etc. NEC is in discussions with NP regarding the establishment of a small filling station for the refuelling of boats.

The facility represents the largest financial contribution of NEC to one of its communities, at a cost of TT \$35 million.

NEC Creates Energy Industry Department

In July 2011, NEC created a new department, the Energy Industry Development (EID) department for the development of energy-based manufacturing industries and for creating the backward linkages associated with enterprises such as these.

At such a mature stage in Trinidad and Tobago's development, it is important to diversify the nation's economy, and make

Among NEC's roles in this will be ensuring that the assumptions being used for the development of the model are appropriate...

use of its many strengths, especially its skill and experience in the energy sector. These skills can be used to develop other growing elements of the local business landscape, such as manufacturing.

The Energy Industry Development department hopes to create linkages between the energy industry and the manufacturing sector, along with all other related players.

Among its stated goals are the establishment of target projects, the identification of appropriate sites, infrastructure and utilities, and the development of profiles and business plans for selected energy-based manufacturing industries.

They also hope to engage in direct contact with established manufacturers, members of the local petrochemical and chemical sectors, local business chambers, entrepreneurs and financiers. NEC also intends to look outside of these shores for partners and investors.

NEC's Board of Directors has also agreed that it would be responsible for planning, owning, developing and constructing facilities for selected melamine-based derivative projects in the short term, as well as other industries in the medium to long term.

Feasibility Study for Severstal Consortium Project

NEC and NGC have signed a Memorandum of Understanding for the

facilitation of a feasibility study into the establishment of a vertically integrated Iron and Steel Complex at the Union Industrial Estate. In this, NEC will be the primary facilitator.

Members of the consortium are Severstal North America, Complejo Matalurgico Dominicano S.A. (Metaldom) of the Dominican Republic, and Neal and Massy Holdings Limited.

The complex will be a Direct Reduced Iron (DRI) /Hot Briquetted Iron (HBI) plant with a nominal capacity of 1.5 million tons per year, and an integrated steel mill with a nominal production capacity of up to 300,000 metric tons per year of steel billets. The project is expected to cost over US\$600m.

Among NEC's roles in this will be ensuring that the assumptions being used for the development of the model are appropriate, that necessary resources are available, and directing the consortium toward appropriate parties for needed information.

If approved, the project will generate 3,500 indirect jobs during construction and 400 permanent jobs. Once established, the plant is expected to consume approximately 56 MMscf/d.

The feasibility study is due to be completed by the end of February 2012.

NEC also indicates that they are in discussions with other interested parties for the possible establishment of metals plants at La Brea.

LNG Facility Proposed for La Brea Industrial Estate

Prime Minister Kamla Persad-Bissessar has held talks with Gasfin Development SA CEO Roland Fisher at the T&T High Commission in London with regard to developing an LNG production facility at the La Brea Industrial Estate.

Much of the conversation centred on the business opportunities arising from the high cost and poor integration of the energy markets in the Caribbean region and the viability of LNG as a cleaner, cheaper, more efficient alternative to oil.

The proposed facility is expected to serve the needs of the wider Caribbean, using smaller LNG vessels than those used for larger US and European clients.

During the discussion, Gasfin undertook to duplicate mid-sized facilities similar to those held by TGE Gas Engineering, its affiliate, in China.

The project has the potential to generate as much as US\$400 million in investment into the La Brea community. Among the proposed partners would be NGC, NEC, domestic gas producers, local financial institutions and international partners such as TGE, the Linde Group, IFC and EDF Energy.

The Prime Minister expects that this project could be a long-term, premium market for T&T's gas within the Caribbean. There will also be the opportunity for T&T and fellow Caricom members to further develop the region's energy industry.

The proposal for this project will be sent to the Ministry of Energy and NGC for evaluation.

MOE Says Trinidad and Tobago Ready to Assist Africa in Gas Development

While speaking at the Commonwealth Business Forum Oil and Gas Roundtable in Perth, Australia, Minister of Energy and Energy Industries Kevin Ramnarine expressed the view that Trinidad and Tobago has the knowledge, skill and



Energy Minister Kevin Ramnarine

Among the words of advice offered by Minister Ramnarine was the suggestion that countries hoping to develop their energy reserves should invest in health, education and human development.

experience to help many African nations with their energy development initiatives.

Many of the supportive gestures this country intends to make will be made through NGC, whose expanded mandate includes going global. Africa, the Minister noted, is central to this strategy.

In response to this declaration, many of the questions during the Q&A segment of the roundtable were directed at the Minister, a clear indication, he believes, that many African nations

are aware of and attracted by T&T's 100-plus years of experience in energy development.

Among the words of advice offered by Minister Ramnarine was the suggestion that countries hoping to develop their energy reserves should invest in health, education and human development.

The roundtable was a precursor to the CHOOGM events taking place in Perth at that time. Also present were NGC executives, including Chairman of the Board Larry Howai and T&T High Commissioners Patrick Edwards (Uganda), Harry Partap (South Africa) and Nyahuma Obika (Nigeria).

T&T in Talks with Barbados for Supply of Natural Gas

Conversations are ongoing for the supply of natural gas to Barbados via subsea pipeline, to be connected to NGC's new subsea pipeline which comes ashore at Cove Estate, Tobago. That country expects that the purchase of the cheaper fuel would help reduce current energy costs on the island. At the moment, the National Petroleum Corporation of Barbados (NPC) purchases about 1.2 million cubic feet of natural gas from the Barbados National Oil Company Limited (BNOC) to supply its customers with energy.

Barbados has its own natural gas distribution system, to which over 16,500 domestic and 640 commercial customers are connected. Domestic customers primarily use the gas for cooking, while the industrial and commercial sectors, mainly bakeries, laundries, restaurants, light manufacturing industries and hotels, use it for heat and in their processes.

All natural gas not sold to the domestic and light commercial market is used for power generation.

The country further hopes to use natural gas for its public transportation vehicles, and for gas cooling in large hotels, this not only reducing the cost of energy but also the country's carbon footprint.

LNG Carrier Named after Point Fortin

Point Fortin, recognized by many as the birthplace of Trinidad and Tobago's energy industry, and home to Atlantic LNG, has been honoured by international energy powerhouse GDF Suez, which has named an LNG carrier vessel in its honour.

On a recent visit to Point Fortin, where the vessel was loaded with its LNG cargo, crew members of GDF Suez Point Fortin were presented with tokens in honour of the occasion by representatives of Atlantic LNG and GDF Suez. The visit also coincided with 12 years of LNG shipping from that port.

A local representative of GDF Suez commented that the christening of the carrier is an acknowledgement of the critical role played by the borough in the development of the nation's energy industry, and the importance of Trinidad and Tobago's energy supply to its international gas markets. It is also a recognition of Atlantic LNG as a global leader in LNG production.

GDF Suez Point Fortin, with a capacity of 154,200 cubic metres, is one of the largest LNG carriers in the world.

Shale Gas Causes Sharp Drop in T&T's LNG to the US

Rising production of shale gas in the US has resulted in a sharp drop in Trinidad and Tobago's own exportation of LNG to that country. T&T's supply of LNG to the US, which originally amounted to 75% of their imports, has fallen to 25% over the past three years, revealed Energy Minister Kevin Ramnarine in Doha, Qatar



Atlantic LNG at Point Fortin

in November. This decline, however, will not reduce the 15 million metric tonnes of fuel exported by T&T, said the Minister. This is because this country will seek to supply other markets in South America, mainly Brazil, Argentina, and Chile, as well as consumers in Asia, especially Japan, where prices are better.

The Japanese market, the Minister further clarified, has improved sharply since the country suffered damage to its power plants during the earthquake it suffered earlier in the year. At the moment, 22% of Trinidad and Tobago's LNG exports go to Asia.

Further diversification may take place if Trinidad and Tobago goes ahead with its proposal to construct a smaller LNG plant to supply the Caribbean territories.

Still, the competition provided by the US is a matter for consideration, as the country is seeking to supply markets where Trinidad and Tobago once enjoyed relative security of demand.

T&T's LNG Exports to Japan on the Increase

Trinidad's LNG exports to Japan are on the rise, with Kansai Electric, the second largest electricity generation plant in Japan, importing four times as much LNG from T&T in the first three quarters of 2011 than it had in 2010: that is, 216,696 metric tonnes as opposed to 58,240 metric tonnes.

This purchase comes about through a short-term agreement with Atlantic LNG, and is quite unusual because of the length of the journey between the Caribbean and Japan. It represents an attempt by Kansai Electricity to uphold its commitments to generate electricity in the wake of the devastating earthquake experienced by Japan early this year.

At the time of signing, however, prices in Japan for imported LNG were just \$8.99 per MMBtu, as opposed to the \$16.372 per MMBtu level to which it rose months later.

one
moment
please

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



Turtle Rock, Blanchisseuse is a 50 foot peninsula located along the north coast of Trinidad. The area earned its name because it is shaped like the head of a turtle. Visitors (mostly hikers to Paria Bay and Waterfall) can rest, see and take pictures of the turtles swimming in the ocean and enjoy the cool sea breeze of this pristine shoreline which is flanked by the Caribbean Sea. Photo by Timothy Corbin



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