



THE NATIONAL GAS COMPANY  
OF TRINIDAD AND TOBAGO LIMITED

# BEYOND THE PIPELINE

A Newsletter for Our Pipeline Communities

## SMALL STEPS TO CHANGE



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*Beyond the Pipeline* is NGC's Community Newsletter, produced by the Corporate Communications Division of The National Gas Company of Trinidad and Tobago Limited (NGC)

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## Message from the Senior Manager, Corporate Sustainability

### Small Steps to Change

We consider our efforts in Corporate Sustainability to be small steps that ultimately allow us to address big problems. We have persisted in creating and enhancing programmes that will benefit workers, communities, and the country.

Our Corporate Social Responsibility (CSR) projects demonstrate our commitment, and we have been working hard to increase the value of that portfolio for our stakeholders. A few of our outstanding CSR initiatives include supporting the return of the National Badminton Competition; sponsoring volleyball and the Trinidad and Tobago Premier Football League (TTPFL) (March); continuing to serve as the title sponsor of the NGC Bocas Lit Fest 2023 (April); delivering our 'Inspire to Achieve' (I2A) programme (May); and partnering with Shell to deliver the 'Re-Energize TnT' programme (June). In this issue, you will learn more about our involvement.

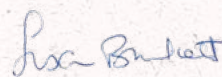
Another objective has been assisting Trinidad and Tobago in addressing climate change and achieving its emission reduction targets through the NGC Group Green Agenda. We have taken new actions, such as developing the Climate Adaptation and Resilience Portal (CARP) and sponsoring a new television series called 'Small Steps to Change', which spotlights people and organisations working to improve both our nation and the environment. Additionally, we received recognition globally for enhancing operational effectiveness and environmental performance through the use of satellite technology.

Once again, we want to progress together with our communities. In order to inspire others to join the battle against climate change, we have made it our duty to inform the national public through as many channels as we can as we advance our green agenda. To do this, we have created a number of communications tools meant to spread awareness of the energy transition, alternative fuels, renewable energy, and energy efficiency.



LISA MARIA BURKETT  
SENIOR MANAGER, CORPORATE SUSTAINABILITY, NGC

We are sharing this newsletter to help you better understand the work we have been doing to serve our national community. I would like to take this opportunity to wish you and your family a happy and successful year on behalf of NGC.



**Lisa Maria Burkett**  
Senior Manager, Corporate Sustainability, NGC

## Update on NGC's Inspire-to-Achieve (I2A) Programme



### Pointe-à-Pierre Wildfowl Trust

NGC is aware of the connection between youth development and a future that is sustainable for both the country and planet. We have continuously made investments in developing the potential of youth. One of our initiatives is the NGC I2A programme, which seeks to promote more holistic education, and open up a wider range of entrepreneurial and career options focused on the 'green' and sustainable economies and communities of the future. The pilot of this flagship programme targets youth within NGC's fenceline community of La Brea,

through the delivery of after-school (and weekend) skills training and education in the following Learning Tracks:

- Science, Technology, Research, Engineering, Arts and Math (STREAM)
- Sustainability
- Entrepreneurship
- Life Skills and Career Coaching

The first cycle of NGC's I2A programme, which was launched in 2022, began on 6th March 2023 in the La Brea community. In the first three-month cycle

of the STREAM and entrepreneurship learning tracks, 62 students participated.

In addition to working in the classroom setting, I2A offered students the opportunity to participate in educational field trips as part of the learning process, with the goal of bridging classroom theory with practical examples. The Pointe-à-Pierre Wildfowl Trust hosted the first group of students from the sustainability learning track on 16th April 2023, in support of this goal.



The Wildfowl Trust was an ideal offsite location to bring learnings from the sustainability curriculum to life. It gave the students an exceptional opportunity to see ideas such as sustainable agriculture, biodiversity, environmental hazards, conservation, and ecosystem function in action.

Another field trip was planned as an added incentive and token of appreciation for those students who completed the first STREAM track. Twenty-four students from primary and secondary schools attended a robotics class on 30th April 2023 at Chuck E. Cheese. At the end of the class, certificates of completion were distributed, and special awards were presented to the students who had made the most progress, were the most imaginative, were the most helpful, and had the best attendance.

The I2A programme resumed on 29th April 2023 with the start of Cycle Two. The students will rotate to new learning tracks.



## Re-energize TnT Energy Education Programme

NGC partnered with Shell Trinidad and Tobago for the development and implementation of an energy education programme called 'Re-Energize TnT'.

Re-Energize TnT is a three-year integrated energy education programme that began in 2022 with the goal of giving students the information and skills they need to help build a more sustainable future through the use of renewable and sustainable energy.

The programme began in January 2023 and includes a curriculum on renewable energy and energy efficiency, as well as practical energy audits and a community green initiative. The content is certified by the Association of Business Executives (ABE) and includes 15 training modules. Students that successfully complete all modules will receive an ABE certificate.

### Re-Energize TnT Training Modules

- |   |   |
|---|---|
| • The importance of energy                                  | • Climate smart agriculture                       |
| • Traditional (fossil fuels) and non-traditional fuels      | • Introduction to solar energy                    |
| • T&T's carbon footprint                                    | • Introduction to wind energy                     |
| • What are energy conservation and efficiency?              | • Introduction to biofuels                        |
| • Conducting an energy audit                                | • The future of transportation: Electric Vehicles |
| • The Paris Agreement and T&T's carbon reduction commitment | • Advocacy and community mobilisation             |
| • Introduction to Renewable Energy                          | • Presentation skills                             |
|   | • Stakeholder engagement                          |



In July 2023, the second part of the programme was introduced. With assistance from RENEW T&T, the students were divided into groups, to undertake an energy audit on the libraries at their schools. Three rooms at the students' schools are scheduled to be the subject of a second round of energy audits by the students in September 2023.

Based on the concepts covered in the classroom sessions, the audits will be evaluated and graded. Each group will also make a presentation of their findings, including recommendations to reduce energy consumption at their school. The school achieving the highest marks for their audits and presentations will be rewarded with a solar photovoltaic (PV) system to be installed at the school. The solar PV system won by last year's audit winners – Mayaro Secondary School – was installed in July 2023.

The school that is determined to be the overall programme winner will take part in an idea incubator where students will be accompanied by business professionals through an engaging brainstorming process. The outcome of the incubator will be a green initiative to be implemented within the school's community.

The programme intends to select two schools each year from fenceline communities of both sponsor companies. Mayaro and Woodbrook Secondary Schools participated in the first year of the initiative, while Moruga and Ste. Madeleine Secondary Schools were chosen for the second cohort.



## NGC Bocas Lit Fest 2023



The NGC Bocas Lit Fest was sponsored by NGC for the 12th consecutive year in 2023. Each year, the NGC Bocas Lit Fest brings together authors and readers from Trinidad and Tobago and the rest of the Caribbean. By actively promoting our Caribbean literature to both domestic and international audiences with remarkable success, the festival has turned the page for many of our local and regional authors.

The festival, which was held throughout the month of April and is currently in its 13th year, featured readings, plays, a travelling caravan of children's storytellers, and other activities. From 28th to 30th April 2023, the main celebration was free and open to the public.

The winners of the poetry, fiction, and non-fiction categories were revealed on the festival's last day. One Caribbean Media's annual prize, widely regarded as the most prestigious honour for Caribbean writing, was won by authors Anthony Joseph, Ayanna Lloyd Banwo, and Ira Mathur in the poetry, fiction, and non-fiction categories respectively. In

the award's 13-year existence, authors from Trinidad and Tobago have only twice won all three categories, the other occasion being in 2019.

The books compete for the overall award, which was revealed at the presentation of awards. Ayanna Lloyd Banwo, the author of 'When We Were Birds', won the 2023 NGC Bocas Lit Fest's overall 2023 OCM Bocas Prize for Caribbean Literature.

Lisa Burkett, Senior Manager, Corporate Sustainability, NGC gave remarks. She stated, "As title sponsors of the NGC Bocas Lit Fest, we at NGC, look upon the voyage of the past 12 years with extraordinary pride. We are, as always, thrilled to celebrate the talent it has fostered with a deep sense of triumph, tempered always by perspective. With our push towards sustainability, and the adoption and strategies of the United Nations Sustainable Development Goals, NGC moreso now than ever, recognises the indefatigable role that this festival plays in deepening our impact beyond energy."

NGC is proud to continue its role as title sponsor of the NGC Bocas Lit Fest.





## Secondary Schools Track and Field Championships in Tobago Sponsored by NGC

After a two-year hiatus due to the COVID-19 pandemic, NGC partnered with the Secondary Schools Track and Field Association once again to host the 42nd edition of the Championships on 1st and 2nd March 2023 at the Dwight Yorke Stadium, Bacolet, Tobago.

NGC's support of this initiative is in direct alignment with NGC's CSR Pillars and strategy for sport sustainability. It also offers opportunities for training and development of coaches and officials, to promote sustainability and build capacity in the sporting discipline of track and field at the secondary level, and build the track and field value chain.

Natalie Phipps-Flemming, Corporate Social Responsibility Officer, NGC brought remarks at the opening of the event, and stated the following - "If we want to extract all the value that we can from track and field, we need to put in the work. We need to find the talent in all corners of our country - from Icacos to Toco, Crown Point to Charlotteville - and we need to develop that talent through training and competitions such as these."

The games were well attended and enjoyed by all. Signal Hill Secondary School was crowned overall champion, relieving the reigning champs Toco Secondary. It was the first time that a school has captured all titles - Champion School - Male; Champion School - Female and Overall Champion School.



## National Badminton Championships Reintroduced with NGC Support



The Tacarigua National Racquet Centre was bustling with competitive activity for five days between 11th to 19th March 2023, as The Trinidad and Tobago Badminton Association (TTBA), with assistance from NGC, hosted its Junior and Senior National competitions. This event marked the sport's return to the national competitive calendar.

Badminton events were put on pause during the pandemic when no national competitions were possible. This year's event was used to re-introduce the national tournament to the badminton community and revive interest in the sport. Judging from the participation levels, these goals were achieved.

A total of 108 juniors from clubs throughout Trinidad vied for trophies in the U-11; U-13; U-15; U-17 and U-19 age groups. The senior tournament attracted 90 participants in the Open; Masters 35 and Over; and Masters 45 and Over categories.

Numerous clubs such as Southern Stars; Cristars; Central Badminton Academy and Club; and Samurai, took home titles in the Junior Nationals. The standout club in the Senior Nationals was Shuttleforce Badminton Club, which captured the lion's share of the titles, followed by Cristars; Chinese Association of Trinidad and Tobago; Central Smashers and Southern Court Masters.

The TTBA plans to review the results of this year's Nationals to undertake the selection of National Junior and

Senior squads to participate in regional and international competitions such as the Caribbean Regional Badminton Federation (CAREBACO) Tournament 2023, Central American and Caribbean Games 2023 and other international badminton events.

NGC was pleased to support the return of the TTBA Junior and Senior Nationals 2023 in keeping with the company's commitment to the development of sport in Trinidad and Tobago.



## Trinidad and Tobago Premier Football League 2023 sponsored by NGC

NGC was a sponsor of the Trinidad and Tobago Premier Football League (TTPFL) 2023. In Trinidad and Tobago, football was played at this level for the first time this season since the COVID-19 outbreak began. The season ran from 10th March till 24th June 2023. Games were held in the Larry Gomes and Mannie Ramjohn Stadia; Police Barracks; Mahaica Oval; Arima Velodrome; Ato Boldon Recreation Ground; and the La Horquetta Recreation Ground.

The league comprises two divisions: a Top-Tier division and a Second-Tier division. In keeping with the Trinidad and Tobago Football Association's (TTFA's) three-and-a-half-year strategic plan (2022 – 2026) this League aims to create a sustainable business model for professional football in Trinidad and Tobago and to protect the integrity of the sport built on a foundation of sound governance, transparency and active stakeholder involvement. The League's structure is based upon the findings and recommendations of a 2021 FIFA-led Trinidad and Tobago Professional Football League Development study.

The League was won by the defending champions, Defence Force, who successfully defended their title. This was their fifth Premier League championship and their 23rd top-flight victory overall in Trinidad. Defence Force and the league's runners-up secured group stage spots in the 2023 CONCACAF Caribbean Cup, giving them a chance to compete in the 2024 CONCACAF Champions Cup (formerly the Champions League).



# Sponsorship of the Volleyball Tour by NGC

NGC is a sponsor of the 2023 Trinbago Beach Volleyball Tour, organised by the Trinidad and Tobago Volleyball Federation (TTVF) and taking place at beaches all throughout Trinidad and Tobago from April to September 2023.

The tour consists of six competitions that will be played at well-known beaches throughout the country by national and international teams. In addition to providing an opportunity to promote Trinidad and Tobago as a location for future beach sporting events, these competitions will function as Olympic Games qualifiers for 2024. The clubs that fall under the TTVF will benefit from these games by having access to employment and volunteer opportunities.

NGC is aware that Trinidad and Tobago is a country with a wealth of sporting talent, and for many years, NGC has been working to make sure that our young athletes have access to opportunities for development in a variety of important disciplines.

**Calendar for the 2023 Trinbago Beach Volleyball Tour**

TTVF 2023 CALENDAR			
	📍	MAIN EVENT	SIDE EVENT
TRINBAGO	MARACAS BAY	EASTER WEEKEND SENIOR CASUAL FUTSAL APRIL 8 & 10	U18 INTERNATIONAL OPEN A. TECHNICAL SKETCH COURSE B. FINISH EVENT QUALIFIER
	GRAND BEACH	INDIAN ARRIVAL WEEKEND SENIOR CASUAL FUTSAL MAY 28 & 30	U18 INTERNATIONAL OPEN B. REFEREE COURSE C. FINISH EVENT QUALIFIER
	MBAYRO BEACH	LABOUR DAY WEEKEND SENIOR CASUAL FUTSAL JUNE 28 & 29	U18 SELECTION A. VOLUNTEERS LEADERSHIP B. FINISH EVENT QUALIFIER
	NORCECA TOBAGO	NORCECA TOUR SENIOR CASUAL FUTSAL JULY 21 - 23	A. COACHING COURSE B. FINISH EVENT QUALIFIER
	CAZOVA TOBAGO	CAZOVA TOUR SENIOR CASUAL FUTSAL AUGUST 12 & 13	A. FINISH EVENT QUALIFIER
	NORCECA TRINBAGO	NORCECA TOUR SENIOR CASUAL FUTSAL SEPTEMBER 1 - 3	U18 PERFORMANCE LEADERSHIP A. FINISH EVENT QUALIFIER



Leg #1 - Maracas Beach - BRITNEY CHOON Defense



Leg #1 - Maracas Beach - DANEIL WILLIAMS SPIKE



Leg #1 - Maracas Beach - JEROME MORRISON & JAHREEF MIGUEL of JMVP



Leg #3 - Couva Sand Court - AWARD CEREMONY



Leg #3 - Couva Sand Court - AWARD CEREMONY



Leg #3 - Couva Sand Court - Under 18 CHAMPIONS



Leg #3 - Couva Sand Court - TOCO YOUTHS Celebrate



Leg #3 - Couva Sand Court - AWARD CEREMONY



Leg #1 - Maracas Beach -DEJAUN WILLIAMS of TSAC

## Climate Adaptation and Resilience Portal



NGC introduced its Climate Adaptation and Resilience Portal (CARP) at the Caribbean Sustainable Energy Conference on 5th June 2023. This new portal will be housed on the NGC website and will complement the products in The NGC Group's Green Agenda.

CARP will provide, in the first instance, information and alerts on hazards such as flooding; sea-level rise; landslips; riverine alerts; coastal erosion; maritime alerts; bush fires; air quality; seismic; deforestation and other emerging threats related to climate change.

The portal will incorporate interactive Geographic Information Systems

(GIS) interface products such as maps, charts, and other tools to assist employees and members of the public planning daily activities in accordance with material or potential threats related to climate change and other natural hazards. CARP will contain:

- Tidal information
- Hurricane forecasts
- Best practices adopted by other countries for adaptation (links)
- Meteorological forecasts
- A climate adaptation and resilience news feed
- Linkages to other GIS systems-information showing global trends
- Articles on hurricane impacts (on Caribbean islands)

NGC's President, Mark Loquan, the originator and driver of the idea, noted at 2023's Sustainability Conference, "We are attempting to become more agile while keeping in mind that adaptation and resilience will be difficult. As we move forward, we hope to create products that will help everyone understand about climate change and its implications. We are working on a new Climate Change and Adaption and Resilience Portal (CARP), which we believe is important for the population to visualise the impacts of climate change."

The portal is scheduled to go live in 2023. To access the portal, please visit [www.ngc.co.tt](http://www.ngc.co.tt)

## Small Steps To Change



NGC's 'Small Steps To Change', is a new TV series that puts a spotlight on individuals and companies that are implementing projects and initiatives to make our country and our planet more sustainable.

NGC and Guardian Media Limited (GML) have joined forces to bring the public a captivating TV series that delves deep into sustainability, energy, renewables, and all things 'green'. Through the series, audiences can witness the inspiring stories of everyday citizens taking 'one small step at a time' towards sustainable changes.

Episodes aired include:

- Episode 01 Green Circle
- Episode 02 EcoWash
- Episode 03 Cashew Gardens Community Council
- Episode 04 BCRC Caribbean
- Episode 05 SpeSeas
- Episode 06 Flying Tree Environmental Management
- Episode 07 Central Pathfinders
- Episode 08 Wild Fowl Trust

The episodes were aired every Monday on CNC3 @ 8:00 pm. To view these episodes, please visit [www.ngc.co.tt](http://www.ngc.co.tt) or NGC's Facebook page <https://www.facebook.com/ngctrinidadandtobago/>

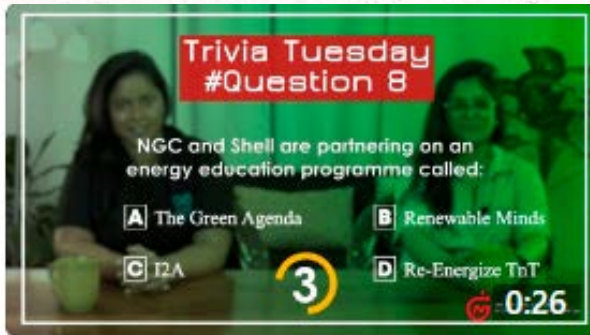


## Trivia Tuesday's and Carigreen Wednesday

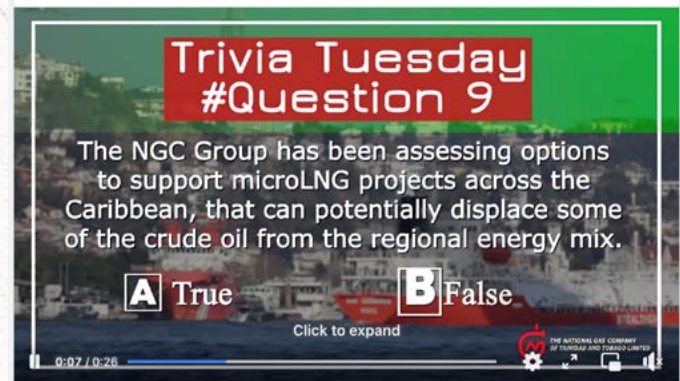
NGC posts many informative articles and media products on its social media pages.

Visit NGC's Facebook page <https://www.facebook.com/ngctrinidadandtobago/> to view:

### TRIVIA TUESDAY

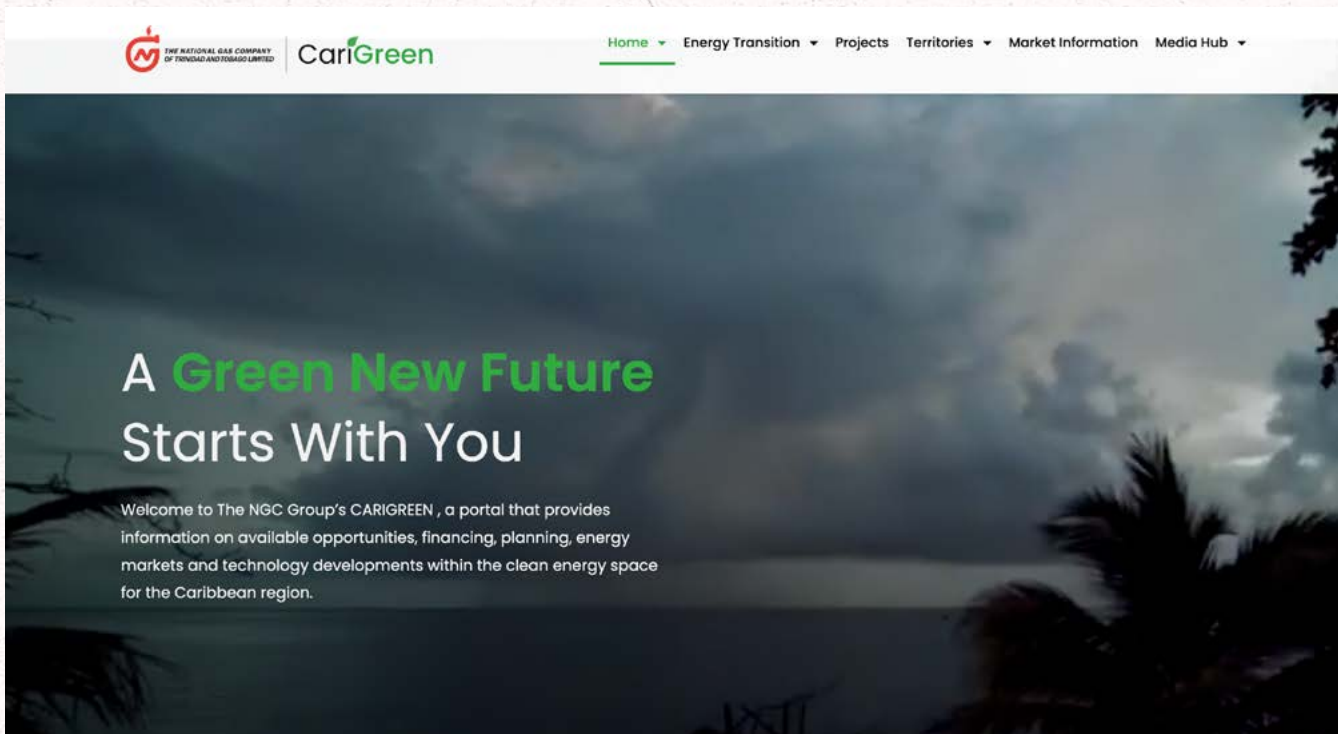


#TriviaTuesday2023 #A8  
1 · 0 comments · 86 views



2  
Like Comment Share

### CARIGREEN WEDNESDAYS



As we progress our green agenda, we have made it our responsibility to educate our staff through as many channels and products as we can to encourage people to

join the fight against climate change. One of these products is a fact sheet titled Small Steps to Change. This issue focuses on Food Security.



*According to the Food and Agriculture Organisation (FAO), "Food and nutrition security exists when all people at all times have physical, social and economic access to food of sufficient quantity and quality in terms of variety, diversity, nutrient content and safety to meet their dietary needs and food preferences for an active and healthy life, coupled with a sanitary environment, adequate health, education and care."*

Enough food is produced to feed every person on the planet. Yet, between 702 and 828 million people around the world face hunger daily.

## FOOD SECURITY FACTS



Malnutrition is a devastating reality for those who are food insecure, not only because of the associated suffering, but because it can lead to increased food insecurity. Weakened muscles and cognitive issues associated with malnutrition can make it near impossible for those individuals to improve their situation or maintain their livelihoods.

A child who doesn't receive proper nutrition, particularly during their first 1,000 days from conception to the second birthday, will likely experience stunting. The child will not mentally or physically develop as they should, irreversibly damaging well-being and future prospects.

### Tips for reducing food waste in households

- Check the fridge – confirm what food you really need before going shopping.
- Use meal plans – write a weekly meal plan (remember to include leftovers); buy what you need.
- Use your freezer – freeze food to extend its lifespan and stop it from going to waste.
- Get to know labels – "Use by" relates to food safety. "Best before" relates to quality. You can eat food after its "best before" date if you think it's still fresh, but shouldn't eat food after its "use by" date.
- Measure portions – only make/take what you need. Have a plan for leftovers.
- Label and date leftovers – organise your fridge and freezer so you know what is where and by when you need to use it.
- Reconsider bulk-buying – buying in bulk might save on the unit cost per food item, but you may end up with too much food to consume before expiration.



### Other ways to reduce food waste

Donate non-perishable food items to a local food drive or food bank. Donate money to national hunger organisations or start your own fundraiser and give the money you raise to a local food charity.



As the need for information changes, we have been upgrading our products. The updated NGC Energy SmarTT

App now has additional features and is now known as NGC Energy SmarTT App 2.0.



# Be Energy Smart

## The Energy SmarTT App

Climate change is a growing global concern. In this always-plugged-in, ever-connected world, it's important that we pay attention to our energy consumption and the carbon footprint we each leave behind.

In 2020, as part of its expanding portfolio of green agenda investments and initiatives, NGC developed and launched the country's first mobile app as an energy education tool for users to gain customised insights into their individual carbon footprint. In 2022, an enhanced version of the NGC Energy SmarTT app was released.

**Energy SmarTT 2.0** – available for free download by the public – aims to change behaviours and attitudes toward energy consumption, particularly at the domestic level, and increase awareness about the big picture environmental impact of personal choices.

### HERE ARE SOME USEFUL FEATURES:

- The 'Energy Calculator' allows users to calculate their estimated electricity cost and carbon footprint on a daily, monthly or yearly basis. In addition, users can now input their desired expenditure on power for any given appliance, and the app reveals what duration of usage corresponds to that figure – i.e. how many hours per day/week/month one would be able to use that appliance in order to limit its power cost to the stipulated amount.
- The 'Switch and Save' feature calculates the estimated payback period over which the purchase cost of an energy efficiency (EE) product would be amortised. Additionally, more renewable energy products have been added to the product selection available to app users.

- The app is now linked to NGC's CariGreen website. Through the CariGreen platform, app users can learn more about efficiency and conservation within the broader context of global climate action.
- The NGC Energy SmarTT app uses location-based services linked to mobile devices to highlight where energy efficient products can be purchased within Trinidad and Tobago. Users are now able to search within a particular radius for stores that sell EE products, which further enhances their accessibility and improves likelihood of purchase.
- NGC encourages all citizens to download the free EnergySmarTT app from their respective mobile application stores. Climate action is urgently needed, and the personal choices we make today will determine what kind of planet we leave for our children.



DOWNLOAD THE FREE NGC ENERGY SMARTT APP AT THE APPLE APP STORE OR GOOGLE PLAY STORE.

**NGC – PURSUING SUSTAINABILITY AT THE FOREFRONT OF ENERGY**

## Reforestation Programme Marks a Milestone

The International Day of Forests held particular significance for NGC this year, as it marked the culmination of the company's successful 18-year Reforestation Programme. The reforestation sites that have been rehabilitated under the Programme were ceremoniously handed over to the stewardship of the Forestry Division of the Ministry of Agriculture, Land and Fisheries on 21st March 2023 during an event hosted at the natural heritage site, San Fernando Hill.

NGC, in keeping with its "No Net Forest Loss" Policy, under the Cross Island Pipeline Project (CIPP), Beachfield Upstream Development (BUD) Project and Union Industrial Estate (UIE) Development Project, implemented a Reforestation Programme in August 2005. The first phase of the project involved the rehabilitation of 105 hectares in the south-eastern Forest Conservancies, while in the second phase, 210 hectares were reforested in the Morne L'Enfer Forest Reserve, for a total of 315 hectares.

The planted trees have actively contributed to national emissions reduction efforts and this contribution has been definitively measured through above ground and below ground carbon sequestration studies conducted in partnership with The University of the West Indies (The UWI), St. Augustine Campus. The quantitative data has shown that as of 2021 a total of 10,373 tonnes of carbon have been sequestered as a result of NGC's reforestation efforts.

Throughout the reforestation programme - which has helped bolster the ecosystems of the reforested areas - NGC sought to deliver benefits beyond the environmental aspect. The project has allowed NGC to support sustainability on a socioeconomic level through the development of human capacity. Through



Back Left - Alister Narinesingh, Social Responsibility Officer, NGC  
 Back Middle - Dr. Donnie Boodlal, NGC Director  
 Front Middle - Lisa Burkett, Senior Manager, Corporate Sustainability, NGC  
 Front Right - Myles Lewis, Head, Corporate Social Responsibility, NGC  
 Reforestation workers Grant's trace reforestation workers

collaboration and consultation with the Forestry Division, community reforestation groups were introduced to the fundamentals of setting up plant nurseries, propagation of seedlings, bee-keeping and key business skills.

Even as the reforestation sites are now under the care and management of the Forestry Division, NGC is still seeking opportunities to deepen the impact and legacy of the Reforestation Programme by leveraging the versatility of forests to support sustainability. By using a more holistic approach, NGC is extending the project into a broader programme, called 'Beyond 315'.

The first phase of Beyond 315, was a five-day beekeeping workshop which introduced the members of the Rio Claro Reforestation Group to facets of setting up a functioning apiary unit. The next step is to plan and

coordinate with the Apiary Unit and Forestry Division to identify lands near Union Village, Rio Claro, to set up an apiary for the group to work with and potentially turn into a business.

At the event, NGC Director, Dr. Donnie Boodlal emphasised that "NGC has embraced sustainability as the principal driver of our business. Our operations, processes, strategies and vision are aligned to the targets of the United Nations Sustainable Development Goals (SDGs). We have now introduced an extensive Green Agenda portfolio, which is largely concerned with climate action. We are intent on reducing the carbon footprint of our business and wider industry, through energy efficiency mechanisms; clean energy technologies; a heavy focus on methane mitigation; advocacy and public education programmes. Our reforestation project, has helped us advance our Green Agenda".

# Satellite-based Monitoring Solutions for NGC

With Orbital Eye’s Right-of-Way monitoring solutions, NGC is a pioneer in the use of satellite technology to enhance operational effectiveness and environmental performance in the areas of leak detection and repair programmes as

well as methane monitoring. High-resolution satellite methane monitoring is conducted using CoSMiC-EYE and GHGSat.



**CASE STUDY**

**Satellite-based monitoring solutions for the National Gas Company (NGC) of Trinidad and Tobago**

**OVERVIEW**  
 NGC is a frontrunner in using satellite technology to improve operational efficiency and environmental performance using:

**Orbital Eye’s Right-of-Way monitoring solution CoSMiC-EYE**

- Frequent monitoring of the pipeline Right-of-Way to detect and mitigate risks induced by Third Party Interferences like excavations, construction works, vegetation removal, etc.
- Including high-res optical satellite data enabling risk assessment from the office

**GHGSat high-resolution satellite methane monitoring**

- Provide a top-down survey to enhance LiDAR efforts
- Monitor critical sites and provide reliable satellite data for methane emissions detection.

**TECHNOLOGY DETAIL**

**Right-of-Way monitoring with COSMIC-EYE**

- Using Synthetic Aperture RADAR (SAR), Multi-Spectral (MS) and high-resolution optical satellite data
- Detecting any activity in the pipeline Right-of-Way that can damage the pipeline
- Follow-up by NGC personnel of detected activities using the CoSMiC-EYE application in the field

**High-resolution satellite methane emissions monitoring with DATA.SAT by GHGSat**

- 8 satellites with patented methane sensor technology
- Monitoring 12 industrial facilities, including landfill sites.
- Deliver high-resolution satellite data on point sources of methane.

**RESULTS**

**Satellite-based Right-of-Way monitoring**

- Weekly overview of all activities taking place in and around the pipeline Right-of-Way (RoW)
- Improved information level on activities in the RoW
- Hundreds of potential threats detected and mitigated

**Emission reduction from high-resolution satellite data**

- 30% of satellite observations showed emissions.
- Emissions were detected at 5 different O&G sites.
- Rapid data delivery allowed NGC to take fast mitigation measures for leak repair.

**VALUE FOR NGC**

**Increased operational efficiency**

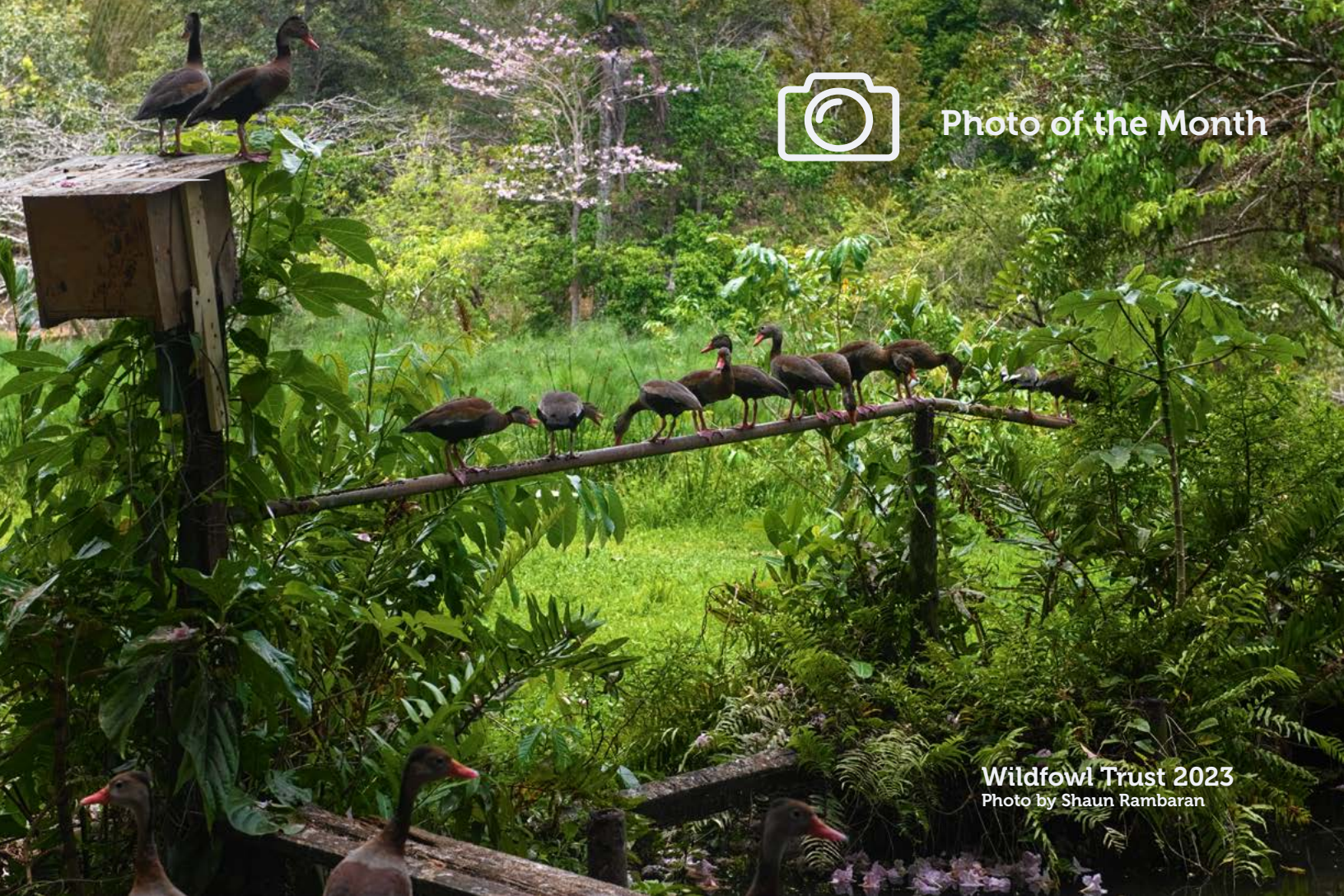
- Facility-level satellite monitoring has allowed for surveying assets on demand.

**Informed decision-making driven by satellite data**

- Accurate monitoring allowed NGC to be informed of their emission activities, supporting informed decision-making on specific assets.

**Increased safety and reduced environmental impact**

- Safest method to monitor emissions at the facility level, allowing NGC to lead in the global push to reduce methane emissions.



## Photo of the Month

**Wildfowl Trust 2023**  
Photo by Shaun Rambaran

**Energy Brain**

**Buster**

1. NGC sponsored the T&T Premier Football League and 2023 Trinbago Beach Volleyball Tour (True/False)
2. NGC is using satellite technology to improve operational efficiency and environmental performance using Orbital Eye Right of Way monitoring solution CoSMiC-EYE and GHGSat high-resolution satellite methane monitoring. (True/False)
3. NGC and Forestry Division manage NGC's reforestation sites (True/False)
4. The new Climate Adaptation and Resilience Portal (CARP) is housed on National Energy's website (True/False)
5. Students that successfully complete all modules of the Re-Energize TrT programme will receive an ABE certificate. (True/False)
6. NGC's I2A programme aims to encourage more holistic growth and open up a wider range of career and entrepreneurial paths that are focused on the 'green' and sustainable economies and communities of the future. (True/False)
7. The NGC Bocas Lit Fest is an annual event that brings together writers and readers from North America, Europe and Asia. (True/False)
8. NGC sponsored the Secondary School Track and Field Championships in Tobago and the National Badminton Competition 2023. (True/False)
9. NGC's Energy SmarTT app was upgraded to 3.0 (True/False)
10. NGC's "Small Steps To Change" series spotlights individuals and companies in the Caribbean who are working towards sustainability. (True/False)

**ANSWERS:** (1) TRUE (2) TRUE (3) FALSE (4) FALSE (5) TRUE (6) TRUE (7) FALSE (8) TRUE (9) FALSE (10) TRUE