



NGC'S Commercial Evolution



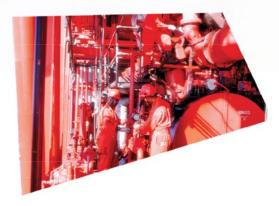






From Island pipeline to **Integrated transnational**

The presence of significant quantities of natural gas off the east coast of Trinidad in the early seventies coupled with newfound oil wealth derived from unprecedented increases in prices and production of oil were the primary drivers that led Trinidad and Tobago to embark on its resource-based industrialisation (RBI) strategy in the mid-1970s. The rationale for this strategy is perhaps best explained by the country's first Prime Minister – Dr. Eric Eustace Williams.



For Dr. Williams, instead of accepting the easy choice of exporting hydrocarbons in the crude state, Trinidad and Tobago (T&T) had accepted the challenge of entering the world of steel, aluminium, methanol, fertiliser, and petrochemicals.

The establishment of NGC (1975) and NEC (1978) (now a subsidiary of NGC) were key components of the institutional infrastructure built to pursue this industrialisation strategy. Since that time, NGC has been pivotal in the successful implementation of the RBI strategy and the growth of the natural gas industry in Trinidad and Tobago. What began as simply a piece of essential infrastructure to transport natural gas from supplier to consumer, has now evolved into an integrated energy group with local and international assets spanning the entire value chain. It is an intriguing story of both planned and emergent strategies working in combination to produce outstanding results.



Start-up capital of just TT\$80,000 has now grown into an asset base of over TT\$40 billion, making The NGC Group the largest locally owned company. The evolution of the Company and its business model can best be broken into four periods.

Early Years 1975-85

In its early years, NGC was no more than a company charged with managing the critical pipeline infrastructure for bringing natural gas from the east coast to consumers on the newly constructed Point Lisas Industrial Estate. In fact, the White Paper on Natural Gas recommended NEC as the sole purchaser/seller of natural gas and NGC as a transmission company. However, by 1981, all pipeline assets were transferred to NGC. Its main assets comprised the pipeline system - two major cross-island pipelines, 24 and 36 inches, from the east coast to the Point Lisas estate, plus the 16-inch T&TEC line to Port of Spain which was inherited from Shell. By 1984, when all contracts were turned over, NGC became both monopsonist and monopolist of the natural gas market, in addition to its ownership of the pipeline - a natural monopoly. The foundation had been set for the Company to grow into a full-scale quasi-utility providing a bundled package of product and transportation services. The Company's asset base and its profit potential were enhanced by the development of the Flare Gas Conservation Project in 1982.



This project involved the installation of two offshore compression platforms – NGC Teak and NGC Poui – to capture, compress and bring to shore the natural gas which was being flared and wasted. The production of compressed natural gas, obtained at a much lower unit cost than purchased natural gas, enabled Government, through NGC, to supply low-cost gas to T&TEC which then passed on the savings to citizens in the form of the lowest electricity rates in the region. In 1982, as well, NGC signed its first 20-year gas purchase/sales agreement with AMOCO, thereby marking its entry into the gas trading business.

Transition 1986-91

This five-year period may be described as the years of transition. NGC moved from being a passive recipient of Government policy directives to become the driver of gas based development.

T&T, like the rest of the oil-exporting world, faced an economic crisis of unprecedented proportions, post-1986, as oil prices fell sharply, foreign exchange reserves evaporated and both the external and fiscal balance fell into deficit. It was accompanied by the growth of new liberal economics and trade liberalisation policies that advocated the withdrawal of the state from direct involvement in economic activity.

The fiscal and forex crunch forced T&T into a Structural Adjustment Programme with the International MonetaryFund (IMF). In keeping with the tenets of liberal economics, the state sold its equity in Trinidad and Tobago Urea Company as well as the Iron and Steel Company of Trinidad and Tobago (ISCOTT). NEC was scaled down significantly. The depressed conditions in the petrochemical markets not only placed the future of existing investments in

doubt but also dampened the appetite for new investment at PointLisas. It was in an effort to keep T&T competitive as a location for gas-based industrial development that the Government, on the recommendation of a special task force, adopted the policy position to introduce the product-related pricing mechanism (PRPM). This gave birth to one of the most significant policy interventions in the history of the business.



But while the general economic philosophy was for less state involvement, there was still the view by a few that the energy sector - a commanding force in the economy - was to be treated differently. Therefore, a deliberate policy was engaged to increase the proportion of hydrocarbon assets under the control of the state. Two major investments at the time resulted in a distinct change in the assets and business portfolio of NGC. The first was Phoenix Park Gas Processors Limited (PPGPL), in which NGC held the state's 49% equity. The second was NGC's equity participation in Trintomar - a company formed to operate the South East Coast Consortium (SECC). This investment was meant to provide NGC with its own supply of gas and at the same time, break the single supplier monopoly of Amoco. These deliberate investments saw NGC evolve for the first time into both the midstream and upstream business as an equity partner.

The Golden Years 1992-2010

For nearly two decades, Trinidad and Tobago witnessed unprecedented growth in the natural gas sector, which itself drove overall economic growth. When the new Government took office in 1991, one of its early decisions was the merger of NEC with NGC to form a powerful, integrated entity mandated by Government to be the

prime mover in gas-based development. The merged company expanded its value creation matrix by assuming several roles: merchant transporter, infrastructure property developer, and business developer. In many respects, the expanded NGC now became a one-stop shop for gas-based investments.

Two other policy decisions provided stimuli for growth over the coming period.

- The introduction of the product-related pricing model – the PRPM links the price of product to the price of the commodity, placing NGC the merchant in a position to directly share the market risks with its petrochemical customers.
- To broaden the range of investment possibilities, the Government removed a long-standing ban on the export of natural gas as LNG.

The mandate given to the Company at the time of the merger was reflected in its first Strategic Plan 1994-98. Then, the Company crafted and embraced a vision:

"To position Trinidad and Tobago as a major player in the global natural gas business."



In pursuit of this vision, NGC adopted an aggressive marketing thrust focused on the key value proposition attributes of competitive price, strategic location, and resource availability.

Market promotion included trade missions and conferences both at home and abroad. NGC partnered with the Gas Technology Institute to host six Natural Gas in the Americas Conferences between 1994 and 2002, each introducing new players to Trinidad and Tobago. NGC's proactive strategy extended to business and infrastructure developments. Three significant initiatives stand out.

NGC was highly instrumental in the coming to fruition of Atlantic LNG Train 1. NGC played a unique role in the negotiations for Train 1 as the only one among the equity partners to solely represent the interest of the state in negotiations with the supplier (Amoco) or the LNG buyer (Cabot). NGC also took a 10% equity position in the Train 1 investment. Secondly, when in 1993 a gas shortage loomed as a result of the loss of gas volumes from Trintomar, it was NGC's direct engagement of ENRON (now EOG Resources) that resulted in the

company being able to fill the gap. In the downstream sector, both Farmland and NUCOR were actively courted to invest in Trinidad and Tobago. This period also witnessed the expansion of the pipeline network and the establishment of new industrial space in Point Lisas North, La Brea and Union. In 2010, the Company was executing over TT\$7 billion in capital projects. The strategy pursued by NGC brought a wave of foreign investment into the sector thereby stimulating exploration in the upstream and increasing the proven resource base.

By 2010, the industry landscape had changed significantly. Trinidad and Tobago had seven methanol plants, 11 ammonia plants, one urea plant, one AUM plant and four LNG trains. Trinidad and Tobago was well-recognised in the global arena as the world's leading exporter of both ammonia and methanol and the fifth-biggest exporter of LNG, with the largest slice of the US market. The vision of Trinidad and Tobago becoming a major player in the global gas business had been achieved.





Value Chain Expansion **2011-Present**

The global financial crisis of 2008 took its toll on the direction of the gas business. In the aftermath of the crisis, a combination of high capital costs, higher gas prices, and unfavourable market dynamics brought investment in new downstream plants to a virtual halt. Construction of the aluminium smelter – (Alutrint) had started, only to be cancelled by the new Government in 2010. Prior to that, a long list of planned projects, including steel, polypropylene, ethylene, and maleic acid, never came to fruition as investors pulled out. These were the early manifestations that the market dynamics were changing.

With the vision of placing T&T on the global energy map being achieved, NGC turned its strategy inwards, becoming more focused on the long-term sustainability of the organisation. It became evident that NGC had to diversify its sources of income as the margins earned from the merchant business were forecast to shrink over time. Expansion along the value chain was now an urgent imperative. In 2010, NGC embraced a new vision "To be a valued partner in global natural gas business." Local and international growth and asset integrity were among its strategic pillars. The growth priority targeted strengthening participation in other areas along the local value chain, and deepening integration into all facets of the gas business. Local and international growth and asset integrity were among its strategic pillars.

The growth priority targeted strengthening participation in other areas along the local value chain, and deepening integration into all facets of the gas business. Some significant strides were made in this priority area. Strong commodity prices over the period 2011 to 2014 provided the Company with the capital to make some strategic investments along the value chain.

These included

- Acquisition of the upstream assets of Total in the Angostura marine field (2013)
- Acquisition of Petrotrin's 20% interest in Block 1.
- Acquisition of the shares of Conoco and Pan West to become 90% owner of PPGPL. Citizens were given the opportunity to invest and earn in this venture through the public offer of shares in TTNGL, a company incorporated to hold a 39% stake in PPGPL.

NGC began trading its own cargo thereby increasing the value from its processing capacity rights in Atlantic Train 4.

Since 2015, the natural gas business locally and internationally has been hit by some disruptive developments which have threatened the sustainability of NGC.

These include gas curtailments, supply shortages, relatively high upstream prices in contrast to falling international prices, low commodity prices and plant closures. shortages, relatively high upstream prices in contrast to falling international prices, low commodity prices and plant closures. In part, these developments provided a string of evidence of a maturing natural gas sector. In the circumstances, it was imperative that NGC recalibrate its business model to move beyond the merchant/transporter role both inside and outside T&T's borders to ensure its long-term stability.

By leveraging synergies across the Group, significant strides have been made in the growth imperative.

Some important achievements of the Group include:

- 20% equity participation in Caribbean Gas Chemicals Limited
- Expansion of the Commodity Trading desk to include crude oil and LPG in addition to its growing LNG trading activities
- Purchase of the LPG marketing business of Twin Eagles Liquids Marketing LLC - representing the Group's first ownership of an operating entity in the US market.
- A historic LNG agreement with China
- Establishment of a corporate office in Guyana

These advances are yet to impact the bottom line in a measurable way.

However, they represent **important foundation blocks**on which a strong and sustainable future can be built.

