



Stepping Down to Step Up

A downstream development strategy

Trinidad and Tobago is considered by many to be touched by the hand of God. Our land is one rich in natural resources – most notably oil and gas. The question to ponder, however, is whether Trinidad and Tobago (T&T) is deriving optimal value from its natural resources, particularly gas. Any natural gas policy should involve the following:

- Optimizing the Value of Natural Gas.
- Maximizing Revenue.
- Creating industries for downstream processing of Natural Gas.
- Building Technical and Intellectual Resources.
- Maintaining adequate levels of reserves.

The downstream processing of natural gas possesses the potential to further add value to the already booming energy sector. This is extremely important given the fact that oil and gas is T&T's 'cash crop' and the fact that of recent times, oil prices have dipped below USD100/bbl. Expansion in the natural gas industry has a multitude of options, including petrochemicals, metals steel and liquefied Natural Gas (LNG).

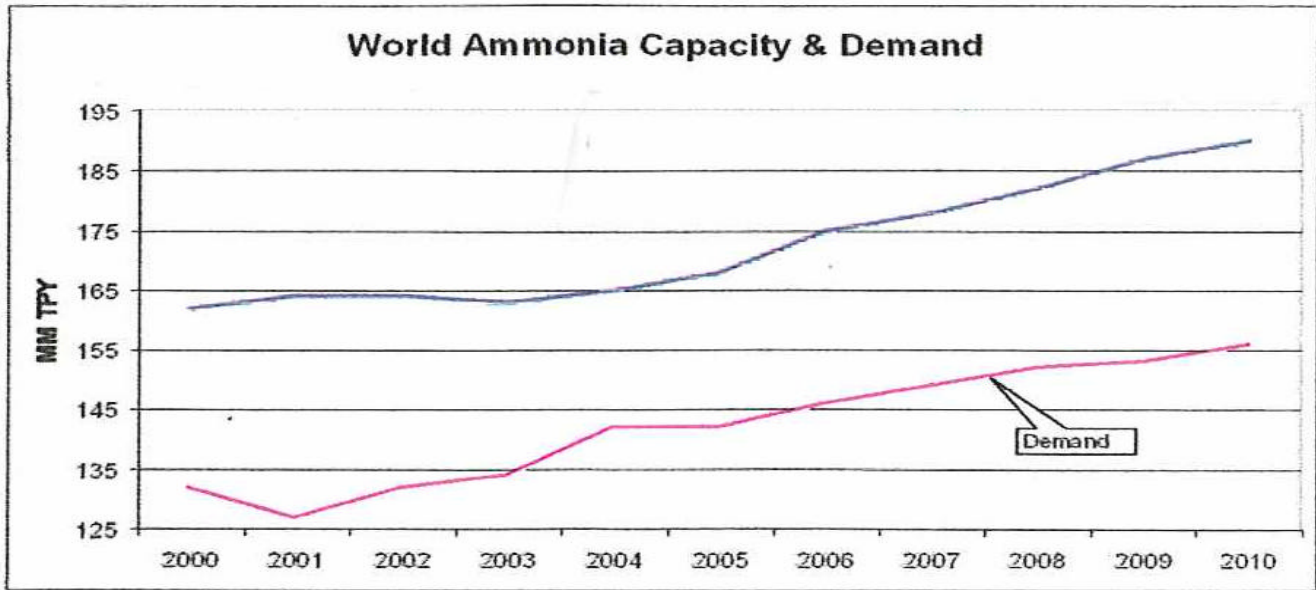
The issues and challenges posed now differ slightly from those faced when the first attempts at diversification were made in 1975. Dr. Eric Williams' dissertation in his feature address, at the commencing of the Iron and Steel complex, Pt. Lisas, 1977, stated the problem as:

"Blessed as we are with hydrocarbon resources, we had a choice to make. There have been attempts to persuade us that the simplest and easiest thing to do would be to sit back, export our oil, export our gas, do nothing else and just receive the revenues derived from such exports and as it were lead a life of luxury - at least for some limited period. This, the government has completely rejected, for it amounts to putting the entire nation on the dole. Instead, we have taken the challenge of entering the world of steel, aluminum, methanol, fertilizer and petrochemicals, in spite of our smallness and in spite of our existing technology. We have accepted the challenge of using our hydrocarbon resources in a very definite industrialization process."

The energy sector has a major role of value maximization which can be transferred to other sectors within the economy. The primary goal therefore is to exploit fully the options available from natural gas.

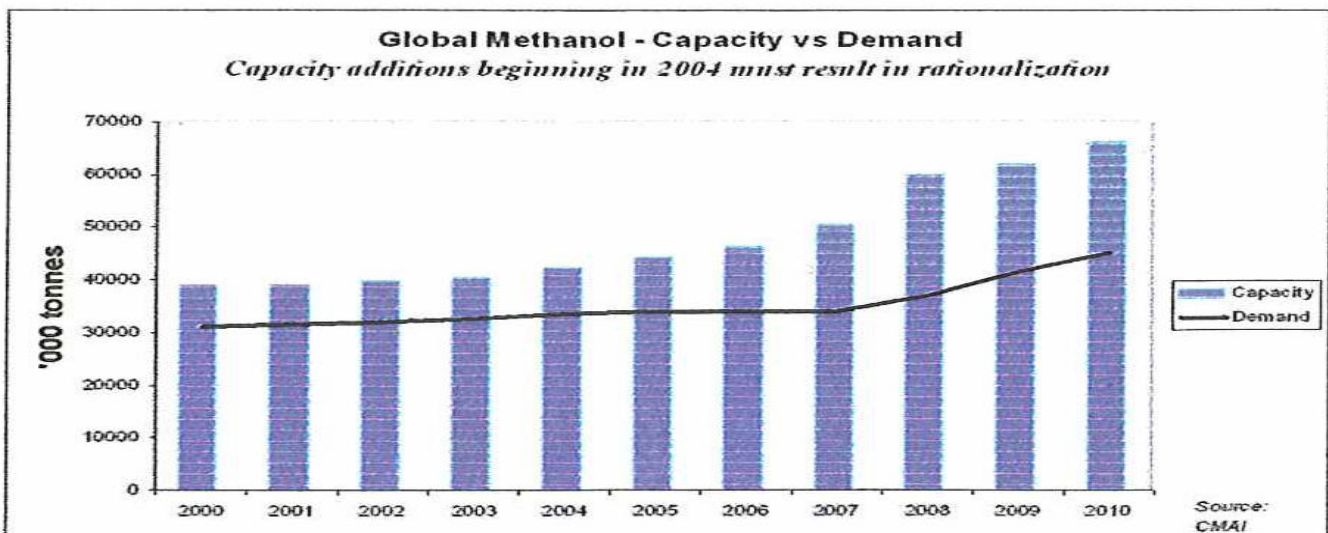
If one was to break down the major components of natural gas it would include Methane (C1), Ethane (C2), Propane (C3), and Butane (C4). Examining the existing market conditions indicates that producing more methanol and ammonia may further saturate an already oversupplied market where sufficient capacity already exists as depicted in charts 1 and 2. The focus therefore lies on the development of additional derivative chemicals. The idea at hand is which option benefits the major players in the industry by creating jobs and enhancing manufacturing potential.

Chart 1



Source: Fertecon

Chart 2



Source: Chemical Market Associates Inc. CMAI

Moving away from the primary C1 production towards development of secondary C1 chemicals and gearing towards the manufacturing of C2, C3 and C4 derivatives may result in additional value added for T & T.

As such, it is essential to have a judicious mixture of private and public investment to extort the wide range of consumer products derived from digging deeper into what methanol and ammonia can offer. The finished products of methanol and ammonia are vast and include pharmaceuticals, paints, plastics and decorative laminates, wood adhesives, as well as solid and liquid fertilizers. Further processing of the gas segments allows the refining of Ethane to produce Ethylene. Supported by the volumes of LNG which sustains the availability of ethane, an Ethylene complex has the potential of expanding the country's production frontier well beyond its borders. Also, extracting from Ethylene produces Propylene, which provides the potential for manufacturing numerous end products such as acrylics (paper coating and fibre), synthetic materials and nylons just to name a few. World demand for these goods is expected to increase over the years and extra capacity is needed to fill this demand.

Further to the development of derivative chemicals, a fundamental growth strategy would be the expansion of metals and steel industries. The opportunities that reside with this option are iron, steel and aluminum. Moreover, the downstream manufacturing potential for metals and steel will give T&T the ability to develop re-bars, cast and wrought irons, all used in the construction industry. Given the heavy demand in the developing world such as India and China, the idea is to strike now. Additionally, the downstream prospects for aluminum are extremely broad and consist of rims, wires, pipes, doors, windows, foil and weather resistant composite panels with the list just starting. This option offers the benefit of relatively high employment potential per dollar of capital investment. Although this industry exists today, it is yet to attain its full downstream potential.

In exploring these options T&T will derive more value from an extractive industry with the view of aiding the vision of sustainable development and securing the future of the industry. However, consideration of an Environmental and Social Impact Assessment is of utmost importance. The views and concerns of average citizens, whose lives are at stake and can be dramatically altered, should not be overlooked. The country's development is in the hands of the people - our attitude will determine where we will go.

FINANCIAL & ECONOMIC INDICATORS

As at 2 October, 2008

<u>Exchange Rate/US\$</u>	<u>Closing Value</u>	<u>Previous Week</u>
Yen	105.33	106.56
Euro	1.38	1.46
Jamaica	72.95	72.47
Guyana	204.40	204.50

<u>Commodity Prices</u>	<u>Closing Value</u>	<u>Previous Week</u>
Crude oil (US\$/bbl)	93.97	108.02
Natural Gas (US\$/mmbtu)	7.59	7.63
Gold (US\$/Troy Ounce)	836.40	877.90

Eurobond Indices (Return % YTD, as of 2-October-08)

Lehman Brothers Global Aggregate Index	-0.55
JP Morgan EMBI+ (percentage change)	74.00
CMMB Eurobond Index	n/d

<u>Policy Interest Rates (%)</u>	<u>Closing Value</u>	<u>Previous Week</u>
United States	0.25	0.50
Euro Zone	4.25	4.25
Japan	0.65	0.55
Brazil	13.75	13.75
Trinidad	8.50	8.50
Jamaica	13.50	13.50
Barbados	4.50	4.50

<u>Market Interest Rates (%)</u>	<u>Closing Value</u>	<u>Previous Week</u>
US 90-day T-Bill	0.60	0.75
US 10-Yr Treasury	3.63	3.86
3-month UK Libor	6.28	6.28
Japan 90-day T-Bill	0.53	0.53
Brazil 90-day T-Bill	13.90	13.95
TT 90-day T-Bill	7.17	7.30
Jamaica 90-day T-Bill	14.26	14.26
Barbados 90-day T-Bill	3.48	3.48

Sources: Bloomberg, CMMB, Central Bank of Trinidad and Tobago, Bank of Jamaica, Central Bank of Barbados, www.lehman.com

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