



The National Gas Company of Trinidad and Tobago Limited

Sponsor Remarks
Launch of the Sustainable & Renewable Energy Business Incubator
Arthur Lok Jack Graduate School of Business
Mt. Hope Campus
Wednesday October 1st, 2014

Remarks by Mr. Indar Maharaj
President, NGC

Senator The Honourable Kevin Ramnarine: Minister of Energy and Energy Affairs

Ms. Catalina Herrera Roca: Managing Director and Citi Country Officer, Trinidad and Tobago Hub

Mr. Arthur Lok Jack: Chairman, Associated Brand Industries Limited and Board Member, Arthur Lok Jack Graduate School of Business

Professor Miguel Carrillo: Executive Director and Professor of Strategy, Arthur Lok Jack Graduate School of Business

Specially Invited Guests

Members of the Media

I am very happy to say a few remarks at the Launch of the Sustainable & Renewable Energy Business Incubator. My delight is first based on the fact that the Arthur Lok Jack Graduate School of Business is adding a new dimension to its efforts to enhance local management capability in the energy sector, by providing "incubation" support for new, energy-related business activity.

It is also timely that we are at a forum committed to renewable energy and sustainability given the recently ended UN Climate Summit held in New York. With over 100 Heads of State and Government in attendance, the Summit sought to intensify efforts to ensure that global



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average temperatures rise no more than 2°C above pre-industrial levels. Estimates released in the latest annual publication of the Global Carbon Project suggest that we are on course for a rise of between 3.2°C and 5.4°C by the end of this century if we do not take significant action to abate carbon emissions. As everyone in this audience knows, the consequences for small island states like Trinidad and Tobago would be catastrophic due to rising sea levels and changing weather patterns.

So this effort by the Arthur Lok Jack GSB is a worthy and necessary contribution, if Trinidad and Tobago is to play a part in supporting this global effort.

From the onset I want to say that I consider the support of the climate agenda to make good business sense. The global picture seems to support this assertion. The International Energy Agency in its recently published World Energy Investment Outlook indicated that investment in renewables rose from USD \$60 bn in 2000 to a high point of USD\$300 bn in 2011, but has since fallen to USD\$250 bn in 2013. The impact of this investment has been substantial and the latest Statistical Review of World Energy 2014 indicated that hydroelectric and other renewable energy sources together accounted for 9.4 % of global energy consumption in 2013. In Europe that has meant that the share of renewables in the composition of consumption has more than doubled to 11% between the mid 1990's and 2012.

This idea that sustainability and business are inextricably linked is easy for us to understand at NGC since we have been broadly involved in this agenda since the formation of the company 39 years ago. A key part of our business is the transportation of natural gas, and as all of you in this forum will know – in terms of green house gas emissions - natural gas is the cleanest form of hydrocarbon. More specifically, NGC is the sole supplier of gas for power generation – in fact about 19% of our volumes are sold to T&TEC. Given that our national power generation is



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done mostly with natural gas combustion turbines, NGC plays a key enabling role in the generation of a 'greener' (lower carbon) electricity supply. However, as a nation we need to move rapidly towards converting all of our power generation facilities to combined cycle.

Additionally, many of you may have heard of our recent foray into compressed natural gas (CNG) for use in transportation as an alternative to gasoline and diesel. Through our new company, NGC CNG Company Ltd, we are seeking to encourage the use of CNG as an environmentally responsible, cheaper - and more efficient alternative – relative to higher carbon liquid fuel options. We are aggressively pursuing this new business and we plan to increase the number of stations from the current number of 11 to 35 by early 2016. We will also be involved in supporting the conversion of select market segments to CNG such as public transportation vehicles owned by PTSC. Not to be outdone, NGC has already outfitted most of its fleet to CNG while there are other state enterprises being encouraged to convert their fleets to CNG use.

With sustainability as such a key part of our past - and remaining a key plank of our future agenda - NGC's support for this GSB programme is a natural fit.

But the value proposition presented by the move into the sustainable and renewable energy business offers opportunities for our core business mandate as well.

Using the power sector as an example, in energy importing countries, and particularly in the Caribbean, the rationale for a switch to renewable energy for power has an obvious economic benefit of reducing the exposure to the price and supply vagaries of the global hydrocarbon energy market. In the case of a natural gas rich – and exporting - country like Trinidad and Tobago – that economic logic may at the surface appear less compelling.



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However, NGC believes that there is a very different, but equally powerful value consideration justifying the integration of alternative, renewable based energy sources into the national power grid – that is - it allows the diversion of natural gas volumes to higher added downstream activity, thereby generating even greater economic benefit.

To illustrate this, I ask you to consider the fact that so far in 2014, 19% of gas sold (or 305 mmscf/d) went into power generation. If as a country we were able to supplement 20% of our current electric generation from renewable energy sources, then that would free up approximately 61 mmscf/d of natural gas. To put that volume into perspective, it represents just over 50% of NGC's sale for iron and steel production and just over a third of the gas supply volume required by a methanol mega-plant such as Atlas Methanol.

So the promotion of renewable energy can actually release volumes of natural gas to be used in service of higher value added activity such as ammonia and methanol production. The promotion of renewables therefore directly creates opportunities for us, hence the enthusiasm we have for this new initiative by the Arthur Lok Jack GSB.

Let me be clear, I am not advocating for a target of 20% - since the level should be developed through a national Renewable Energy policy, established by policy makers in consultation with all the relevant stakeholders. However, I do believe we need to establish explicit, time bound targets that will help give direction to investors and innovators who may wish to be part of this sector. In my view, we should be aggressive to force action.

The experience of other countries confirms that this is the best direction of travel for meaningful progress on reducing emissions levels. The recently released 'Renewables 2014 Global Status Report' produced by the influential Renewable Energy Policy Network for the



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21st Century included a review of the policy environment globally and concluded that renewable energy targets - together with feed-in tariffs - have had the biggest impact on renewable energy market introduction.

But policy issues are not limited to the establishment of targets and incentives for renewable uptake. For example, for feed-in tariffs mentioned above to work effectively, the existing energy infrastructure may have to be altered or upgraded to accommodate such supply into the grid by small-scale producers. The experience of Barbados is illustrative that the amount of solar energy that can be produced needs to be balanced by legitimate concerns about the stability of the power grid. There are technical challenges in integrating intermittent power sources like wind and solar into the grid, while still assuring the stability of the overall electrification system. But I will tell you, there are European countries with significant natural gas reserves, but with less wind and sunshine than we have, who are doing a great job at this.

Furthermore, there will be need to amend the appropriate laws and regulations to ensure a simplification of the process for the interconnection of small, distributed renewable energy sources to the grid. There would also need to be some level of guarantee of sales into the grid.

These are but two inter-related issues that will need to be addressed. Many others will have to be considered as we seek to create policy in this area. So I am advocating an integrated, multi-sector approach to policy driven action aimed at reducing emissions – which seeks to use the wisdom and wealth of the local private sector as a critical catalyst and implementer.

And it is here that I see the real value of this programme we are launching today. The Arthur Lok Jack GSB is fostering the development of a business solution for a key societal issue that in turn will deepen local business participation in the energy sector. This is core to the strategic



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intent of NGC and I am very pleased to see that this institution is joining us in taking on this challenge.

So I want to congratulate the leadership of the Arthur Lok Jack Graduate School of Business for having the foresight to initiate such a critical venture in support of the energy sector and the larger problem created by climate change. It is my real hope that this will grow to be a flagship effort for this institution, serving as a bridge between the “teaching” and “practise” of business – which generates locally owned businesses that contribute to true national development.

Business and sustainability can be profitable – I like to think that NGC is proof of this. I challenge the Sustainable & Renewable Energy Business Incubator to foster successful businesses that provide further proof points to support this assertion.

I thank you for your time.