



**Government of the Republic of Trinidad and Tobago
MINISTRY OF ENERGY AND ENERGY INDUSTRIES**

Welcome Address

by

Senator the Honourable Franklin Khan

Minister of Energy and Energy Industries

At the Festschrift Conference Honouring

Professor Kenneth S. Julien

Hyatt Regency Trinidad

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It is my honour and a great privilege to welcome you to today's event hosted by the Institute of Electrical and Electronic Engineers in recognition of the lifelong achievements of Professor Kenneth Julien.

Professor Julien throughout his career and achievements as an eminent academic and an architect in the development of the energy sector represents the brilliance that this twin island nation is capable of and has been producing. In 2003, in recognition of his outstanding contribution to the country Professor Julien was awarded the country's highest honour, the Trinity Cross which has since been renamed the Order of the Republic of Trinidad and Tobago (ORTT).

Professor Julien's impact has been felt among several sectors of the economy. However, he has made his most impressive contribution in the energy sector. He was a key player in the transformation of this sector that commenced in the late 1960s to early 1970s. In that period, the concept of national identity in the energy sector took root and the responsibility for its implementation was entrusted to him, among others.

One of the earliest examples of this concept was the formation of the National Petroleum Marketing Company Limited (NPMC). In 1972, the NPMC was formed and by December 1976, the NPMC had taken over all of the local marketing operations previously owned and operated by

multinationals, namely Shell, Texaco, and Esso. Another first that has remained largely unknown and which was instigated by Professor Julien was the local construction of two of Trinidad-Tesoro's four (4) production platforms in its Galeota Block. The next such achievement occurred in 2002 when BHP agreed to build in Trinidad the topsides of its Kairi One Drilling and Production platform in Block 2C.

The movement continued apace with acquisition by the Government of the assets of Shell in 1974. The acquisition of Tesoro followed and when the Government acquired Texaco in 1985 the national identity process had reached its peak. To quote a Trade Union phrase 'the commanding heights of the Economy'.

However, it was natural gas that provided impetus for a petroleum revolution and the realization of Professor Julien's mandate of national identity within the energy sector. In early 1970s the discovery of natural gas off the North Coast and the East Coast was the major turning point in the industrialization of Trinidad and Tobago (T&T).

In 1974, Professor Julien was appointed Chairman of the Energy Coordinating Task Force which was given a mandate to plan, develop and implement an industrialization programme based on the monetization of natural gas as a parallel developmental platform. His approach to the

development of the industry was guided by his vision that gas would undertake a greater international dimension than what existed at that time. In this regard, he has been prophetic, as natural gas today has become the country's dominant hydrocarbon and globally the fastest growing energy fuel.

It was due to his insight that it was decided that the State would take the lead as aggregator in the distribution of natural gas to the gas based industries. In 1975, the National Gas Company of Trinidad and Tobago (NGC) was established with the mandate to procure and sell natural gas to a developing gas based industry. This led to the development of the Point Lisas Industrial Estate (PLIE) comprising 860 hectares and a deep-water port at Point Lisas, Couva.

The idea of an industrial estate and port facility at Point Lisas to facilitate heavy industry was conceived by the then South Trinidad Chamber of Commerce. However, it took acumen and management incisiveness of Professor Julien in his capacity as Chairman of the Point Lisas Industrial Port Development Company Limited to turn the fledgling estate into a world class industrial park and the port as the top performer in the region.

With the establishment of the PLIE and assured supplies of natural gas, the participation of the state in commercial activity in the energy sector

took off. By the end of the 1980s, the identity of the state in the energy sector was firmly established with participation in petrochemicals, iron and steel. Professor Julien had successfully achieved his mandate.

In 1992, Professor Julien was appointed a member of the newly established Standing Committee on Energy (SCE), a committee headed by the Prime Minister of Trinidad and Tobago, which would be responsible for the development of energy sector policy.

At its inaugural meeting, the SCE noted that there was an impending natural gas shortfall based on the gas requirements of existing plants, those under construction, and the projected supply from upstream producers. There was a serious concern that if this situation was not expeditiously addressed then the country's natural gas based development could be jeopardized. In addition it was brought to the attention of the Committee that the National Energy Corporation which was charged with the responsibility of promoting natural gas based developments, had become ineffective due to the lack of requisite financial and human resources.

In the circumstance, the Government turned to Professor Julien and he did not disappoint. He was appointed Chairman of the NGC and immediately undertook a merging of NGC and NEC and through alignment of their

strengths optimum performance was obtained. The impending natural gas shortage was addressed by providing upstream producers with take or pay arrangements which acted as an incentive to companies to monetize their natural gas reserves. This resulted in an increase in natural gas production and by 1996 gas had surpassed oil as the dominant hydrocarbon.

It was soon realized that the model of industrialization of the energy sector had to be adjusted to accommodate this expansion in natural gas production. This led to the concept of industrialization by invitation. The NGC was the prime mover of this mandate and was supported by the Natural Gas Exports Task Force, a Technical Committee established by the Government under the Chairmanship of Professor Julien. As always no challenge was beyond Professor Julien. In his own inimitable style he led from the top and through his direct intervention several international companies invested in gas based industries in this country. The success in this enterprise can be gauged by standing of T&T in the global arena. With less than 0.1 percent of the global gas reserves T&T has become one of the leading exporters of ammonia and methanol with Russia being our major competitor.

However, one of his crowning achievements and which he would probably admit was his most difficult undertaking, was the development of the country's first Greenfield LNG Project, Train 1. Today, we have

four (4) LNG plants and we are recognized globally as a major LNG producer.

The establishment of the LNG business in T&T would not have occurred but for the vision of Professor Julien and his commitment to its realization. It is no secret that the major gas producers of the day had no interest in such a venture and questioned its feasibility. Professor Julien was able to convince the gas producers of the viability of the project and structured an arrangement that facilitated the project.

Today the majority of the country's natural gas is directed towards the production of LNG, and it should be noted that in 2008, LNG was the major revenue earner for this country. However, with the collapse of the LNG prices in North America and the transfer of revenue further along the value chain; and out of the jurisdiction of T&T, the primary beneficiaries are the major upstream companies and their marketing affiliates. This situation is currently being addressed by the Government.

Professor Julien's influence and contribution is not limited to the energy sector, for which he has served dutifully, but also includes the field of education and power generation and transmission. In his own right, he is also an innovator and holds patents in electrical systems and heads the firm Kenesjay Systems Limited, a consulting firm specializing in energy.

As an educator, he served as Professor and the Head of the Department of Electrical Engineering of the University of the West Indies, St Augustine for sixteen (16) years from 1970 to 1996. He has willingly shared his knowledge, his expertise and experience in producing a cadre of engineers, many of whom are in today's audience and are now leaders in industry. He has served as Chairman of the National Energy Skills Centre, as Chairman of Evolving Technologies and Enterprise Development and was instrumental in the establishment of the University of Trinidad and Tobago, where he currently presides as the Chairman of its Board of Governors.

Professor Julien has been a member of several State Boards. His most extensive tenure was on the Board of Directors of the Trinidad and Tobago Electricity Commission (T&TEC), where he served as a member for twenty-two (22) years from 1964 to 1986 and as Chairman from 1975 to 1986. Under his stewardship T&TEC net generating capacity increased several fold from 350 megawatts to approximately 1200 megawatts.

In the period 1993 to 1994, in his capacity as Chairman of the Technical Task Force appointed to review the expansion of the generating capacity of T&T, he led the reorganization of the sector, which resulted in the creation of separation of responsibilities with respect to power generation and transmission. In 2009, he was the driver behind the decision to

establish the 720 MW combined cycle power plant, Trinidad Generation Unlimited (TGU) at Union Industrial Estate. We are all indebted to Professor for his contribution to the power industry that has achieved a level of access to users and uptime factors which are at international standards.

Over time Professor Julien has reduced his arduous schedule which can be understood as he has selflessly provided national service on a very wide scale. However, he has retained a passion for the development of a downstream aluminium industry in T&T not based on liquid metal but imported ingots.

The dream that was derailed in 2010 is very much alive now. This Government supports the development of development of an aluminium industry and there are currently three aluminium projects in train at different developmental stages. Professor Julien has been an integral part of the process and is currently the Chairman of Alutech Limited. Alutech is charged with the responsibility of implementing a Wheel Facility at ETeck Tamana Park. The project is underway and is due for completion within the next eighteen (18) months.

There are not enough superlatives to describe the contribution of Professor Kenneth Julien to this country. He has received the highest

accolade our country can bestow on its distinguished citizens. Today, the Institute of Electrical and Electronic Engineers, his peers, students and all who have been impacted by him have taken the opportunity to recognize his outstanding contribution to T&T in the several spheres of activity in which he operated.

He has been an extraordinary individual who by his selfless contribution and commitment to country has made this country a better place for all of us.

On behalf of the Government, the Prime Minister is to be here this evening, the Ministry of Energy and Energy Industries and on my own behalf, we thank you for your invaluable contribution and ask that you accept our eternal gratitude.

I thank you.