

Keeping T&T in the energy game

By Shelly Dass

A massive energy transition involving many moving parts is now underway to transform Trinidad and Tobago into a low-carbon hydrogen-based economy by 2050-2060.



AFTER 100 years of powering the economy on oil, followed by another 30 years on natural gas, the energy base of the economy is about to make another fundamental shift from hydrocarbons to renewable energy. The goal is to reach net zero emissions by 2050, which would bring the amount of greenhouse gases produced, such as carbon and methane, into balance with the amount removed.

Taking the lead on this is state-owned National Energy (NE) which led the development of the gas-based sector in the 1970-80s and is now being positioned to lead T&T into a decarbonised future based on renewable energy.

According to company president Vernon Paltoo, this new focus by NE, a subsidiary of the National Gas Company, is not to be interpreted as a change of mandate but an evolution. "We have always been responsible for the development of energy-based industries in T&T and energy-based industries are now focused on sustainable type industries as opposed to traditional development of gas-based industries," he explained.

The transition to a hydrogen-based economy rests on a two-pronged approach: optimising natural gas resources by enhanced energy efficiency in the industrial sector in particular; and creating new clean forms of renewable energy from solar and hydrogen.

In specific terms this translates into a push to maximise and optimise T&T's natural gas, a "key transition fuel" which Paltoo assures "will be with us for a very long time". CNG, the cheaper, cleaner fuel which occupies a small but growing share of the fuels market, remains in the mix as a

**NATIONAL ENERGY PRESIDENT:
Dr Vernon Paltoo**

"critical" player. Despite the excitement around electric vehicles, the infrastructure for supporting a mass market for EV on the scale of current gasoline demand is still being built out. This leaves room for CNG to expand its market share with its price advantage in the soon-to-be liberalised fuels market.

Energy efficiency is another frontier on which the national strategy for decarbonising the environment hangs. A key target here is the industrial sector which is the single largest contributor to carbon emissions at about 74 per cent.

The energy efficiency programme is to be implemented through a Super Energy Service Company (ESCO) which is being structured by National Energy to facilitate large-scale projects in energy auditing and the design, implementation and retrofitting of companies' energy structures to achieve improved efficiency.

By NE's calculation, T&T could save \$2 billion a year and better optimise its gas resources by more efficient use. "We have a good plan in terms of how to get there," Paltoo assures.

Heading into a low carbon future, Paltoo says NE has already completed several projects on a national scale. A signature project is the recently opened Preysal multi-fuel station which uses 320 solar panels to produce 100kw of renewable energy power which drives every aspect of the service station apart from some large compressors. "Even the electric charger for electric vehicles is being driven by renewable energy so it is a full zero carbon offering," Paltoo boasts.

However, the big-ticket renewable projects are in solar and hydrogen.

Project Lara is the solar project being developed in Brechin Castle and Orange Grove by Lightsource bp as lead develop-

er with bp Alternative Energy (T&T), and Shell (T&T), the country's largest hydrocarbon producers. Project Lara will add 112 megawatts of solar energy to the national power grid, enough to power about 38,500 homes. The Orange Grove facility will be on lands belonging to The UWI and has scope for student involvement.

In terms of the green hydrogen initiative NE has partnered with the IDB and a team of international consultants are currently scrutinising the option.

Paltoo describes the road ahead as very complex, requiring buy-in from the entire industry, state actors and regional partners.

"This is something that we even have to do beyond T&T. It has to be a Caribbean-wide effort that we have to look at when we're going towards the entire decarbonisation of not just T&T but the region. Recent UN studies would have shown that if we take the path to a decarbonised transportation and power generation sectors, the

region as a whole can save up to \$620 billion," he says.

As it choreographs T&T's transition to a future based on renewable energy, NE is stepping up on public education and awareness through community-based programmes. In La Brea, training has been conducted in the installation



'HEADING INTO A LOW CARBON FUTURE': Training in the installation of solar panels in La Brea.

of solar panels while in Mayaro/Guayaguayare, training in energy efficiency audit training has been done. Convinced that change requires reaching people early, NE is rolling out education campaigns on cleaner energy throughout the primary school system via a partnership with the online educational outfit, Pennacool. The strategy, according to Paltoo, is to get T&T to the point where in 10-15 years the public fully embraces and understands the shift to renewables.

Ultimately, however, NE's over-arching objective is to "ensure that beyond gas, we have an energy industry in Trinidad and Tobago".

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