



EMA converts to CNG

The Environmental Management Authority (EMA) has launched a programme to convert its 12-vehicle fleet to Compressed Natural Gas (CNG).

The Government of Trinidad and Tobago is re-launching its CNG conversion initiative in keeping with climate change commitments made at last year's Commonwealth Heads of Government Meeting (CHOGM) in Port-of-Spain and the United Nations Climate Summit in Copenhagen, Denmark. As such, the EMA aims to lead by example nationally by its fleet conversion project.

CNG is a safe, clean and economical fuel and is emerging as one of the most significant alternatives to traditional motor vehicle fuels globally and could make a significant impact in greenhouse gas emissions reductions right here in Trinidad and Tobago.

Currently, in Trinidad and Tobago there are limited CNG ready vehicles available for purchase and the only available option is converting current gasoline or diesel fuel engines to natural gas. There are two types of conversion:

- Dedicated Conversion Vehicle which only runs on CNG

- Bi-Fuel or Dual-Fuel Conversion Vehicle which runs on either a combination of CNG and gas or CNG and diesel.

EMA Managing Director/CEO, Dr. Joth Singh said the increased uses of CNG can considerably contribute to reducing greenhouse gas emissions in Trinidad and Tobago.

Dr. Singh said he was pleased to announce that one third of the EMA's '4x4' fleet had already been converted (retrofitted). "Natural gas is the cleanest burning alternative fuel per unit of energy and at \$1.07 a liter, CNG emerges as the cheapest available fuel option nationally. There are even further options to reduce CNG price through prospective incentive subsidies." Dr. Singh said.

The overall cost of converting to CNG was reduced in 2009 when custom duties and Value Added Tax (VAT) were removed from conversion kit purchases.

"Considering switching to CNG makes good sense in these tougher economic times – times which also call for increased environmental responsibility at the individual, national and global levels." Dr. Singh expressed.

There are many other economic gains to be derived from CNG conversion. Since CNG is non corrosive, maintenance costs are reduced and intervals between tune-ups and oil changes are extended. It has also been found that natural gas does not react to metals the way gasoline does, thus, sparkplugs, exhaust pipes and mufflers last longer. It has also been noted that engines burning

CNG last longer than those utilizing gas. CNG also has a slight efficiency advantage over gasoline. Thus, from a public transportation perspective, if drivers' operational costs are reduced, these savings could be passed on to commuters in the form of lower fares.

From an environmental perspective, CNG promises many benefits. Recent studies show that CNG powered vehicles produce up to 29% less greenhouse gas emissions than gasoline powered ones and 22% less than comparable diesel ones. Additionally, CNG vehicles produce little or no evaporative emissions during fueling and use while in gasoline fueled vehicles, evaporative and fueling emissions account for at least 50% of a vehicle's total hydrocarbon emissions. Exhaust or tail-pipe emissions from CNG vehicles are much lower than equivalent gasoline powered vehicles.

Currently in Trinidad and Tobago, the most viable option for CNG conversion is retrofitting to a dual conversion vehicle. This option is presently undertaken for gasoline powered vehicles since diesel to CNG requires some significant engine and control systems modifications and also requires substantial technician training in diesel conversion. Converting a gasoline-powered car should only be undertaken by certified CNG conversion technicians. Right now in Trinidad and Tobago, Automotive Components Limited is the only agency certified by the Ministry of Energy and Energy Industries to convert to CNG.

With the dual conversion system, a switch is placed on the car's dashboard

so the driver can still run on gasoline if he/she so chooses.

The National Petroleum and Marketing Company Ltd. of Trinidad and Tobago, which is managing the CNG thrust in the country, currently has 10 stations with CNG facilities in Trinidad. These NP stations are located at the corner of Southern Main Road and Churchill Roosevelt Highway in Curepe; Southern Main Road in Chaguanas; Mon Repos; the intersection at Rushworth Street and San Fernando By-Pass; Beetham Highway; Barataria Roundabout in Barataria; at the corner of Eastern Main Road and Maloney Street in Mt. Lambert; Frisco Junction in Point Fortin and one is planned at O'Meara Road, in Arima, just off the Churchill Roosevelt Highway. There are plans to extend the network as the demand grows.



Caption: EMA's MD/CEO Dr. Joth Sing examines the engine of one of the converted CNG vehicles



Caption: A closer look at the CNG gas tank