

Liquid Fuels Line Update

The Liquid Fuels System project

NGC is constructing a pipeline system to transport liquid fuels such as unleaded super and premium gasoline, diesel, and jet fuel from Petrotrin in Pointe a Pierre to Frederick Settlement, Caroni, and to Piarco International Airport. An 8-inch-diameter liquids line will carry the four fuels mentioned to a facility to be constructed at Caroni. A second line will take the jet fuel from Caroni to Piarco. NGC is managing this project on behalf of the Government of Trinidad and Tobago.

What are the main elements of the system?

The beginning of the pipeline

The new system will start in the Petrotrin compound. Four tanks will be erected there to store the liquid fuels before they enter the pipeline. Two shipping pumps and a backup control system will also be installed.

The pipeline route

The line will leave Petrotrin and travel north mainly along NGC's existing Right of Way. You can recognise part of the Right of Way by the yellow pipeline markers along the highway.

The line will run to a storage facility to be constructed in Caroni, opposite the cremation site. The second line will run from the Caroni facility to the NP facilities at Piarco International Airport.

The Caroni facility

The Caroni facility will feature 9 large tanks, which will hold the different fuels. There will also be 2 slop tanks, a fire-water tank for use in case of emergency and a potable water tank.

From the fuel tanks, fuels will be pumped to four structures housing 24 loading arms, which will load the fuels onto tank wagons. From there, the fuels will be sent to gas stations throughout the country.

While jet fuel will be taken to Piarco by pipeline, there will be a backup loading arm at the Caroni facility to dispense it. This loading arm will also be used to dispense kerosene and jet fuel to operators of light aircraft and helicopters. The main control systems will be housed here.

Piarco

At Piarco, two additional receiving tanks for jet fuel will be constructed to supplement the current storage capacity.

How will the system work?

Fuels will be sent through the pipeline in batches one after the other. They will be stored at the Caroni facility until needed. The fuel batches will be monitored electronically, and at the interface between different fuels in the pipeline, the pipeline operator will decide how to manage the trans-mix.

Why build a liquid fuels line?

The new system will make the transportation of liquid fuels safer, more reliable, and more efficient. At the moment, most liquid fuels are transported by boat from Petrotrin to the NP facility at Sea Lots in Port of Spain. The fuels line will replace the ship between Petrotrin and NP Sea Lots. It will also no longer be necessary for tank wagons to carry jet fuel on the roads.

What's going on with the Liquid Fuels System project

The pipeline system is being constructed in three phases, which are taking place at the same time. Phase 1 is between Petrotrin and Phoenix Park. Phase 2 is between Phoenix Park and Pierre Road in Chaguanas, and Phase 3 is between Pierre Road and Caroni. Another segment of Phase 3 is between Caroni and Piarco.

The segment between Caroni and Piarco is essentially complete. The line has been buried and testing is being done. The section between Caroni and Pierre Road will be completed by the end of the year. The portion between Pierre Road and Phoenix Park has been strung, with the exception of 2 km of pipeline, where thicker-walled pipe needs to be laid. At the moment, the segment between Phoenix Park and Pointe a Pierre is being laid. All pipe laying work will be completed by early 2010.

A fibre optic cable is being laid at the same time, for use by a remote computerised system called SCADA. This system will allow the controller to monitor flow, pressure, etc. along the entire length of the system. The Caroni site has been filled and foundations are being constructed in preparation for the construction of the tanks. The site should be completed and commissioned by the end of the 4th quarter of next year.

Horizontal Directional Drilling

Along the route, the pipeline encountered several areas where NGC needed to perform an operation called Horizontal Directional Drilling (HDD). Using this technique, NGC passed the line under the surface rather than disturb it by opening a trench.

So far, all HDDs have been successfully completed including a pipeline crossing under the runway lights at Piarco International Airport. Others were completed at Rivulet Road, Caroni River, Couva River, Couva Main Road, Caroni Irrigation Canal, Camden Road, Cedar Hill Road, Roopsingh Road and the Solomon Hochoy Highway.