

Enbridge's CNG Medium-Duty Trucks

Blue and white cloud patterns dance across the side of a shiny white dump truck added to Enbridge Gas Distribution's Toronto fleet.

It's a fitting symbol for a new technology that promises blue skies both in terms of costs and environmental performance. Enbridge is the first fleet in Canada to make use of medium-duty vocational vehicles with dedicated Compressed Natural Gas (CNG) engines.

As a gas distribution company, Enbridge has always been a strong supporter of natural gas powered vehicles. It has been using light trucks and vans fueled with CNG for twenty-five years, with great results. But the company didn't have an attractive natural gas option for its medium-duty operations. That's because previous technologies simply adapted existing diesel and gasoline engines to run on CNG – resulting in a loss of power and torque.

Game-Changing Options

Two new medium and heavy-duty vehicle options have changed all of that and Enbridge is test-driving both. The International dump truck with the attention-grabbing wrap, is the first of an order of three Internationals and two Freightliners. The Freightliners provide an original equipment CNG-fueled option incorporating Cummins Westport's 8.9-litre

ISL G engine with a standard cab. Enbridge purchased them through Harper Ontario Truck Centre. The International trucks incorporate Texas-based Emissions Solutions' 7.6 litre Phoenix engine as a replacement for the vehicle's base engine, an International DT-466. The aftermarket conversion of the Internationals was done at Kemptville Truck Centre Ltd. and takes less than a week. The replacement engine can be fitted in a variety of configurations.

Matching Diesel Power

What is important is that both the original equipment and aftermarket conversion options feature dedicated CNG engines and fuel systems. This technological advance enables these vehicles to match diesel

power and performance with about 20% less fuel costs based on current pricing. An added attraction is their lower emissions. They meet the new 2010 emissions standards with no further technology or aftermarket treatment required. Both options offer the same standard warranty protection as their diesel counterparts.

One of the best features of the new trucks is their range. With four CNG tanks, these haulers can go the same distance as a 50-litre diesel truck before requiring refueling. For Enbridge that means its new trucks can put in a full day's work without running short.

Enbridge fleet managers are also pleased that the new vehicles offer a seamless driving experience. The trucks will perform in the same way



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that drivers are accustomed to with diesel. The only difference is the refueling and even that difference has been minimized.

The refueling of the CNG tanks is designed to match the gasoline/diesel experience. It is all self-serve, with an easy-to-attach hose replacing the nozzle-in-tank setup. The attachment incorporates a safety feature to prevent a driver starting up without disconnecting; the engine will not start until the cap is replaced. A fast-fill can be completed in around 10 minutes and a slow-fill procedure enables convenient overnight refueling.

John Mellish, Field Manager, Tools and Equipment, is sold on the flexibility and performance of the new CNG vehicles, "Now there's a natural gas model available for every job in a fleet." Evelyn Thompson, Manager of Fleet and Equipment, likes the green benefits but also the economics, "There's an incremental cost, just as there is with a hybrid, but there is also a positive return on investment."



CNG trucks offer a lower fuel cost, ready-to-go alternative for greening a variety of work vehicles. And for fleet managers striving to meet renewable fuel targets, an added plus is that CNG-fueled vehicles can be changed over to biogas when new fuel options become available.

Multiple Applications

In addition to the five dump trucks already purchased, Enbridge plans to convert two more work vehicles to dedicated CNG engines. As for the custom-wrapped International that was first to arrive, it will stay shiny and clean for a while longer. Enbridge is using it as a demonstrator – showing off its capabilities at trade shows and customer sites.

For those who need reassurance about a seamless switchover for drivers, Mellish says, "Come and drive it."

CNG is a good fit for fleets to reduce costs and meet environmental standards. CNG-fueled options are available for medium and heavy-duty applications including dump trucks, garbage packers, cranes, tank trucks, tractors, delivery vehicles, and others.

Southern Ontario offers a network of two-dozen retail CNG stations. For business partners, Enbridge can discuss access to its own network of fueling stations. Enbridge will also install on-site refueling capability when it makes business sense for larger fleets.



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