AUTO PROPANE

PROPANE BUSES:
BRANDON SCHOOL DIVISION SAVES $95,000 IN TWO YEARS AND REDUCES GHG EMISSIONS BY 1 M lbs.

The Brandon School Division in Manitoba has chosen low-emission propane as their fuel of choice to transport students. The school division now has over 24 propane buses in their fleet after piloting a propane bus over seven years ago.

The BSD estimates that, by the end of the 2019-20 school year, their fleet will have decreased the amount of CO_2 emissions into the atmosphere by more than 1,000,000lbs than had they been operating a purely diesel fleet.

When their diesel school buses began aging, Brandon School Division transportation supervisor, Ron Harkness, began looking at propane buses. They successfully ran a demonstrator propane bus in windchill temperatures ranging from -26°C to -44°C. It started every morning, the bus interior was heated evenly inside with no cold spots, and to top it off, it ran much quieter.

Harkness received approval to purchase two propane buses for 2014. A year later, their data showed low maintenance costs; lower fuel costs — 23 cents/km for propane versus 33 cents/km for diesel, and the reliability was excellent.

Between 2015 and 2017, the BSD purchased an additional eight buses, realizing a cost savings of close to $95,000 when comparing the fuel and maintenance costs of their propane fleet to their diesel fleet. Their goal is to have all 45 of their buses running on the alternative fuel by 2025.

Operating Costs 2015-2017

		Older Diesel – all unit fleet	Cummins/Def motor	Propane Fleet
2015-2016	Maint $/km	0.3312	0.1781	0.0337
	Fuel $/km	0.3320	0.2748	0.2374
	Total $/km	0.6633	0.453	0.2711
2016-2017	Maint $/km	0.2396	0.1881	0.0807
	Fuel $/km	0.3542	0.3042	0.2957
	Total $/km	0.5938	0.4923	0.3764

TOTAL SAVINGS			Diesel	Cummins/DEF
2015-2016	Propane km	101,029 (3 buses)	$39,623.57	$18,377.18
2016-2017	Propane km	251,949 (5 buses)	$54,773.71	$29,200.89
	Total savings 2015-2017		**$94,397.29**	**$47,578.06**

The fuelling centre used by the Brandon fleet, currently consisting of 24 buses, features a 2,000-gallon propane tank, which is currently filled one-to-two times per week on average. It can easily be expanded to accommodate a second 2,000-gallon tank in the future. The fuelling centre utilizes a high capacity pump with a three-horsepower motor to dispense propane and features fuel management system technology which allows the BSD to track each unit's fuel consumption.

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