

Watt's Happening?

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Electric Vehicles: a test drive



Ernie Freeman of Fort St. John is the proud owner of an all-electric Nissan Leaf. Zero-emission and very cheap to run, this is a high-performance vehicle that

is smart, comfortable, fun to drive, and surprisingly, ideal for our northern climate.

Hey, I drove my first all-electric vehicle last week. Got a strong feeling it won't be my last.

It was a Nissan Leaf that my friend Ernie Freeman drove down from Fort St. John to show me. Seats four comfortably, back seats fold down for large cargo space, looks small but not tiny. "Climb in!" he says, "Take her for a spin."

So I slid into the driver's seat – lots of leg and head room (important for me at six foot two), well-appointed interior, roomy feeling. I press the "on"

button and everything comes alive. Except the engine. Because there isn't one.

No cranking to start, no vibration, no sound, no pollution. Quiet, totally quiet. Cool hi-tech dashboard displays. I like it already.

I pull out, still no sound. Wow, this is different, but handles beautifully, solid on the road. Great, I mean really great acceleration! This is cool!

Clearly not an experimental vehicle. This technology is mature.

RANGE ANXIETY

“Range anxiety” has often been described as a big barrier to electric car adoption. This problem is being solved so quickly it is hard to keep up.

Range varies with make and model, with more choices and longer range available every year. The lithium batteries now used in cars gives the Leaf a 200 km range, the Tesla Model S a 480 km range. New battery technologies being tested promise to double and triple this.

RECHARGING

Most electric vehicles today recharge overnight from a regular 110 outlet. A simple outlet upgrade to 240 V. allows a 4x faster charging rate.

New “supercharging” stations allow up to 16x charging, giving the Tesla, for instance, a full recharge in one hour, or a 50 percent top up in 20 minutes.

What about out on the highway, or running around town? Your built-in navigation system shows you where all the charging stations are in your area, and how to get there, but soon there will be chargers everywhere, so the issue will disappear. Charging stations are small, inexpensive, simple, and easy to install. Their numbers are blossoming quickly to meet demand. Ontario just dedicated \$20 million to install some 20,000 fast-chargers across that province.

COST

The cost of EVs is still high, \$30,000 and up, but falling (BC still has a \$5000 grant to help). Good old mass production is kicking in and bringing the price down, and an array of new models is released each year from a wide variety of manufacturers.

EVs should, eventually, be really inexpensive.

Think about it. No exhaust system, no muffler, no spark plugs, no oil changes, no belts, no fuel pump, no radiator, no transmission, almost no moving parts . . . Just an electric motor and a battery. Elegant, simple, emissions-free and fast, just the way a car should be!

Fuel? Ernie says he figures it cost him \$1.50 for the electricity to drive his Leaf from Fort St. John to Dawson Creek, about 100 km. His previous car, a super-fuel-efficient Prius, would have cost him about \$6 in gasoline for the same trip. The Nissan Leaf battery has a 160,000 km / 8 year warranty and close to zero percent failure rate. This stuff works.

WINTER PERFORMANCE

Everybody asks “Well sure, but is it hard to start in the winter?” Ha! There’s nothing to start! The lithium batteries are very cold tolerant. The Leaf says they require no special attention down to -24C, and then a little battery warmer automatically kicks in to keep them cozy.

A smart phone app lets you “start” your electric car remotely in the winter. You can choose which seats you want warmed up, if you want the steering wheel warmed up, and to what temperature you would like the interior, all quickly brought to comfort level by the instant-on electric heaters. No fuel being wasted (because you are probably plugged in), no expanding pool of toxic exhaust, no cold-weather starting issues. Electrics are BETTER in cold weather than fossil vehicles!

I could go on, and in future issues of *Watt’s Happening* I will. But for now, lets just say that EV’s actually ARE the environmental personal transportation answer. They are smart, comfortable, ideal for our northern climate, and cheap to run.

I want one.

***Watt’s Happening?* Quick Fact:**

Canada’s first all-electric taxi company launched:

XPDN, a venture capital company, has launched Taxelco in Montreal, Canada’s first 100 percent electric taxi company. Taxelco features a fleet of 50 electric vehicles, a mix of Nissan Leaf and Kia Soul EVs.