

# Watt's Happening? #210

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## NEW ENERGY *update*



*WELCOME TO THE FUTURE! Left, the Swedish Candela C-8 hydrofoil electric boat “flies above the waves in absolute silence” reducing the energy used compared to a combustion engine by 80%. It flies at 30 knots.*

*Above: the experimental Hyundai hydrogen fuel-cell powered autonomous long-haul truck, featuring 1000 km range and the ability to electronically lock together in highway “platoons.” Not too sure about the “platoons” idea, but apparently we can do just about anything with electricity.*

**W**ell, the election is over and everything looks much the same. But one issue clearly did make progress: climate change.

No longer were the politicians debating about the existence of a looming climate emergency. Instead, the conversation was about what Canada should do about it, not whether it exists, and the Liberal plan generally came out on top.

Building on what they had announced before the election, they promise a 2035 clean electricity standard, a requirement for 50% of new cars to be zero-emission by 2030 and 100% by 2035, capping oil and gas emissions and eliminating fossil fuel subsidies. Canadians gave the Liberals their support to do this. Now we will see if they can actually make it happen.

### RECYCLABLE WIND TURBINE BLADES

What to do with used wind turbine blades has become a headache for the industry. Made of composite materials that are difficult to separate and re-use has

meant that many end up in landfills after their roughly 25-year service life ends.

That is about to change with wind turbine giant Siemens announcing the first fully recyclable blade by using a new type of resin that can be “efficiently separated from the other components at end of the blade’s working life.”

Most other wind blade manufacturers are making similar announcements. Denmark’s Orsted has pledged to “reuse, recycle or recover” all blades from their worldwide system of wind farms once they are decommissioned.

Similarly, General Electric and wind giant Vestas are pledging to move toward “zero-waste” turbines.

With the global growth of wind expected to continue and even accelerate (it is already the second fastest growing energy source on the planet, just behind solar), this is good news indeed.

## **NEW VOLVO Electric Delivery Truck**

The all-new Volvo VNR Electric is just hitting the US market. It is designed for delivery for local and regional ranges, including food and beverage pick-up and delivery routes. The 264-kWh lithium-ion batteries can charge to 80% within 70 minutes, and have an operating range of 150 miles. The proprietary Volvo electric driveline is rated at 455 horsepower generating 4,051 lb-ft of torque. The truck features a two-speed Volvo I-Shift transmission for “efficient acceleration with excellent start ability and low-speed maneuverability.”

Drivers report ease of operation, a much quieter ride and an increase in comfort, reduced stress and fatigue compared to the combustion version the VNR replaces.

## **MORE GAS CAR BANS**

Earlier this year Canada announced a mandatory target of 100% zero-emission vehicle sales by 2035, joining California, New York State, Quebec, B.C. and the U.K. who have all set the same or similar dates to phase out fossil-fuel vehicles.

Hyundai has announced that it will no longer be selling combustion vehicles in Europe by 2035 and the rest of the world by 2040. They are also working on an autonomous freight truck (no driver, no cab) and a new plug-in hybrid sports car. Meanwhile, Toyota is investing billions to expand its battery manufacturing capacity, and the wildly popular Ford Mustang Mach-E is the first electric

car to pass Michigan’s police tests, qualifying it as a prospective new police vehicle.

This is all good news, since about one third of global carbon emissions come from transportation. As more and more renewables are installed world wide, more and more of our vehicles will be powered by the sun and wind.

## **B.C. HEAT WAVE BREAKS ALL RECORDS**

This summer’s heat wave in B.C. has been declared “the most deadly weather event in Canadian history by a factor of about three” by a scientific director of the B.C. Centre for Disease Control. As warned by B.C.’s provincial health officer, this “one in a 1,000 year” disaster is likely to be happening again much sooner due to climate change.

## **CHINA ENDS OVERSEAS COAL**

The state-run Bank of China has been the largest single financier of coal projects around the world. Now Chinese president Xi Jinping has just announced that China will stop funding coal projects overseas. This is a big shift in the right direction.

The window of opportunity to really address climate change is closing fast but all the actions listed here (and so many, many more around the world) are helping us move in the right direction. And from day-to-day, we can all do our part. No matter how small, it makes a real and vital difference.

“... the most  
deadly  
weather  
event in  
Canadian  
history...”