

Watt's Happening? #183

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CLEAN ENERGY UPDATE



Summer students and Peace Energy Co-op's experienced solar installers worked together to install some of BC's largest roof-top solar arrays in Hudson's

Hope, commissioned in 2018. Creating the clean energy infrastructure we so desperately need will boost the economy with jobs for millions.

As global temperatures continue to rise along with rising levels of greenhouse gases in the atmosphere, governments around the world are preparing multi-trillion dollar plans for pandemic recovery. Let's hope, and push for, changes that will not only stimulate our economies and create jobs but will also help address the rising threat of climate change.

The two, of course, can go hand in hand, but leadership, incentives and factual information will all

be necessary if we are to succeed in one of the greatest challenges we have ever faced.

HEAT BREAKS ALL RECORDS

This past July was one of the hottest months ever recorded. Indeed, the last decade was the hottest since records began in the mid-1800s, as detailed in a new report by the American Meteorological Society.

2019 was among the warmest years on record. “Each decade since 1980 has been successively warmer than the preceding decades.” The six warmest years on record have all occurred in the past six years.

Global carbon dioxide levels, responsible for the bulk of the planet’s warming, have risen to a record 409.8 parts per million, the study found. That was the “highest in the modern 61-year measurement record as well as the highest ever measured in ice core records dating back as far as 800,000 years.”

HYDROGEN – AN ALBERTA LIFELINE?

The world’s largest oil companies (including Royal Dutch Shell, BP, Total and Chevron) have wiped almost US\$90 billion from the value of their oil and gas assets in the last nine months “as the coronavirus pandemic accelerates a global shift away from fossil fuels.” (*The Guardian*).

But the possibility of making clean hydrogen fuel (which when burned creates no carbon pollution) from natural gas may be a life-saver for oil and gas rich areas, turning Alberta into a hydrogen super power.

The province not only has some 31 trillion cubic feet of conventional natural gas that could be converted to hydrogen, it also has large underground geographical formations that would be needed to store the carbon that is released from the natural gas when it is converted to hydrogen. Alberta also has abundant clean energy sources like solar and wind to power gas conversion and carbon sequestration.

And there may be even cleaner paths to hydrogen. Calgary-based Proton Technologies says it has a patented way to make hydrogen with no carbon emissions whatsoever, greatly reducing its cost. Their method involves igniting a gas well and using

a palladium alloy filter in the well bore that traps the carbon emissions in place while allowing only pure hydrogen to flow to the surface. Proton is testing their zero-emission tech on a well in Saskatchewan this fall.

ELECTRIC VEHICLE MILESTONES

EVs passed another important milestone earlier this month when the number of public charging stations around the world hit one million, mostly in China and Europe.

Major automakers are plugging into the EV opportunity. General Motors has announced a U.S.-wide charging network in preparation for its “major push into battery-powered models.”

South Korea’s Hyundai is gearing up to become “a global leader in the electric vehicle market by 2025” with a charging service to match. Watch for Hyundai’s new EV next year.

Electric vehicles made up just 9% of light-duty vehicle sales in BC last year, but that percentage is poised to grow dramatically. The provincial government has put in place regulations as part of its Zero-Emission Vehicles Act that will require automakers to sell a

growing percentage of EVs to help reduce long waiting lists. The idea, they explain, is that if you want an EV, you should be able to go to a lot, test drive one and take it home.

To support this transition, BC Hydro is completing the installation of EV fast chargers through the lower mainland, and plans to connect Prince George to Fort St. John next year with fast chargers along Highway 97, one or two chargers roughly every 80 kilometers. A new Level 3 fast charger will top up most EVs to 80% charge in just a few minutes.

Progress? Yes! Enough? No! But although our situation is dire it is far from hopeless.

...turning
Alberta
into a
hydrogen
super
power.