

GREEN SCENE

COP21: We all must help to make it work

by Elaine Golds

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Like many environmentally minded people around the world, I was thrilled when the COP21 meeting concluded last week with agreement among almost 200 nations to take effective actions to prevent catastrophic global warming. To paraphrase Naomi Klein, this should change everything.

Certainly, there was much to be celebrated with the recognition that temperature rise must be limited to less than 2 °C. I am proud of the role that Canada played in bringing this concept forward.

Earth Day on April 22, 2016 will be the day that 196 nations formally sign the new climate agreement. This new plan will take effect in five years' time only if 55 nations responsible for 55% of our current greenhouse gas (GHG) emissions ratify the treaty. With a plan to transition to a world fueled by 100% renewable energy by 2050, the challenge will be to achieve this lofty goal.

Without a doubt, effective actions will be required even over the short term. But I am hugely encouraged by the almost universal recognition by politicians around the planet that fundamental change must occur and that the poorer nations will require financial help to reduce their GHG emissions.

Currently, fossil fuels still play a central role in supporting our economy. Coal is responsible for generating about 40% of the electricity consumed by the world's population and oil is still the major supply of energy for transportation.

Change, however, is finally coming. Much of the technology to achieve this already exists. To almost everyone's surprise, solar-generated electricity is quickly making significant gains. In the past decade, the supply of solar-generated electricity has increased 150 times while the price of solar panels has dropped by more than 80%.

California now has a large 392-megawatt solar plant; other southwestern states have built four additional solar-generating facilities. In Spain, a large solar-powered plant is able to generate electricity 24 hours a day by storing heat in the form of molten salt.

Thus, the technology to support a transition to solar-generated electricity already exists — it simply needs to be applied. If the only reason BC Hydro has not built a solar-generated

electricity plant in the sunny Okanagan is because the provincial policies prohibit BC Hydro from developing new sources of electricity, then such policies must change.

The solar potential is vast — enough solar energy reaches the surface of the Earth every hour to exceed the annual energy consumption of the world's population. Wind power is even less expensive than solar power. By 2030, wind power is expected to provide 20% of the world's electricity needs.

In Okotoks, AB, there is a solar-powered community where 90% of the home heating supply is provided by solar sources in conjunction with an underground thermal storage system. The cost of building new homes with high energy efficiency standards and electricity-generating potential on their roofs has dropped considerably in recent years. In Edmonton, such a new townhouse development was recently completed at an additional cost of only \$35,000 per home.

Years ago, when the official community plan for the Burke Mountain area was being developed, the Burke Mountain Naturalists recommended all the roofs on this south-facing slope be built at an angle optimal for solar panels — unfortunately, this recommendation was ignored. With much new development still happening in local communities, we are long overdue to implement energy efficiencies into home and community design.

With regard to transportation, it appears that switching to a reliance on mostly electricity is quite feasible. We also need to do far more to provide viable public transit options as well as cycling alternatives. In Japan, most trains run on electricity. While this may be more costly to implement because of the long distances trains cover in Canada, it should still be possible. Alternative solutions for gasoline-fueled cars already exist even though they remain more costly and have limited mileage. Government subsidies, hopefully paid for through a carbon tax, could help with the cost. As for the limited mileage, gasoline hybrids currently take care of this problem; other solutions may be developed.

For far too long in North America, we have been complacent about the continuing use of fossil fuels. Other developed nations have led the way. Norway imposes strict environmental regulations on industry and taxes pollution. As a consequence, the greenhouse gas emissions of residents in Oslo are only about a 10th of per capita emissions in North America.

It is good news for all of us that we finally have a set of elected officials who recognize the dangers of global warming and have agreed on a plan to significantly reduce greenhouse gas emissions.

Now, we all need to pull together to make this new climate plan work.