

Analysis

Evolving beyond oil and gas: Canada can shift entirely to renewable energy sources

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Canada's premiers are meeting with Prime Minister Justin Trudeau this week in Vancouver to talk about how to arrest climate change, to cut the country's greenhouse gas emissions. The message Trudeau should be putting on the table is living on 100 per cent renewable energy is not only 100 per cent possible, it will save money, and it can be done without job losses.

It doesn't make sense to squander more public money on the already highly subsidized fossil fuel industry.

Fossil fuels are depleting, a primary source of air pollution, the major cause of global climatic change, and they are more expensive than renewable energy.

Since 2001, studies have consistently shown renewable energy costs less than fossil fuels.

A paper published in Scientific American in November 2009 described how solar, wind and hydroelectricity could supply all the world's energy needs within 30 years at a lower cost, with more reliability than conventional energy sources and with considerably fewer adverse environmental effects.

And in 2014, the International Energy Agency published two reports indicating that by 2050, the sun could be the world's largest source of power, ahead of fossil fuels, wind, hydro and nuclear.

Looking into the future, renewable-energy costs will continue to fall while fossil-fuel costs will continue to rise — the current dip in oil prices is not expected to last. Renewable energy now costs less than fossil fuels because the easy-to-recover, low-cost conventional fossil fuels are largely gone.

The days are over when we could drill a few hundred metres and out would come bubbling crude.

Today's fossil fuels are incredibly expensive, such as the oilsands, liquefied natural gas and liquefied fracked gas, sour gas, off-shore oil, fracked shale oil and mountaintop-removal coal mining. With these fossil fuels, the energy return on investment (amount of energy spent to recover a barrel of oil) is around one barrel of oil.

We're wasting money squeezing the last drops of fossil fuels from Mother Earth.

Just like when we walked away from typewriters in the advent of computers, it's time to walk away from fossil fuels. Subsidies won't bring back depleted oil reserves. Leave what's left in the ground and save money.

On the other hand, the sun continues to shine free of charge. We continue to improve technologies to harness solar energy. The potential is vast. Renewable-energy prices have nowhere to go but down.

The problem is the current fossil-fuel-employment equation.

In Canada, there are tens of thousands of jobs in fossil-fuel recovery, transport, refining, etc.

The question is how do we switch from high-cost, rapidly depleting, air-polluting, climate-changing fossil fuels to low-cost renewable energy while preserving jobs in the fossil-fuel sector?

The answer is simple. Transfer the \$2.9 billion in annual subsidies (such as the advantageous tax breaks for exploration field development and extraction) from the fossil-fuel sector to the renewable-energy sector. Then, guarantee jobs for everyone employed in the fossil-fuel industry with jobs in the renewable-energy sector. We'd recover the investment in lower energy costs.

Rather than waste more money on fossil fuels, our governments need to map a humane transition to a lower-cost, fossil-fuel-free economy.

By humane, I mean protect jobs. Remember the 1992 Atlantic cod-fishery collapse? A renewable resource was so poorly managed the industry crumbled, and 40,000 people lost their jobs, creating a social disaster. Marriages and families dissolved, alcoholism and substance abuse increased, crime worsened, suicides rose.

Based on that experience, imagine what would happen if Canada stopped the fossil-fuel industry without a plan for the tens of thousands of working Canadians employed in the fossil-fuel sector.

To avoid that catastrophe, it makes economic sense to guarantee jobs for all the oilsands workers and all the workers on the other expensive fossil-fuel projects.

Those workers could be more profitably employed building and installing wind turbines, solar panels, geothermal energy systems, concentrated solar thermal power plants and biodiesel facilities.

Those workers could retrofit existing buildings to consume less energy, consume no energy or generate energy.

They could modify auto factories to build electric cars and build clean-energy mass transit.

We need to guarantee jobs for displaced fossil-fuel workers in the renewable-energy sector to speed the transition to a sustainable economy and meet our climate change targets.

Let's invest in the future, not in the past.

One hundred per cent renewable is not only 100 per cent possible, it will save money, and it can be done without job losses.

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