A Sustainable Environment: Our Obligation to Protect God's Gift

by

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The Keystone XL Pipeline Should Not Be Approved

I have been asked several questions relative to the Keystone XL pipeline and whether I think it should be approved. My answer is "no" for a number of reasons.

Since the beginning of the industrial revolution when we started burning coal, oil and gas for fuel, globally we have emitted 380 billion tons of carbon in the atmosphere. These emissions will remain in the atmosphere for thousands of years. In order to preserve the creation and a planet that continues to look like the one civilization depends on, we should limit the total carbon emissions to 500 billion tons. This means we must phase out emissions from coal and leave most of the unconventional fossil fuels, including tar sands, in the ground. The Keystone XL pipeline has been proposed to transport the tar sands from northern Alberta, Canada to the U.S. gulf for processing.

The Athabasca (area in northern Alberta) tar sands oil is not typical crude oil for processing. It is much heavier because of the high content of bitumen and is more toxic with an average of 11 times more sulfur, 11 times more nickel, and five times more lead. It is very thick and tar-like, and a spill in water will result in the tar sands sinking to the bottom, not floating on water like conventional oil. It is very difficult to process into a usable fuel and requires huge quantities of water. About four barrels of water are required to produce one barrel of oil. In addition, processing of the tar sands oil results in large quantities of pet-coke, a filthy byproduct that is difficult to control and hazardous to communities.

If the pipeline is approved, large quantities of the tar sands oil will be shipped to Gulf for processing by U.S. oil companies. The processed oil will then be shipped to Asia, primarily for China. The U.S. consumer will not benefit from this oil; only the U.S. oil companies will reap a benefit, yet the American citizens will be at risk for any spills between Canada and the Gulf. Because tar sands oil is thicker and, indeed, more tar-like, it can't be transported like conventional oil. Pipelines pumping tar sands crude can run at a much higher pressure and at a much higher temperature. This high pressure and the corrosive nature of tar sands oil combine to increase the likelihood of spills.

If the tar sands are eventually destined for China and other Asian countries, why not transport it directly west from northern Alberta to British Columbia and ship it directly from there? This is a much shorter distance from the source to the coast, and a shorter distance from the coast to China. Two pipelines have been proposed to the west through British Columbia, but they are stalled due to popular opposition. Two more pipelines going to the east are also heavily criticized. The Canadians need to transport this fuel to a coast for shipping. In 10 to 20 years, they may even be able to go north to the Arctic when most of the ice melts. But they must think

that going through the U.S. will be easiest route to get approved. Thus, if we allow the pipeline to go through the United States, the U.S. farmers and ranchers get all the risk, while oil companies will reap all the rewards.

It is obvious that fossil fuels are the dominant source of energy because of the perception that they are the cheapest. In terms of processing and purchasing fossil fuels, they appear to be the cheapest, but they are really not because the consumer doesn't have to pay their costs to society. They do not pay for the human health effects of air pollution or water pollution. They do not pay for the growing impact of climate change and the effects due to climate change.

The crucial factor going forward is to reduce the quantity of carbon being emitted for the generation of energy. We must reduce the carbon released per unit of energy and strive for a carbon intensity approaching zero. There is one nation that has come close: Sweden. It has reduced it carbon intensity via the combination of hydropower and nuclear power. With one additional step Sweden can be at or near the low carbon intensity needed to stabilize the climate. If it can reduce the carbon emissions from transportation via fuel cells or improved battery storage for electric cars, it will achieve the goal that all other countries should strive to achieve.