



Marcia McNutt is Editor-in-Chief of *Science*.

Keystone XL

I DRIVE A HYBRID CAR AND SET MY THERMOSTAT AT 80°F IN THE WASHINGTON, DC, SUMMER. I USE public transportation to commute to my office, located in a building given “platinum” design status by the U.S. Green Building Council. The electric meter on my house runs backward most months of the year, thanks to a large installation of solar panels. I am committed to doing my part to cut greenhouse gas (GHG) emissions and minimize global warming. At the same time, I believe it is time to move forward on the Keystone XL pipeline to transport crude oil from the tar sands deposits of Alberta, Canada, and from the Williston Basin in Montana and North Dakota to refineries on the U.S. Gulf Coast.

This position may seem incongruous with my personal crusade to minimize fossil fuel use, a desire rooted in scientific understanding that climate change is a real threat and that tar sands oil produces higher GHG emissions than many alternatives. Prominent environmentalists oppose Keystone XL. When the extension was originally proposed, I, too, was opposed, believing that it would hasten development of the petroleum resource. Certainly, some fossil fuel deposits remain untouched because there is no pipeline to transport the resource; a good example is natural gas on the Alaskan North Slope. However, the absence of Keystone XL has not stopped development of the Canadian oil sands; unlike the situation on the Alaskan North Slope, truck and rail are viable alternatives to a pipeline between Canada and the United States.

Even after accepting that Keystone XL would not accelerate extraction of the Canadian oil sands, I still opposed the project because the pipeline would cross environmentally sensitive regions, such as the Sandhills of Nebraska, a natural wetland that supports many species, including migratory birds, and the Ogallala Aquifer, one of the world’s largest groundwater resources. The project’s developers, the TransCanada Corporation, modified the pipeline to avoid sensitive areas and have promised comprehensive monitoring and state-of-the-art shutoff valves to reduce risk to the environment. No method for moving hydrocarbons can be considered completely fail-safe. At least the current permitting process can, and should, be used to ensure that Keystone XL sets new standards for environmental safety. There is no similar leverage on the truck and rail transportation options, which produce higher GHG emissions and have a greater risk of spills, at a higher cost for transport.*

I remain very concerned by the slow rate at which the United States, one of the larger per-capita consumers of total energy globally,† is moving to develop renewable sources of energy. Unfortunately, blocking Keystone XL will not reduce GHG emissions nor will it increase investment in renewable forms of energy. But allowing Keystone XL to move forward could advance both goals. For example, President Obama, who has yet to decide on the pipeline, could put conditions on approval that require Canadian authorities to reduce the carbon intensity of extracting the tar from the oil sands and processing it into a liquid petroleum product.‡ As part of a compromise to allow the project to move forward, let’s now insist on an income stream from Keystone XL revenues to support investment in renewable energy sources to secure our energy future.

Opponents of Keystone XL have been right to contest construction of the pipeline without reasonable assurance that the plan is environmentally acceptable. It should now be possible to determine this, with the release in January 2014 of a thorough Environmental Impact Statement. It is also time to insist on concessions so that building the pipeline ultimately reduces GHG emissions and speeds progress toward renewable energy.

— Marcia McNutt

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*www.fas.org/sqp/crs/misc/R43390.pdf. †<http://data.worldbank.org/indicator/EG.USE.PCAP.KG.OE>. ‡<http://harvardmag.com/pdf/2013/11-pdfs/1113-37.pdf>



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