

Date: September 15, 2017
To: NH Site Evaluation Committee
From: E. H. Roy
Subject: Northern Pass

18 SEP '17 AM 11:10

Committee Members:

I am told that the cost to build this Northern Pass transmission line would be approximately \$1.6 Billion dollars. In a past letter to you I stressed the importance of developing our own truly renewable, green, climate-positive energy projects here in the US rather than becoming dependent on energy from another country. So what would \$1.6 billion dollars buy in the way of renewable generation here in the US?

I am involved in the Solar Electric (Photovoltaics or PV) industry and the costs of this technology have decreased substantially in recent years. Based on a report from the US DOE's Berkeley Lab, 60% of the utility-scale PV systems installed in 2015 cost between \$1.60 and \$2.60 per watt. Using an average cost of \$2.10 per watt, \$1.6 Billion dollars would pay for the installation of approximately 762 Megawatts of PV generation capacity.

How much energy would 762 Megawatts of PV provide over the course of one year? In Springfield, MA for instance, one kilowatt of PV should annually generate approximately 1100 kilowatt-hours of energy for consumer use. For example, 762 Megawatts of PV should generate enough electrical energy to serve over 116,000 average homes in MA each year (Electrical energy usage based on US Energy Information Administration data).

The 762 megawatts of PV generation capacity would be closer to the end user and therefore result in much smaller transmission losses than the Northern Pass project. The utility could spread the locations of this generation capacity out across the region in places where the grid support is needed most. Alternatively the \$1.6 Billion could be spent on a combination of Wind and PV generation capacity and, if needed, energy storage capabilities could be installed with the renewable generation.

If approved, Northern Pass would spend \$1.6 Billion dollars to install the transmission system and on top of that, the Northern Pass Project would have to pay Hydro Quebec for each kilowatt-hour of energy imported into the U.S. In contrast, once a PV system is built, there is no cost for the fuel (sunlight is free).

Northern Pass would foster dependence on foreign energy and provide a dis-incentive to develop our own renewable and green resources. There is absolutely no reason why New England cannot generate all the electrical power it needs right here within our own borders and at reasonable cost. Spending that \$1.6 billion on domestic renewable energy generation would generate business for contractors AND provide jobs to New England workers. It would also put New England squarely on a route toward a sustainable and energy-independent future.

Sincerely,

E. H. Roy
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