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Global Disruption: Ukraine and Climate

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In response to the current situation in the Ukraine, serious proposals have been made – first by Tom Friedman in a NYTimes op-ed, and most recently in Friday's Times News story and in its lead editorial – favoring policies that would encourage the export of Natural Gas from the US to Europe. The expressed hope is that such exports will threaten Russia's Gazprom monopoly on natural gas shipments to Europe.

There is little doubt that US fossil fuel interests will welcome this suggestion with some enthusiasm, given the price differential between domestic natural gas here and the much higher prices that will await it in Europe. The arbitrage may be attractive to the natural gas business, but the proposal is an example of "magical thinking": the government can wish, but business will have to execute. Producing meaningful change will require months or years; and a successful result will produce significant costs with respect to our national interest in limiting climate change.

A cubic foot of natural gas burned here in the US could replace an equivalent amount of coal burned to produce electricity, for example, yielding a 50% reduction in what can be called "Global Warming Potential" (GWP). To export a much larger amount of GHG to Germany, for example, it would have to be compressed, cooled, and then stored in a canister for transport. Those canisters would have to be loaded and trucked to an export facility -- for loading on a Diesel powered freighter, which would then travel across the Atlantic before being unloaded at some convenient German port.

The climate impact of each unit of exported LNG now employed in Europe would have to include all the climate costs of the added amount of energy used in cooling,

condensing, loading, and shipping. Had it been used as a replacement fuel in the US, it would have reduced the GWP of the coal it replaced. By using it in Germany instead, we sacrificed that gain. But its major consequence for the climate is that it will exact a much larger impact when it is used, because of the energy required to get it there. LNG export may provide a political solution, but for the global climate it is a bad deal.

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