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From: Elaine Esch [REDACTED]
Sent: Wednesday, January 23, 2013 12:53 PM
To: LNGStudy; President Obama
Subject: 2012 LNG Export Study

To Whom It May Concern.

Thank you for accepting public comment on the DOE study of the economic impacts of exporting LNG. I feel this study is fundamentally flawed because of the narrow scope utilized in looking at this complex issue. Exporting LNG is indeed an economic issue, but the focus on projected jobs obscures the true picture. Economics cannot stand apart from environmental impacts and human health risks. All need to be considered and I strongly urge DOE to complete a EIS, and to obtain real data instead of using projections as their basis.

Please consider the following issues:

- Conventional sources of natural gas are a thing of the past. Most new wells require high-volume, slick-water, horizontal drilling and hydraulic fracturing, which I will call fracking.
- Although production from fracked wells is high at first, it falls off at least 80% within 2 years. Projections used by the gas industry are based on the lifetime of conventional wells, inflating projections in order to increase their stock value and setting us up for a crash.
- In order to continue current production levels, 30,000 wells must be drilled and fracked annually.
- Exporting LNG would drive up demand, leading to unrestrained development of fracked wells across the US, currently taking place in 32 states. States such as PA, which does not tax natural gas extraction, would be particularly exploited.
- **Fracking is exempt from the Clean Air Act, Clean Water Act, Safe Drinking Water Act and Superfund Act, making the US vulnerable to severe environmental degradation without recourse, while the gas industry is given unfair industrial advantages and assured higher profits in overseas trading.**
- Fracking uses high volumes of fresh water. In PA, the average per well per first frack is 5 million gallons. Wells may be re-fracked to stimulate production, using additional water resources. This is particularly problematic in states experiencing drought, which includes over half of the US.
- Fracking uses chemical that are not all safe. Many are proven carcinogens. Though the percentage of the fracking fluid is only about 1% chemicals, this averages 50,000 gallons per well per frack in PA. These chemicals are all pumped through the water table, greatly risking contamination if there are any problems with the casing.
- Casings fail 3-5% of the time within the first year. Casing failures increase over time until almost all casings fail, especially if wells are re-fracked.
- **Methane migration and leaking are problems the industry has not been able to solve. Methane is 100 times more potent as a greenhouse gas than carbon dioxide. Studies from Cornell University and from the NOAA show that methane leakage makes the life cycle of fracked gas dirtier for the planet than the burning of coal. Fracked gas is not a clean fuel.**
- Bonding levels are completely inadequate in PA, and I would guess that they are in other states as well. Studies exist (Univ. of Pitt for one). There should be a federal guideline for state bonding, or a federal bond.
- At least 80% of the fracking fluid used does not return to the surface but remains underground or returns to the surface slowly, over many years. This water is taken out of the water cycle – an unproven experiment in water management.

- The wastewater that returns is difficult to dispose of. It has been proved to cause earthquakes when disposed of in injection wells. It has over and over again contaminated surface water through spills, leaks and the intentional discharge of partially treated wastewater into rivers and streams, which is still allowed by law in most states, including PA. Open storage pits in PA have accounted for half of the contamination incidents, yet are still legal.
- The drilling and fracking of each well entails many truck and equipment trips, equaling approximately 3.5 million car trips (and the CO2 emitted).
- Exporting LNG requires that natural gas be carried by pipeline, creating demand for hundreds of thousands of miles of high volume pipelines, and hundreds if not thousands of large, air-polluting compressor stations. Both carry high risks of fire and explosion, especially as they interact with a wide network of existing and aging pipelines throughout the US.
- Well pads, access roads, storage areas, retention ponds, pipelines, compressor stations and the expansion of ports all utilize land that will likely never be reclaimed. This land is also likely to become brownfields.
- The process of liquefying natural gas is also damaging to the environment, the costs again being born by the US.
- **The exporting of LNG, especially if approved for non-trade agreement countries, will globalize the price of natural gas, raising manufacturing, heating and electricity costs across the board. The DOE report seems to ludicrously suggest that these costs will be mitigated if one has invested heavily in gas industry stocks. How can that statement be possibly allowed in a tax-payer funded study?**
- In PA, many leases were signed under promises of contributing to national security and energy independence. Exporting LNG would be the biggest slap in the face to landowners who were willing to sacrifice the use of their land, often sacrificing their quality of life, in order to assure the safety of America.
- Leases in PA predominantly include clauses of automatic lease renewal if wells are being actively produced. This has allowed gas companies to turn 5-year leases into eternal leases, taking away all property rights as they continue to drill one well at a time to hold leases, giving them access for other shales and future technologies. Such leases should be overturned by the Supreme Court. The full development of individual well pads (drilling all wells at once) would mitigate environmental damage, be more fair to landowners, and decrease costs.
- Job numbers have been wildly inflated. While the industry has promised hundreds of thousands of jobs to PA alone, they have actually created about 23,000 in PA, most of which are held by out-of-state workers. Many of the jobs touted by the industry and politicians are temporary jobs, creating a boom and bust cycle that is not community-sustaining.
- Fossil fuels are all finite and natural gas is no exception. Let's plan carefully instead of selling the farm to the highest bidder.

Issues of this kind of importance to our nation should not be "studied" by private firms primarily employed by the industry the study stands to judge. Such conflicts of interest are truly insulting to the American people. DOE should scrap this study entirely and start over with a careful and thorough assessment of the impacts that will reverberate across our nation if LNG exports are approved. I can think of no other issue that is as important to our economy, our health, our quality of life, and our confidence in the Government.

Sincerely,
 Elaine Lapp Esch
 Pennsylvania