



*Written version of testimony provided by
Maya K. van Rossum, the Delaware Riverkeeper
at the May 1, 2013 Delaware Natural Resources
Committee hearing.*

May 1, 2013

Natural Resources Committee
Delaware House of Representatives
Dover, DE

Re: House Bill 54

Dear Committee Members,

While I very much appreciate the important focus on the safety issues associated with Liquefied Natural Gas facilities with regards to HB 54, I believe that the environmental issues are equally important and so would like to bring that topic to your considerations.

There are many that jobs depend upon a healthy Delaware River. Just the coastal areas of the Delaware Estuary and Bay support \$947 million in wages. When one adds to that the other jobs and economic values of a healthy Delaware Estuary that figure goes way up.

And so we should not be considering projects that sacrifice the health of our estuary resources in the name of other jobs because our healthy River and environment are of irreplaceable value on the jobs front. They are also irreplaceable education, recreation, ecotourism, and quality of life elements that make Delaware so special.

Bringing LNG to Delaware's coastal zone brings a whole host of environmental and safety impacts that should be of concern and avoided.

Construction of LNG operations, including the required dredging, has significant implications for the coastal zone, for wetlands, for water and air quality, and for species such as the Atlantic Sturgeon, already endangered, for which this reach of the River is significant in its life cycle.

The liquefaction facilities needed to chill natural gas to its very low temperatures for LNG purposes are energy intensive and can produce substantial amounts of air and water pollution.

The network of pipelines and compressors LNG facilities require to bring the gas in require vast areas of land, contribute an increase of methane into the atmosphere, and result in water pollution harms as they cut across landscapes, through communities, through wetlands and through creeks.

Researchers are finding shale gas extraction, storage and delivery to be a significant source of methane. Experts say that in order for natural gas to have less of a climate impact than coal, methane leaks from gas development, storage and delivery would need to be held to 2 percent or less. And yet, researchers are finding that as much as 2.5% or more of gas is lost during its transmission, distribution and the storage of gas; with new research showing as much as 9% being lost at the drilling fields during shale gas development. LNG facilities, as part of this life cycle of shale gas, is a contributor to the harmful global warming and climate change impacts of shale gas.

LNG brings with it the hazards of a spill and release. If LNG liquid is released it creates a serious safety hazard for those around. LNG vapor clouds can travel many miles if not ignited, transferring their threat of harm over a broad area – I have read 3 to 10 to even 50 miles depending on the size of the spill etc. Spills that catch on fire bring with them serious risk of burn – second degree burns within 30 seconds for those exposed within a mile.

LNG tankers require the use of ballast water to compensate for the on or off loading of the LNG cargo – this brings with it, among other things, concerns for the introduction of foreign and invasive species when ballast water is discharged. Intake of water is also required for cooling purposes for some ship engines. To the extent the intake and discharge of water is a threat of harm to Delaware river species, it is a serious and legitimate concern. Commercial and recreational fishing are vitally important to the communities of our region with the tidal Delaware River being the source of over \$34 million in fish landings alone.

And we cannot forget that bringing in to Delaware a facility designed to support the transport of fracked shale gas brings with it also the responsibility for the upstream harms that occur from inducing and supporting increasing shale gas development.

The harms of shale gas development includes the contribution to greenhouse gas emissions discussed. The water, air, food, land and community destruction that is taking place from

shale gas development is immense and growing. It is harming jobs, property values, recreation. It is making people, families and communities sick. To take steps that further fuel these harms, harms that will be visited upon Delaware directly or indirectly if the industry continues to grow, would be detrimental, and harm both present and future generations.

There is a rush to export right now as gas is selling for as much as 3 to 4 times the price overseas as in the U.S. And so there is likely to be a press for LNG in the Delaware River – making this piece of legislation vitally important to protect us from that pressure we know will come.

Transforming our country into one dependent on shale gas instead of oil and coal brings with it a hefty price tag – by some estimates it will cost as much as \$700 billion. Recent estimates from the United States Geological Survey of the volume of undiscovered Marcellus Shale gas that may be recoverable is an average 84 trillion cubic feet. At the current U.S. consumption rate of 24 trillion cubic feet per year, chasing after this gas, and incurring all of the harm shale drilling and fracking brings, will only give an additional 3 ½ years of supply. Other estimates that include gas which is proved, probable and recoverable calculate all U.S. natural gas as supporting only 11 to 21 years of energy at this consumption rate. That is a very short period of time compared to the perpetual harm LNG construction and operation will inflict on our coastal zone and Delaware estuary waters.

LNG operations is not about economic or job prosperity. Information submitted to the Department of Energy demonstrates that while LNG exports generates increased revenues for the gas exporters and gas companies, other areas of the U.S. economy, as a result of exports, declines. Among the losses are job losses. LNG exports harm labor income and jobs in many other sectors of the economy. (e.g. paper, metals, chemicals, stone, clay, glass, plastic, food processing – that all rely heavily on natural gas). If LNG is allowed to proceed nationally as is being considered it is estimated that as many as 270,000 jobs could be lost. And so while it is not job loss figure specifically applicable to Delaware, it is a figure that should be of concern in your decisionmaking.

In fact, if LNG is allowed to grow as is being proposed, folks in every major sector, except for natural gas, will lose income; and we all will have to pay more for goods and services as the impact of increased gas prices reverberates through the economy.

(For discussion of these jobs and economic impacts please see the report I submitted during the hearing: *Will LNG Exports Benefit the United States Economy?* Synapse Energy Economics, Jan 23, 2013)

And so any claimed benefits from the construction of an LNG facility in Delaware, for Delaware, are likely to be very short-lived, but the harms will be long lasting and far reaching. Rather than invest in creating these harms – it is better or Delaware to preserve its coastal zone, all of the ecological, health, safety and economic benefits it provides. To the extent Delaware wants to invest in energy, invest in sustainables and become a leader in the fast growing and to be long-lived sustainable energy industry.

Respectfully submitted by:
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