

**DRAFT**

**MODEL LNG TRANSPORTATION RESOLUTION – Philadelphia, PA**

WHEREAS, a fundamental purpose of government is to protect the health, safety, and welfare of citizens; and

WHEREAS, Article I, Section 27 of the Pennsylvania Constitution affirms that, “The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment”; and

WHEREAS, Article I, Section 27 further declares, “Pennsylvania’s public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people”; and

WHEREAS, New Fortress Energy is planning the overland transport of Liquefied Natural Gas (“LNG”, also known as liquid methane) by truck on public highways and by rail car on existing railways from a yet-to-be-completed liquefaction plant in Wyalusing, Pennsylvania, to a proposed LNG export terminal in Gibbstown, New Jersey on the Delaware River (the “Gibbstown Logistics Center”) at a location also known as the Repauno Port and Rail Terminal; and

WHEREAS, New Fortress Energy subsidiary Energy Transport Solutions received a Special Permit from the Pipeline and Hazardous Materials Safety Administration (“PHMSA”)<sup>1</sup> for the transport of LNG in rail cars designed 50 years ago and never used for LNG transport while subsequent federal rulemaking requires a safer rail car design for all other carriers<sup>2</sup>; and,

WHEREAS, the transport of LNG has unique safety hazards, exposing those along these particular truck and rail routes to unprecedented and unjustifiable risk. An LNG release boils furiously into a flammable vapor cloud 620 times larger than the storage container. An unignited ground-hugging vapor cloud can move far distances,<sup>3</sup> and exposure to the vapor can cause extreme freeze burns. If in an enclosed space, it asphyxiates, causing death<sup>4</sup>. If ignited, the fire is inextinguishable. A resulting pool fire is so hot that second degree burns can occur within 5

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<sup>1</sup> Special Permit DOT-SP 20534. <https://www.phmsa.dot.gov/safe-transportation-energy-products/dot-20534-pdf>

<sup>2</sup> PHMSA, 49 CFR § 172, 173, 174, 179, 180 (2020). <https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2020-06/2137-AF40%20Final%20Rule%20%206.19.20%20web%20final.pdf>

<sup>3</sup> “Immediate ignition with liquid still on the ground could cause the spill to develop into a pool fire and present a radiant heat hazard. If there is no ignition source, the LNG will vaporize rapidly forming a cold gas cloud that is initially heavier than air, mixes with ambient air, spreads and is carried downwind.” P. 10 “Methane in vapor state can be an asphyxiant when it displaces oxygen in a confined space.” P. 11. SP 20534 Special Permit to transport LNG by rail in DOT-113C120W rail tank cars. Final Environmental Assessment. Docket No. PHMSA-2019-0100. December 5, 2019. P. 10.

<sup>4</sup> SP 20534 Special Permit to transport LNG by rail in DOT-113C120W rail tank cars. Final Environmental Assessment. Docket No. PHMSA-2019-0100. December 5, 2019. P. 11.

seconds for those exposed within .69 miles and 10 seconds of exposure could be fatal.<sup>5</sup> An LNG release can cause a Boiling Liquid Expanding Vapor Explosion.<sup>6</sup> The explosive force of LNG is similar to a thermobaric explosion – a catastrophically powerful bomb. The 2016 US Emergency Response Guidebook advises fire chiefs initially to immediately evacuate the surrounding 1-mile area.<sup>7</sup> No federal field research has shown how far the vapor cloud can move so in the most recent serious Plymouth, Washington, LNG fire, they evacuated a 2-mile radius<sup>8</sup>; and

WHEREAS, spillage of LNG into water presents a hazardous situation where the water quickly transfers heat to the liquid methane, causing it to expand with explosive speed that can result in damage to nearby structures.<sup>9</sup> Explosion can occur and have a cascading effect as the vapor cloud moves downwind or along topographical features such as a tributary, ditch, tunnel, or human built structures, threatening public safety, human life and the environment; and

WHEREAS, the likely route for the trains carrying LNG to Gibbstown cuts through the City of Philadelphia, traversing both the Schuylkill and Delaware Rivers adjacent to homes, day care centers, schools, businesses, and important and valuable community and city assets, exposing those who live and work in the city to the increased rail traffic and the risk of an accident that endangers the safety, health, wellbeing, quality of life, and the community and personal properties of those along the train route; and

WHEREAS, the likely rail route travels through communities with proportionately more people of color and low-income populations, compounding environmental injustices<sup>10</sup> and these communities are already unjustly burdened by environmental and public health harms<sup>11</sup>, which is intolerable; and

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<sup>5</sup> “The Council on Environmental Quality describes the danger: The characteristics of these fires on water, like the behavior of vapor clouds, are subject to great uncertainties and estimates of the safe distance from their intense radiant heat vary significantly. According to a recent FPC (Federal Power Commission) analysis, a generally safe distance from a 25,000-cubic-meter pool fire would be about 8,300 feet or 1.6 miles. People standing 3,600 feet away would blister in 5 seconds, and exposure for longer times—perhaps 10 seconds -- would be fatal. Estimates based on Bureau of Mines figures indicate that the danger might extend farther. According to these figures, on a windless day when thermal radiation is greatest, unsheltered people at a distance of 9,600 feet, or nearly 2 miles, could suffer fatal burns.” “DELAWARE COASTAL MANAGEMENT PROGRAM AND FINAL ENVIRONMENTAL IMPACT STATEMENT”. [From the U.S. Government Printing Office, www.gpo.gov ]. U.S. DEPARTMENT OF COMMERCE, National Oceanic and Atmospheric Administration, Office of Coastal Zone Management, \*41T4 O74f. UNITED STATES DEPARTMENT OF COMMERCE, The Assistant Secretary for Science and Technology, Washington, D.C. 20230, JUL 2 1979. P. 225 of PDF.

<sup>6</sup> “LNG tank BLEVE is possible in some transportation scenarios.” Sandia National Laboratories, “LNG Use and Safety Concerns (LNG export facility, refueling stations, marine/barge/ferry/rail/truck transport)”, Tom Blanchat, Mike Hightower, Anay Luketa. November 2014. <https://www.osti.gov/servlets/purl/1367739> P. 23.

<sup>7</sup> US DOT Emergency Response Guidebook. <https://www.phmsa.dot.gov/hazmat/erg/emergency-response-guidebook-erg>

<sup>8</sup> Powell, Tarika. Sightline. "Williams Companies Failed to Protect Employees in Plymouth LNG Explosion." June 3, 2016. <https://www.sightline.org/2016/06/03/williams-companies-failed-to-protect-employees-in-plymouth-lng-explosion/>

<sup>9</sup> Rapid Phase Transitions of LNG illustrated at <https://www.youtube.com/watch?v=h-EY82cVKuA>

<sup>10</sup> Delaware Riverkeeper Network, <https://www.delawariverkeeper.org/taxonomy/term/1174>

<sup>11</sup> Public health is negatively impacted by air pollution. [Those closest to the emission source receive the most harm](#) from most pollutants, particularly particulate matter 2.5 (PM 2.5). Communities of color and those with low

WHEREAS, neither the Commonwealth of Pennsylvania nor the Delaware River Basin Commission has assessed the potential public safety, public health or environmental impacts of the proposed overland transport of LNG by truck or by rail car on the communities along the possible transportation routes between Wyalusing, Pennsylvania, and Gibbstown, New Jersey; and

WHEREAS, no federal, state, or local agency has conducted a risk assessment of the specific transportation route(s) along which the LNG would travel; and

WHEREAS, no full scale Quantitative Risk Assessment, which quantifies the frequencies of events such as transportation accidents and their consequences, has been done of the trucks or railcars that would contain the LNG that would travel from Wyalusing, Pennsylvania, to Gibbstown, New Jersey<sup>12</sup>; and

WHEREAS, Special Permit DOT-SP 20534<sup>13</sup> issued by the Pipeline and Hazardous Materials Safety Administration (PHMSA) to New Fortress Energy subsidiary Energy Transport Solutions for the transportation of LNG in rail tank cars on December 5, 2019 for travel between Wyalusing Township, PA and Gibbstown, NJ does not provide adequate safety protection for the communities through which the rail cars will travel, including the lack of the requirement for an outer rail car tank that is thicker and made of steel with a greater puncture resistance to provide an added measure of safety and crashworthiness, along with other required operational controls, which is included in the federal rulemaking approved by PHMSA for the transport of LNG by rail throughout the nation<sup>14</sup>; and

WHEREAS, the Commonwealth of Pennsylvania, the federal Army Corps of Engineers, the interstate Delaware River Basin Commission nor any other agency has conducted a comprehensive assessment of the cumulative and long-term impacts of the full scope of New Fortress Energy's plan to liquefy natural gas from fracking wells in Northern Pennsylvania, transport the LNG by truck or rail to the Gibbstown Logistics Center and export by marine vessels overseas on the Delaware River past Delaware and South Jersey bayshore communities; and

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household incomes live in proximity to some of the greatest sources of air pollution, including those along the transportation route such as Camden and Paulsboro in New Jersey.

<sup>12</sup> "The QRA will help to evaluate the derailment and release probability of LNG rail cars over certain segments of the network, and account for a variety of track and train characteristics...An LNG risk model can be used to understand the probability and consequences for LNG transportation incidents for both rail and truck delivery. Even though they are treated differently, the underlying event tree analysis approach is the same. When the probability of LNG tank car derailment is understood, better decisions can be made regarding the crashworthiness, placement, and operation of rail cars and the potential consequences from an LNG release due to a derailment. Further study for modeling the probability and consequences of transporting LNG by rail and truck will help decision-makers understand public risks and make informed decisions." "Risk Assessment of Surface Transport of Liquid Natural Gas", prepared for U.S. DOT Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety prepared by Cambridge Systematics, Inc. with MaineWay Services, LLC, Rutgers University, Transport Analytics, LLC. ScienceSmith LLC, March 20, 2019. P. ES-9.

<sup>13</sup> <https://www.phmsa.dot.gov/safe-transportation-energy-products/liquefied-natural-gas-transportation-rail>

<sup>14</sup> <https://www.federalregister.gov/documents/2020/07/24/2020-13604/hazardous-materials-liquefied-natural-gas-by-rail>

WHEREAS, no full-scale Quantitative Risk Assessment, which quantifies the frequencies of events such as transportation accidents and their consequences, has been done of the trucks or rail cars that would contain the LNG that would travel from Wyalusing, Pennsylvania, to Gibbstown, NJ<sup>15</sup>; and

WHEREAS, the growth in gas production through hydraulic fracturing and horizontal drilling, which the development of LNG transport and export infrastructure incentivizes, poses a direct and imminent threat to human health and the climate.<sup>16</sup> Over the past decade, oil and gas infrastructure has been the primary source of the rising global atmospheric levels of methane, a gas which has a warming effect 86 times greater than CO<sup>2</sup> over a twenty-year period and 36 times greater over a hundred-year period;<sup>17</sup> and

WHEREAS, methane, a potent greenhouse gas and ground-level ozone precursor, is intentionally vented or known to leak from every part of the gas supply chain;<sup>18</sup> and

WHEREAS, there has not been sufficient investigation nor planning to prevent the spread of highly toxic legacy pollution at the former DuPont “Repauno” site, presenting a substantial threat to water quality and species<sup>19</sup> including lack of control of discharges of polychlorinated biphenyls (PCBs)<sup>20</sup>; and

WHEREAS, the Army Corps of Engineers has issued approval of a permit to Delaware River Partners, LLC (“DRP”) pursuant to Section 10 of the Rivers and Harbors Act, 33 U.S.C. § 403, and Section 404 of the Clean Water Act, 33 U.S.C. § 1344, for the construction of a proposed new docking facility (“Dock 2 Facility”), which will transfer LNG from trucks and railcars to docked vessels but has not performed an environmental impact statement (EIS) and no other agency has performed an environmental impact statement, leaving the project unexamined under the National Environmental Policy Act<sup>21</sup>; and

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<sup>15</sup> “The QRA will help to evaluate the derailment and release probability of LNG rail cars over certain segments of the network, and account for a variety of track and train characteristics...An LNG risk model can be used to understand the probability and consequences for LNG transportation incidents for both rail and truck delivery. Even though they are treated differently, the underlying event tree analysis approach is the same. When the probability of LNG tank car derailment is understood, better decisions can be made regarding the crashworthiness, placement, and operation of rail cars and the potential consequences from an LNG release due to a derailment. Further study for modeling the probability and consequences of transporting LNG by rail and truck will help decision-makers understand public risks and make informed decisions.” “Risk Assessment of Surface Transport of Liquid Natural Gas”, prepared for U.S. DOT Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety prepared by Cambridge Systematics, Inc. with MaineWay Services, LLC, Rutgers University, Transport Analytics, LLC., ScienceSmith LLC, March 20, 2019. P. ES-9.

<sup>16</sup> Coalition for Responsible Regulation, et al. v. EPA, 684 F.3d 102 (D.C. Cir. 2012), citing Endangerment Finding at 66,518.

<sup>17</sup> Oil Change International, “Burning the Gas ‘Bridge Fuel’ Myth, Why Gas is Not Clean, Cheap, or Necessary”, 2019, pp. 4-5. [http://priceofoil.org/content/uploads/2019/05/gasBridgeMyth\\_web-FINAL.pdf](http://priceofoil.org/content/uploads/2019/05/gasBridgeMyth_web-FINAL.pdf)

<sup>18</sup> *Ibid*, p. 6

<sup>19</sup> *Ibid*.

<sup>20</sup> <https://www.delawareriverkeeper.org/sites/default/files/DRN%20Legal%20Petition%20to%20NJDEP%20re%20Gibbstown%20PCBs%20%282020-12-08%29.pdf>

<sup>21</sup> <https://www.delawareriverkeeper.org/sites/default/files/DRN%20Motion%20for%20Summary%20Judgment%20in%20Gibbstown%20Army%20Corps%20Permit%20Challenge%20%282020-10-30%29.pdf>

WHEREAS, LNG's hazardous nature, flammability and potential for powerful explosion combined with the difficulty of predicting the movement of LNG when released from a container such as a truck or rail car, exposes emergency and first responders to danger that cannot be reliably prevented, risking the health and safety of these workers; and

NOW, THEREFORE, BE IT RESOLVED that:

1. [The Township/County/District] calls upon the Commonwealth of Pennsylvania to fulfill its constitutional duty and act affirmatively to protect the Commonwealth's public natural resources by taking all actions necessary to prevent the transportation of LNG through Pennsylvania by truck and/or by rail, and to conduct a public health and safety analysis, a quantitative risk assessment, and a comprehensive environmental review of the potential impacts to communities and the natural environment in Pennsylvania.
2. The [Township/County/District] calls upon the Army Corps of Engineers to perform an environmental impact statement under the National Environmental Policy Act.
3. The [Township/County/District] calls upon the Pipeline and Hazardous Materials Safety Administration to rescind and not extend Special Permit DOT-SP 20534 for the transportation of LNG in rail tank cars for travel between Wyalusing Township, PA and Gibbstown, NJ.
4. An official copy of this resolution be filed with Governor Tom Wolf of Pennsylvania at Office of the Governor, 508 Main Capitol Building, Harrisburg, PA 17120.
5. An official copy of this resolution be filed with the Administration of President Joseph Biden at the Council on Environmental Quality, The White House, 1600 Pennsylvania Ave NW, Washington, DC 20500.