MODEL LNG TRANSPORTATION RESOLUTION – NJ Rail Route Region

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

WHEREAS, the State of New Jersey Constitution declares "All persons are by nature free and independent, and have certain natural and unalienable rights, among which are those of enjoying and defending life and liberty, of acquiring, possessing, and protecting property, and of pursuing and obtaining safety and happiness"[1]; and

WHEREAS, Governor Philip D. Murphy recognized that "New Jersey is especially vulnerable" to the impacts of climate change and sea level rise, that "minority and low-income communities are disproportionately affected by climate change . . . [and] increased air pollution," that "in the absence of action at the federal level, states must take the lead in reducing greenhouse gas emissions," that it is "the policy of this State that . . . New Jersey must pursue a just and smooth transition away from its reliance on fossil fuels as a primary energy source," and that "unlimited present day and future investments in expanded fossil fuel infrastructure [is] a potential waste of both private and public resources"[2]; 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"); and

WHEREAS, the Pipeline and Hazardous Materials Safety Administration (PHMSA) issued Special Permit DOT-SP 20534[3] on December 5, 2019 to New Fortress Energy subsidiary Energy Transport Solutions to use rail tank cars designed 50 years ago and never used to transport LNG, without performing an environmental impact analysis, which is essential to fully evaluate the impacts of LNG transport by rail car. The PHMSA Special Permit allowing the transportation of LNG in rail tank cars for travel between Wyalusing Township, PA and Gibbstown, NJ through hundreds of communities including municipalities in Camden and Gloucester Counties, does not provide adequate safety protection for the communities through which the rail cars will travel. Importantly, the Special Permit lacks 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[4]. PHMSA required the new design cars because they decided it was necessary to upgrade the rail tank cars for safety reasons, deeming the existing cars that will be used for the Gibbstown transport substandard and unsafe for LNG transport; and

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[1] NJ Const. art. I, pt. I.
[2] Exec. Order No. 100 (Jan. 27, 2020), 52 N.J.R. 365(a) (Mar. 2, 2020).
[3] https://www.phmsa.dot.gov/safe-transportation-energy-products/liquefied-natural-gas-transportation-rail
[4] https://www.federalregister.gov/documents/2020/07/24/2020-13604/hazardous-materials-liquefied-natural-gas-by-rail

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,[5] and exposure to the vapor can cause extreme freeze burns. If in an enclosed space, it asphyxiates, causing death[6]. If ignited, the fire is inextinguishable. A resulting pool fire is so hot that second degree burns can occur within 5 seconds for those exposed within .69 miles and 10 seconds of exposure could be fatal.[7] An LNG release can cause a Boiling Liquid Expanding Vapor Explosion.[8] 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.[9] 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[10]; 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.[11] 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

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[5] "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.

[6] 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.

[7] "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.

[8] "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.

[9] US DOT Emergency Response Guidebook. https://www.phmsa.dot.gov/hazmat/erg/emergency-response-guidebook-erg

[10] 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/

[11] Rapid Phase Transitions of LNG illustrated at https://www.youtube.com/watch?v=h-EY82cVKuA

WHEREAS, neither the State of New Jersey, the Delaware River Basin Commission, the Army Corps of Engineers nor any other agency 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 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[12]; 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.[13] 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^2 over a twenty-year period and 36 times greater over a hundred-year period;[14] 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;[15] and

WHEREAS, New Jersey has already warmed approximately 3ºF in the last century; heavy rainstorms are now more frequent; and sea levels have already risen roughly sixteen inches since 1911 and are now rising about one inch every six years,[16] eroding beaches, submerging low lands, exacerbating coastal flooding, increasing the salinity of estuaries and aquifers, and threatening sensitive ecosystems;[17] 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

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[12] "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.

[13] Coalition for Responsible Regulation, et al. v. EPA, 684 F.3d 102 (D.C. Cir. 2012), citing Endangerment Finding at 66,518.

[14] 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

[15] *Ibid*,p. 6

[16] NOAA National Centers for Environmental Information, "State Summaries 149-NJ New Jersey." https://statesummaries.ncics.org/downloads/NJ-screen-hi.pdf

[17] U.S. Environmental Protection Agency, "What Climate Change Means for New Jersey", August 2016, https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-nj.pdf

threat to water quality and species[18] including lack of control of discharges of polychlorinated biphenyls (PCBs)[19]; 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 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[20]; and

WHEREAS, neither the State of New Jersey, the Delaware River Basin Commission, the Army Corps of Engineers 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

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

WHEREAS, the potential transportation routes travel through communities with proportionately more people of color and low-income populations, compounding environmental injustices[21] and these communities are already unjustly burdened by environmental and public health harms[22], which is intolerable;

NOW, THEREFORE, BE IT RESOLVED that:

1. The [Township/County/District] strongly opposes New Fortress Energy's proposal to transport dangerous LNG by train and truck through NJ for export, and calls upon Governor Murphy and the State of New Jersey to rescind state permitting that would allow the export of LNG from the Gibbstown Logistics Center Dock 2 based on the lack of comprehensive, full and fair review of the potential public health and safety and environmental impacts of this project and the environmental injustice imposed by the footprint of the entire project, including transportation.

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[18] Ibid.

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

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

[21] Delaware Riverkeeper Network, https://www.delawareriverkeeper.org/taxonomy/term/1174

[22] 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 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.

2. The [Township/County/District] calls upon the State of New Jersey to act in furtherance of its policy to transition away from fossil fuels by taking all measures possible to prevent the transportation of LNG by truck and/or by rail through New Jersey and by conducting a public health and safety analysis, a comprehensive quantitative risk assessment, and a comprehensive environmental analysis of the potential impacts of this transportation to communities and the natural environment in New Jersey.

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. The [Township/County/District] calls upon the Army Corps of Engineers to perform an environmental impact statement under the National Environmental Policy Act.

5. An official copy of this resolution be filed with New Jersey State Governor Phillip D. Murphy, PO Box 001, Trenton, NJ 08625.

6. An official copy of this resolution be filed with Lieutenant Colonel David Park, Commander of the U.S. Army Corps of Engineers Philadelphia District and Edward E. Bonner, Chief of the Regulatory Branch the U.S. Army Corps of Engineers Philadelphia District, 100 E Penn Square East, Philadelphia, PA 19107.

7. 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.