



# The New York City Chapter of the Surfrider Foundation

## “To Protect the World’s Oceans, Beaches and Waves”

P.O. Box 844 New York, New York 10163 Ph# 914-573-9216



October 19th, 2009

Thomas Congdon  
Deputy Secretary for Energy  
Chair, NY State Energy Planning Board  
SEP Comments  
NYSERDA  
17 Columbia Circle  
Albany, NY 12203-6399

### **RE: Comments on Draft 2009 New York State Energy Plan**

Dear Deputy Secretary Congdon and members of the State Energy Planning Board:

What follows are comments on the “New York Draft 2009 State Energy Plan” (“Draft Plan”).<sup>1</sup> These comments represent the position of the three New York chapters of the Surfrider Foundation (e.g. the New York City, Central Long Island, and Eastern Long Island Chapters).

The Surfrider Foundation is national 501(c)(3) environmental organization consisting of more than sixty thousand current activists working in seventy locally based chapters, all “dedicated to the protection and enjoyment of the world's oceans, waves and beaches for all people, through conservation, activism, research and education.”<sup>2</sup> With this broad environmental as well as recreational focus, the three New York based Surfrider Chapters—representing a combined membership of just over two-thousand dues-paying members and countless allies and supporters—are deeply interested in the state’s energy planning efforts. We have carefully reviewed the Draft Plan and find much to admire in terms of its systematized, long range approach and, more important still, the plan’s stated interest in environmental concerns. Yet, in one very important particular we find the plan to be highly objectionable.

The one, yet, crucial error we find in Draft Plan is it’s treatment of proposed liquefied natural gas (LNG) port development in New York waters, and, in particular the Plan’s recommendation that New York State “take specific steps to encourage investment in natural gas infrastructure, including LNG facilities.”<sup>3</sup> Our position is clear and unequivocal: LNG is a bad fuel and LNG port development is bad for New York. Thus, we want the Governor, together with the State’s environmental and energy regulators, to implement and disseminate a clear policy statement that ‘closes the door’ on LNG port development anywhere in the state, once and for all. As an ocean-focused environmental group, our opposition to LNG is most directly tied to the profound ecological and recreational harm that would be imposed on our waters by the construction of any new LNG port facility. Indeed, we would oppose any LNG port development because they are such enormous industrial facilities that they can not be built without taking away large areas of public space and significantly damaging the ecology of the waters

<sup>1</sup> New York Draft 2009 State Energy Plan, State Energy Planning Board, State of New York, Aug. 2009

<sup>2</sup> Surfrider, “Mission Statement,” <http://www.surfrider.org/whoweare2.asp> (accessed 10 Oct 2009).

<sup>3</sup> New York Draft 2009 Energy Plan, 61.



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surrounding them. But our view is not limited to our ocean based mission, rather we have taken a holistic view of the energy issues and clearly find LNG to be out of step with any-progressive energy policy and, more to the point, all five of the objectives that the Energy Planning Board defined in the Plan. Thus, the remainder of our comments are organized in the Planning Board’s own prioritized order of objectives—energy reliability, GHG reduction, cost/economic competitiveness, reducing public health and environmental risks, improving energy independence—to show how allowing and/or facilitating LNG development will work against every one of these five laudable goals.

### Objective 1: Energy Reliability

The Draft Plan’s first Objective is “Maintain Reliability: Assure that New York has reliable energy and transportation systems.”<sup>4</sup> In both the Draft Plan and in a private meeting held in New York City with Deputy Secretary Congdon on September 23, 2009, the Planning Board has made clear that it is particularly concerned with the need to have “big supplies of energy close to load,” particularly in the southern tier of the State where demand is greatest and planners are anticipating the possibility of taking the Indian Point nuclear plant off-line.<sup>5</sup> While we understand the concern, we find that that LNG would actually reduce the reliability of our energy infrastructure for at least five reasons:

1. The Sites and Technologies that Would be Used for LNG Ports Would Be Extremely Vulnerable to Weather Related Disruptions—There are three current proposals to build LNG port facilities in the Atlantic Ocean due south of Long Island: the Atlantic Sea Island Group’s (ASIG) “Safe Harbor Energy,” Excalibur Energy’s “Liberty Natural Gas,” and Exxon’s “BlueOcean Energy.” All three of these projects are based on new technologies that have some history in enclosed waters like the Sea of Japan but have never been tested in an open ocean. Moreover, what we know about the oil and gas industry in the comparatively more sheltered waters of the Gulf Coast suggests that even larger, more dangerous LNG facilities being proposed in New York would be anything but reliable. Hurricanes Katrina and Rita, for example, “destroyed or seriously damaged approximately 223 platforms and oil rigs”<sup>6</sup> These events caused substantial disruptions in supply and it is likely that any LNG facility built in the more exposed waters of the Atlantic—where recorded wave heights have exceeded 54.4 feet (16.9 meters) and 30.5 foot (9.3 meters) wave heights are common monthly occurrences—would certainly face routine disruptions if not outright catastrophe, with all the attendant disruptions that this would imply.<sup>7</sup>

<sup>4</sup> New York Draft 2009 State Energy Plan, State Energy Planning Board, State of New York, Aug. 2009, p. 2.

<sup>5</sup> New York Draft 2009 Energy Plan, *passim*; Meeting, 23 Sep 2009, New York City Office of the Governor of New York (New York, NY), Present: Deputy Secretary for Energy Thomas Congdon; Cindy Zipf, Clean Ocean Action; Nassau County Legislator Dave Denenberg [via phone]; Rav Freidel, Concerned Citizens of Montauk; David Byer, Clean Ocean Action; Mike O’Toole, Rockaway Park Homeowners/Residents Association; Dan Mundy Jr., Jamaica Bay Eco Watchers; Claudia Borecky, North Merrick Civic Association; Chris Wade, New York City Chapter of the Surfrider Foundation.

<sup>6</sup> Petroleum Spills of One Barrel or Greater from Federal Outer Continental Shelf Facilities Resulting from Damages Caused by 2005 Hurricanes Katrina and Rita Including Post-Hurricane Seepage Through June 2007, Minerals Management Services, U.S. Department of Interior, Revised July 30, 2007, p. 6, at <http://www.mms.gov/incidents/PDFs/HurrKatrinaRitaSpillageRev30Jul2007.pdf> (last visited Aug. 26, 2008).

<sup>7</sup> Safe Harbor Energy Project Deepwater Port License Application Vol. 2, Exhibit V NJDES Permit Application, Atlantic Sea Island Group, Aug. 2007. p. V-12; Station 44025 – Long Island 33 NM South Islip, NY, National Data Buoy Center, National Oceanic and



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2. The Problem is Not Supply but Delivery—LNG ports would provide increased supply. But it would be an increase of a supply of fuel that is not currently needed. Indeed, when price spikes do occur in our region they have nothing to do with supply, which is abundant, but rather with under-capacity of the Transcontinental Pipeline (Transco) which serves Long Island. None of the three existing proposals would do anything to alleviate the disruptive bottlenecking that occurs in the Transco pipeline but would only displace existing sources of cleaner and cheaper domestic natural gas.

2. New LNG Port Facilities in New York Would be Likely to Discourage Investments in Other Energy Infrastructure—The sustainable energy and domestic natural gas industries are dominated by small scale producers with little political clout and even less ability to challenge the large, well capitalized energy giants that want to build LNG ports in our waters. Thus, if LNG development continues apace it seems almost certain to erode investments in alternative and domestic natural gas infrastructure. Simply put, it seems unlikely that small companies that build windmills or drill for gas in single site operations would want to expand their participation in the Southern New York energy market if they were forced to compete with large, multinational corporations like ASIG, Exxon, and Excalibur, companies who are proposing LNG capacity that nearly matches current New York State consumption rates.<sup>8</sup>

3. Existing LNG Capacity—The U.S. already poses an existing *over*-capacity for LNG import and regasification as to make any call for the construction of still more facilities utterly unreasonable. The U.S. LNG import terminals that are already in operation are only working at 10% of their capacity. Thus, any additional LNG construction will be wasteful and redundant in the extreme. Note that the overcapacity is particularly acute in New York which is connected by reliable pipelines to LNG ports in Georgia, Maryland, and Massachusetts (two, with a third under construction), to say nothing of the recently completed port in New Brunswick, Canada, and the five Gulf Coast LNG ports that also connect to serve New York through the Transco pipeline. Moreover, this overcapacity is expected to carry forward well into the future even without further construction, as forecast estimates suggest that total LNG regasification is will not exceed 20% of current capacity even in the projected peak of 2030.<sup>9</sup> The utter lack of demand for new LNG import capacity is well documented and was pointedly identified by the Chairman of the Federal Energy Regulatory Committee (FERC) who has stated that new LNG ports are not in the public interest because they are “not needed to serve the energy needs of the Mid-Atlantic [NY, NJ, PA] and South Atlantic.”

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Atmospheric Administration, Department of Commerce, at [http://www.ndbc.noaa.gov/station\\_history.php?station=44025](http://www.ndbc.noaa.gov/station_history.php?station=44025) (last visited Aug. 4, 2008); Station ALSN6 – Ambrose Light, NY, National Data Buoy Center, National Oceanic and Atmospheric Administration, Department of Commerce, at [http://www.ndbc.noaa.gov/station\\_history.php?station=alsn6](http://www.ndbc.noaa.gov/station_history.php?station=alsn6) (last visited Aug. 27, 2008).

<sup>8</sup> Steve Inskeep, “With Little Clout, Natural Gas Strikes Out,” *Morning Edition*, 24 Sep 2009 (Washington, D.C.: National Public Radio).

<sup>9</sup> Table 116: Natural Gas Imports and Exports, Annual Energy Outlook 2009, Energy Information Administration, DOE/EIA-0383(2009), Mar. 2009; Table 117: Natural Gas Consumption by End-Use Sector and Census Division, Annual Energy Outlook 2009, Energy Information Administration, DOE/EIA-0383(2009), Mar. 2009; Natural Gas Assessment, New York Draft 2009 State Energy Plan, Aug. 2009, p. 23.



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4. Significant Risk that LNG Ports Will Fail Financially—As has been well documented, existing LNG import capacity is grossly underutilized because ample supplies of cheaper, cleaner domestic natural gas are readily available. The U.S. is already close to self sufficiency in natural gas, producing more than 84% of its gas from American wells. Moreover, recent changes in technology have dramatically expanded all estimates U.S. proven reserves, such that Energy Information Agency estimates that U.S. production will account to 97% of consumption by 2030.<sup>10</sup> These trends have already conspired to push several U.S. LNG importers to the brink of financial collapse and, given the trend of current forecasts it is likely that there will be many of the existing terminals will need to be shut down, making new construction an utterly unreasonable proposition that could leave New Yorkers with a need to pick of the financial pieces of failed LNG ports.<sup>11</sup>

5. The Inherent Unreliability of Foreign Exporters of LNG—Since the oil shocks of the 1970s a fundamental objective of U.S. energy policy has been to reduce dependence upon foreign energy suppliers. This focus on energy independence has been viewed as a policy imperative in part because of the negative affects energy imports have on the nation’s current account. But the greater impetus for energy independence has been the need to insulate Americans from price spikes and interruptions in foreign energy markets and to generally reduce American exposure to the geopolitical instabilities that characterize much of the energy exporting nations. Thus, LNG, which is, of its nature, foreign sourced gas that has been processed (at great, energy intensive expense) for transoceanic shipment, is fundamentally out step with both national energy objectives and the Committee’s first priority of reliability. Indeed, over two thirds of the world’s natural gas reserves exist in Russia and the Middle East, regions that currently dominate international LNG trade. These exporters have shown propensity to use energy as a political weapon: The Arab Oil embargoes of 1973; the crisis precipitated from 2006-8 when the Russian energy giant Gazprom repeatedly threatened and eventually did cut off gas supplies to Central and Western Europe; and most recently, an effort spearheaded by Russia, Iran and Qatar to create LNG-cartel on the OPEC (Organization of Oil Exporting Countries) model. Nor are these connections to unstable, frequently unfriendly foreign markets merely theoretical. Exxon’s proposed Blue-Ocean Energy proposal (slated 30-miles south of Long Island) is already contracted to import from LNG from Gazprom. Excalibur’s “Liberty Natural Gas” proposal is closely linked to and likely to import gas from the company’s Libyan contracts, and the Atlantic Sea Island Group’s “Safe Harbor Energy Project” can hardly be expected to do better when the when the nine largest, non-U.S. reserves of natural gas are Russia, Iran, Qatar, Saudi Arabia, the United Arab Emirates, Nigeria, Algeria, Venezuela, and Iraq.<sup>12</sup>

<sup>10</sup> Annual Energy Outlook 2009, Energy Information Administration, DOE/EIA-0383(2009), March 2009, p. 42.

<sup>11</sup> Bill Radke, “Energy Crisis Postponed,” 10 Oct 2009, *Marketplace* (Washington, D.C., Public Radio International); Russell Gold, *Bad Call*, Wall Street Journal, Feb. 9, 2009, p. R7.

<sup>12</sup> U.S. Department of Energy, “25th Anniversary of the 1973 Oil Embargo,” 3 Mar 1998, available at <http://www.eia.doe.gov/emeu/25opec/anniversary.html> (accessed 4 July 2007); “Distribution of proved (natural gas) reserves 1986, 1996 and 2006,” *BP Statistical Review of World Energy 2007*, British Petroleum, slide 19, [http://www.laohamutuk.org/Oil/LNG/Refs/014BPWorldEnergyReview/statistical\\_review\\_full\\_report\\_slidpack\\_2007.pdf](http://www.laohamutuk.org/Oil/LNG/Refs/014BPWorldEnergyReview/statistical_review_full_report_slidpack_2007.pdf) (accessed 17 Oct 2009); John-Laurent Tronche, “Natural Gas Troika Could Have Impact on Shale Plays,” *Fort Worth Business Press*, Jan. 19, 2009, at <http://www.fwbusinesspress.com/display.php?id=9341> (last visited Oct. 5, 2009); Roman Kupchinsky, “Russia, LNG, and the U.S. Natural Gas Market,” *Eurasia Daily Monitor*, Vol. 5, Issue 233, Dec. 8, 2008, at [http://www.jamestown.org/single/?no\\_cache=1&tx\\_ttnews%5Bsword%5D=8fd5893941d69d0be3f378576261ae3e&tx\\_ttnews%5Bany\\_of\\_the\\_words%5D=lng&tx\\_ttnews%5Btt\\_news%5D=34241&tx\\_ttnews%5BbackPid%5D=7&cHash=453e911fa9](http://www.jamestown.org/single/?no_cache=1&tx_ttnews%5Bsword%5D=8fd5893941d69d0be3f378576261ae3e&tx_ttnews%5Bany_of_the_words%5D=lng&tx_ttnews%5Btt_news%5D=34241&tx_ttnews%5BbackPid%5D=7&cHash=453e911fa9) (accessed 5 Oct 2009);



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### Objective 2—Reduce Greenhouse Gas (GHG) Emissions

The Draft Plan’s second Objective is “Reduce GHG Emissions: Support energy and transportation systems that enable the State to significantly reduce GHG emissions, both to do the State’s part in responding to the dangers posed by climate change and to position the State to compete in a national and global carbon-constrained economy.”<sup>13</sup> The allied Surfrider chapters writing here, together with a broader coalition and, indeed the majority of New Yorkers, fully support this laudable goal. Yet, we find ourselves scratching our heads at the Energy Plan’s attitude to LNG, as increased use of LNG can only increase our contribution to global GHG.

Perhaps the committee confused the emissions profile of LNG with domestic natural gas. But the simple fact is that the overall GHG emissions of LNG, which must be cooled and kept at -259°F, make it ‘dirtier’ than coal.<sup>14</sup>

Clearly then, LNG as a fuel is fundamentally incompatible with the Committee’s second objective, a fact that, in our view is enough, by itself, without regard to its many other incompatibilities, to make it a totally unacceptable fuel for New York.

### Objective 3—Stabilize Energy Costs and Improve Economic Competitiveness

New York State’s energy costs are among the highest in the nation, especially for residential electricity which, at 19.5 cents per kilowatt hour, leaves New Yorkers to pay the third highest electric bills in the country.<sup>15</sup> Thus, as New York based citizen groups, the allied Surfrider chapters of New York State understand and endorse the goal of stabilizing and reducing energy costs. But we find our selves again perplexed by the inclusion of LNG in the state’s efforts to achieve that goal. A careful understanding of LNG reveals that it can only make the New York energy market more volatile and expensive for at least three reasons.

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Press Release, *Canadian Superior Kicks Off Its “Oasis” Project by Signing Oil & Gas Exploration and Production Agreements for Large Oil and Gas Concession, Offshore Tunisia and Libya*, news release transmitted by Marketwire, for Canadian Superior Energy, Sept. 3, 2008, at [http://cnrp.cnmatthews.com/client/canadian\\_superior\\_energy/release.jsp?actionFor=895519](http://cnrp.cnmatthews.com/client/canadian_superior_energy/release.jsp?actionFor=895519) (last visited Oct. 6, 2009); “Hard Truths,” National Petroleum Council, (July 2007) 133, Fig. 2-45.

<sup>13</sup> New York Draft 2009 State Energy Plan, State Energy Planning Board, State of New York, Aug. 2009, 2.

<sup>14</sup> Paulina Jaramillo, W. Michael Griffin, and H. Scott Matthews, *Comparative Life-Cycle Air Emissions of Coal, Domestic Natural Gas, LNG, and SNG for Electricity Generation*, Figure 3 Midpoint Life-Cycle GHG Emissions Using Advanced Technologies with CCS, Environ. Sci. Technol. 2007, 41, p. 6295. See also: Richard Heede, *LNG Supply Chain Greenhouse Gas Emissions for the Cabrillo Deepwater Port: Natural Gas from Australia to California*, Climate Mitigation Services, 7 May 2006, 7; John Coequyt, et al., *Liquid Natural Gas: A Roadblock to a Clean Energy Future*, Greenpeace, 3 and *passim*; and Jon Creyts, et al., *Reducing U.S. Greenhouse Gas Emissions: How Much at What Cost?*, U.S. Greenhouse Gas Abatement Mapping Initiative, Executive Report, McKinsey & Company, Dec. 2007, p. xiii, Exhibit B U.S. Mid-Range Abatement Curve – 2030, at <http://www.mckinsey.com/client/service/ccsi/greenhousegas.asp> (last visited Aug. 6, 2008).

<sup>15</sup> Energy Information Administration, “State Ranking 12--Electricity Residential Prices, June 2009,” U.S. Department of Energy, at [http://tonto.eia.doe.gov/state/state\\_energy\\_rankings.cfm?keyid=18&orderid=1](http://tonto.eia.doe.gov/state/state_energy_rankings.cfm?keyid=18&orderid=1) (last accessed 17 Oct 2009).



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1. LNG is By Definition an Expensive Fuel—The heavy refining and shipment costs of LNG means that it’s market price is always higher than domestic natural gas. Between 2003-2008 piped natural gas from domestic and Canadian sources cost an average of \$5.75 per cubic foot, while liquefied imports traded at an average cost of \$7.19 per cubic foot. Thus, U.S. consumers are already paying a 25% premium when they buy LNG over domestic natural gas. But this price disparity is only likely to widen if the U.S. becomes a larger consumer of LNG, as larger, more consistent consumers of LNG in Europe and Asia were paying upwards of \$16 and \$17 per cubic foot for LNG in the same period.<sup>16</sup>

2. LNG development is Likely to Discourage other Energy Infrastructure Development—In 2008 New York consumed 1,190 billion cubic feet of natural gas or approximately 3.2 billion cubic feet of natural gas per day. The three proposed New York area port projects—ASIG’s “Safe Harbor Energy,” Excalibur’s “Liberty Natural Gas,” and Exxon’s “BlueOcean Energy”—would add between 1.2 to 5.6 billion cubic feet of per day capacity to the metropolitan region. Thus, current LNG proposals represent between 37% and 175% of current gas usage. Such enormous overcapacity can only have the effect of discouraging competing investments in infrastructure, most notably by discouraging private investments in new pipeline capacity and alternative energy. Put simply, if these enormous LNG projects are allowed to proceed, New Yorkers will see far less private investment in cheaper, cleaner fuels.<sup>17</sup>

3. Potential for a ‘Perfect Storm’ of LNG Dependence and Failure—While it is quite likely that LNG development will discourage other private infrastructure investment in Southern New York, the energy supply provided by such facilities may not be reliable. One problem that has been noted elsewhere in this document, is that offshore LNG

<sup>16</sup> Energy Information Administration, “Natural Gas Prices (Annual),” U.S. Department of Energy, at [http://tonto.eia.doe.gov/dnav/ng/ng\\_pri\\_sum\\_dcu\\_nus\\_a.htm](http://tonto.eia.doe.gov/dnav/ng/ng_pri_sum_dcu_nus_a.htm) (accessed on 17 Oct 2009). While foreign contract prices are often kept private these numbers can be drawn from the following industry and media reports: “Starting On Empty,” *World Gas Intelligence*, 26 Mar 2008, at [http://www.energyintel.com/DocumentDetail.asp?document\\_id=226738](http://www.energyintel.com/DocumentDetail.asp?document_id=226738) (accessed 6 Aug. 2008); Clifford Krauss, “Global Demand Squeezing Natural Gas Supply,” *New York Times*, 29 May 2008, at [http://www.nytimes.com/2008/05/29/business/29gas.html?\\_r=1&oref=slogin](http://www.nytimes.com/2008/05/29/business/29gas.html?_r=1&oref=slogin) (last accessed on 6 Aug 2008); Steve Hargreaves, “Abundant Clean Energy in Your Backyard,” *CNNMoney.com*, Apr. 18, 2008, at [http://money.cnn.com/2008/04/17/news/economy/natural\\_gas/index.htm?section=money\\_mostpopular](http://money.cnn.com/2008/04/17/news/economy/natural_gas/index.htm?section=money_mostpopular) (accessed on 6 Aug 2008); “Argentina Set To Get First LNG -- For \$14,” *World Gas Intelligence*, 23 Apr 2008, at [http://www.energyintel.com/DocumentDetail.asp?document\\_id=229044](http://www.energyintel.com/DocumentDetail.asp?document_id=229044) (accessed on 6 Aug 2008); “CCGTs Cheaper To Run In Spain Than Coal-Fired Plants,” *World Gas Intelligence*, 23 Apr 2008, at [http://www.energyintel.com/DocumentDetail.asp?document\\_id=228854](http://www.energyintel.com/DocumentDetail.asp?document_id=228854) (accessed on 6 Aug 2008); Erwin Chan and Angus Rodger, “Singapore’s Not-So-Secret LNG Hub Trading Ambitions,” *World Gas Intelligence*, 23 Apr 2008, at [http://www.energyintel.com/DocumentDetail.asp?document\\_id=228843](http://www.energyintel.com/DocumentDetail.asp?document_id=228843) (accessed on 6 Aug 2008); Ann Davis and Russell Gold, “Surge in Natural-Gas Price Stoked by New Global Trade,” *Wall Street Journal*, 18 Apr 2008, A7.

<sup>17</sup> Energy Information Agency, “New York Natural Gas Consumption by End Use,” U.S. Department of Energy, 29 Sep 2009 [http://tonto.eia.doe.gov/dnav/ng/xls/NG\\_CONS\\_SUM\\_DCU\\_SNY\\_A.xls](http://tonto.eia.doe.gov/dnav/ng/xls/NG_CONS_SUM_DCU_SNY_A.xls) (accessed 17 Oct 2009); The Atlantic Sea Island Group’s (ASIG) “Safe Harbor Energy,” would have a capacity of 2 billion cubic feet per day, “Safe Harbor Energy: Project Overview” at [http://www.atlanticseaislandgroup.com/project\\_overview.shtml](http://www.atlanticseaislandgroup.com/project_overview.shtml) (accessed 17 Oct 2009); Excalibur Energy’s “Liberty Natural Gas” would have a capacity of 2.4 billion cubic feet per day, “What is Liberty Natural Gas,” at <http://www.libertynaturalgas.com/> (accessed 17 Oct 2009); Exxon’s “BlueOcean Energy” would have a capacity of 1.2 billion cubic feet per day, “Blue Ocean Energy: About the Project,” at <http://www.blueoceanenergy.com/TheProject/AbouttheProject/tabid/60/Default.aspx> (accessed 17 Oct 2009).



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port facilities would be extremely vulnerable to weather related disruption or catastrophe. Another, and even more likely threat, would be the economic failure of these facilities as they fail to compete on price. As has already been demonstrated, the economics of LNG import business suggest that most existing port facilities are unprofitable and in danger of bankruptcy. Thus, it seems quite likely that LNG development in New York would doubly hurt the New York energy market by going out of business after having effectively displaced other competitive energy infrastructure projects.<sup>18</sup>

### Objective 4—Reduce Public Health and Environmental Risks

Though the thrust of our comments is that LNG is clearly antagonistic to all five of the Committee’s goals, the threats posed to health and the environment are clearly the most grave. Indeed, these safety and environmental costs are so numerous and profound as to receive only abstracted treatment here. Yet, we contend that these problems—which we have divided into four categories of concern (accidents due to human error, weather related accidents, terrorism, and environmental pollution)—are so serious that they should, in and of themselves, cause the committee to eliminate LNG from consideration in New York State’s energy plan.

1. Accidents Due to Human Error—The potential for spills or fire will always exist in an LNG facility. The large scale expansion of LNG facilities is a fairly new development and there is scant information available concerning the safety of existing facilities, making it difficult to truly assess the risk. Nevertheless, a few things can be said with certainty, the first of which is that potential damage from an LNG spill or fire is great. Proponents of LNG like the Center for Liquefied Natural Gas argue that LNG is “not explosive” and that it is “not even flammable in its liquid state.” Yet, these are misleading characterizations that obscure the fact of the fuel’s propensity to regasify and combust. Once it begins to escape or leak, LNG rapidly warms and regasifies. Once it reaches a concentration of between 5 and 15% in the ambient air, it becomes extremely flameable. Something as innocuous as a cell phone can set off such gas, at which point it will combust at extremely high temperatures of 3000°F or more. Note also that once ignited LNG fires burn so hot that people can be killed or seriously burned by thermal radiation several miles away from the actual conflagration. Nor can an LNG fire be extinguished; it must simply burn until it is fully consumed, leading one LNG executive to compare an LNG pool fire to “a nuclear meltdown.” The combined energy load of the proposed port facilities is difficult to estimate but as a basis for comparison, a fire on just one average sized, 125-thousand-cubic meter LNG tanker ship has been estimated at seven-tenths of a TNT megaton or approximately the power of fifty-five Hiroshima bombs. Indeed, the greatest hazard to people and private property may well come from ships themselves. Recent cases stand out: in just the last two years LNG tankers bound for the Everett, Massachusetts terminal have lost power and been set adrift in two separate incidents. Nor, is there any reason to believe that accidents or disruptions are less likely to occur in New York harbor. Here, the incidents of navigational error at the Abrose Light Tower are instructive. This 120 foot navigational light tower has been struck by large, professionally crewed commercial ships three times since 1960, leading to fair speculation about the

<sup>18</sup> Russell Gold, *Bad Call*, Wall Street Journal, Feb. 9, 2009, p. R7.



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safety of any ship traveling in the New York harbor, much less LNG tanker ships carrying a combustible energy equivalent to many nuclear bombs.<sup>19</sup>

2. Weather Related Accidents—Weather related accidents are similar threat to and could contribute to all the human errors described above, with equally catastrophic potentials. Yet, we feel compelled to add that the risk of storm damage to any facility that might be constructed is considerably higher for our region than in other regions where they have been built. This is true because the geography of our region would require any LNG facility to be built in the open ocean where they will be exposed to the full brunt of Atlantic Hurricanes and Nor'easters. These storms are a regular and predictable part of the New York maritimes. Such storms strike approximately ten times per year and have made major changes to the coastline, including the destruction of entire barrier islands. The principals behind the current LNG proposals have made extravagant claims about the survivability of the structures they wish to build. But similar promises made by petroleum executives about survivability turned out to be all but worthless when Hurricanes Katrina and Rita rolled into the Gulf Coast causing major spills, the destruction of 113 platforms and major damage to another 120. The artificial island being proposed in ASIG's "Safe Harbor Energy Plan" is particularly worrisome. The plan calls for an island that will be 25 feet above sea level in waters where wave heights of greater than 55 feet are not uncommon. Such faulty planning seems to make life threatening and habitat destroying disaster not only possible but likely.<sup>20</sup>

3. Terrorism—In spite of rigorous post-911 security efforts, New York remains the world's most prominent terrorist target and LNG would be a perfect weapon for terrorist to use in any attack on New York. The

<sup>19</sup> "LNG is Safe and Secure," Center for Liquefied Natural Gas, <http://www.lngfacts.org/About-LNG/Safety.asp> (accessed 17 Oct 2009); *Spotlight On LNG*, (video) Center for Liquefied Natural Gas (accessed 17 Oct 2009); Amory Lovins and L. Hunter Lovins, *Brittle Power* (Jack Howell ed., Brick House Publishing Co. 1982) (1982), 87-89; Theo van de Kletersteeg, "LNG: Birth of a New Industry," *Canadian Sailings*, 23 June 2008; CRS Report for Congress, Liquefied Natural Gas (LNG) Infrastructure Security: Background and Issues for Congress, Congressional Research Service, The Library of Congress, Order Code RL 32073, Sep. 9, 2003, p. CR-8; Government Accountability Office, Report to Congressional Requesters, Maritime Security, Public Safety Consequences of a Terrorist Attack on a Tanker Carrying Liquefied Natural Gas Need Clarification, GAO-07-316, Feb. 2007, 2; Morris, "Lineup for LNG project Adds a Competitor," *The Oregonian*, 13 Oct. 2008, at [http://www.oregonlive.com/business/index.ssf/2008/10/lineup\\_for\\_lng\\_project\\_adds\\_a.html](http://www.oregonlive.com/business/index.ssf/2008/10/lineup_for_lng_project_adds_a.html) (accessed 6 Oct. 2009); "2<sup>nd</sup> Incident Involving an LNG Tanker Off Coast Stirs Critics," *Boston Globe*, 29 Dec 2008, at [http://www.boston.com/news/local/massachusetts/articles/2008/12/29/2d\\_incident\\_involving\\_an\\_lng\\_tanker\\_off\\_coast\\_stirs\\_critics/](http://www.boston.com/news/local/massachusetts/articles/2008/12/29/2d_incident_involving_an_lng_tanker_off_coast_stirs_critics/) (accessed 25 August 2008).

<sup>20</sup> A.. Naparstek, "Storm Tracker," *New York Magazine*, Sept. 4, 2005, at <http://nymag.com/nymetro/news/people/columns/intelligencer/12908/> (accessed 30 Jul 2008); "Nor'easters," Storm-E" at <http://www3.cet.edu/weather2/h17.html> (accessed 27 Aug 2008); "Safe Harbor Energy Project Deepwater Port License Application," Vol. 3, Part 1, Topic Report 3, Biological Resources, (Atlantic Sea Island Group, Aug. 2007), 5; "Recently Asked Questions," BlueOcean Energy, (ExxonMobil), at <http://www.blueoceanenergy.com/RecentlyAskedQuestions/tabid/72/Default.aspx> (accessed 1 Aug 2008); "Petroleum Spills of One Barrel or Greater from Federal Outer Continental Shelf Facilities Resulting from Damages Caused by 2005 Hurricanes Katrina and Rita Including Post-Hurricane Seepage Through June 2007," Minerals Management Services, U.S. Department of Interior, Revised July 30, 2007, p. 6, at <http://www.mms.gov/incidents/PDFs/HurrKatrinaRitaSpillageRev30Jul2007.pdf> (accessed 26 Aug. 2008); Recently Asked Questions, BlueOcean Energy, ExxonMobil, at <http://www.blueoceanenergy.com/RecentlyAskedQuestions/tabid/72/Default.aspx> (accessed 1 Aug 2008); Station ALSN6 – Ambrose Light, NY, National Data Buoy Center, National Oceanic and Atmospheric Administration, Department of Commerce, at [http://www.ndbc.noaa.gov/station\\_history.php?station=alsn6](http://www.ndbc.noaa.gov/station_history.php?station=alsn6) (accessed 27 Aug 2008).



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## “To Protect the World’s Oceans, Beaches and Waves”

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commander of the U.S. Coast Guard’s 11th District, Admiral Kevin Eldridge, recently stated that an attack by ship on U.S. shores was so “likely” that it had become a major planning consideration for the Coast Guard. Even so Eldridge warned that Coast Guard didn’t have “enough ships” or “enough planes” to “set up a picket line” that would prevent it. He continued, “we’re pushing our borders out. Frankly, if we have a vessel in our port that has a problem, it’s too late.” A report by the General Accounting Office agreed, noting that “the Coast Guard . . . reports insufficient resources to meet its own self imposed security standards, such as escorting ships carrying liquefied natural gas.” An attack on any one of the proposed New York facilities would be likely to cause profound economic disruption and a significant number of casualties to those working or recreating within several miles of the facility. Moreover, the proximity of large LNG tankers operating within the New York City port area could easily be hijacked and run on shore with the potential to cause a truly staggering loss of life.<sup>21</sup>

4. Environmental Pollution—The environmental damage caused by the construction and operation of even one LNG port would be profound. Indeed, these are the most important reasons that the Committee should eliminate LNG from consideration in New York’s Energy Plan. These affects are particularly pernicious since the offshore waters where LNG ports would sit are so critical to the health of the Atlantic ecosystems. Known as the ‘New York / New Jersey Bight,’ this 19,000 square mile ‘wedge shaped’ area which extends from Montauk Point, New York to Cape May, New Jersey, is an incredibly vibrant littoral that has broad effects on the health of the entire Atlantic ecosystem. It provides habitat to more than 300 species of fish, nearly 350 bird species, 7 species of sea turtles, and dozens of marine mammals including porpoises, seals, and 10 whale species. The region has federal designation as “Essential Fish Habitat” (EFH) for numerous species including Atlantic cod, whiting, red hake, flounders (5 species), ocean pout, Atlantic sea herring, monkfish, bluefish, scup, sea bass, king and spanish mackerel, cobia, as well as various species of shark and tuna. According to the U.S. Fish and Wildlife Service “the [NY/NJ] Bight has one of the highest diversities of marine mammals and sea turtles reported anywhere in the United States.” Not surprisingly, these waters support multibillion dollar recreational and fishing industries to say nothing of the water related property values that need to be protected. But an even more important consideration is the Atlantic wide impact of the region which must be managed with an eye to global protection of oceanic biodiversity.<sup>22</sup> While the scope of these comments will only allow a short discussion, a brief abstract of two key areas of inevitable LNG related pollution will suffice to demonstrate that LNG development would come at an unacceptable price.

1. Benthic (e.g. Seafloor) Degradation—Construction of LNG terminals will cause major disruptions to the bottom. These include the construction of major trenches for undersea pipeline connections that will create 75 foot

<sup>21</sup> Cindy Hurst, “The LNG Threat: Liquefied Natural Gas Tankers Remain Giant Terror Targets,” *The Cutting Edge* 16 June 2008 at <http://www.thecuttingedgenews.com/index.php?article=531> (accessed 16 Oct 2009);

<sup>22</sup> Significant Habitats and Habitat Complexes of the NY Bight Watershed, U.S. Fish and Wildlife Service, Nov. 1997 at [http://training.fws.gov/library/pubs5/web\\_link/text/int\\_fish.htm#Marine%20Mammals%20and%20Sea%20Turtles](http://training.fws.gov/library/pubs5/web_link/text/int_fish.htm#Marine%20Mammals%20and%20Sea%20Turtles) (last visited July 24, 2008); “Who is involved in conserving EFH and how does it work? Essential Fish Habitat,” Office of Habitat Protection, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, at [http://www.nmfs.noaa.gov/habitat/habitatprotection/efh/index\\_e.htm](http://www.nmfs.noaa.gov/habitat/habitatprotection/efh/index_e.htm) (last visited Aug. 4, 2008); “Summary of Essential Fish Habitat Designations,” National Oceanic and Atmospheric Administration, at [http://www.nero.noaa.gov/hcd/STATES4/conn\\_li\\_ny/40207340.html](http://www.nero.noaa.gov/hcd/STATES4/conn_li_ny/40207340.html) (last visited Aug. 1, 2008).



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wide swaths of disturbed bottom material, causing mortality to lobsters, oysters, crabs, quahogs, bottom feeding fish, and microorganisms. The ASIG “Safe Harbor Energy Project” would have the largest destructive footprint as the construction of this artificial island would cover 116 acres of the bottom with fill of unknown origin, to say nothing of the anchoring damage of chains that would continually disturb an area of another 65 acres. But the floating turret buoys of Excalibur’s “Liberty Natural Gas” and the large anchoring areas of Exxon’s “Blue Ocean Energy” projects would also create enormous swaths of destruction similar to those at the Northeast Gateway LNG facility in Massachusetts. Here each buoy’s anchor chain drags across a 38-acre section of bottom that is so damaged by the impact that the Minerals Management Service estimates recovery of the benthic habitat would take 20 years or more. It is worth noting that the “Liberty Natural Gas” project would use four turrets similar in size and design to the Northeast Gateway project and could thus be expected to decimate an area of more than 152 acres.

2. Seawater Pollution—The quality of water will be greatly degraded by the disturbance of sediments (which are likely to contain extremely hazardous contaminants from earlier dumping) during construction. Water contamination will continue throughout the active life of any LNG facility as large volumes of sea water are used for ballasting operations, the cleaning of tanker holds, and the regasification process itself. These processes, involving billions of gallons of seawater will cause the entrainment and impingement of aquatic organisms. The use of water for regasification and ballast will cause thermal pollution that kills aquatic organisms that can not tolerate such changes in ambient temperature. At times water will be released with trace amounts of chlorine and other biocides. While a more fundamental view of the volume and of contamination isn’t possible here, some measure of the scope and the severity of the situation can be taken from a study of the Northeast Gateway LNG port which estimated that ship operations alone destroy 10.4 trillion phytoplankton, 342 billion zooplankton, 27,000 lobster larvae, two million fish eggs, and 743,000 fish larvae each year.<sup>23</sup>

This is by no means an exhaustive list of environmental consequences. Other pollution problems will include but not be limited to light pollution, vessel strikes, noise pollution, invasive species impact, and air pollution that will not only add significantly to GHG emissions but also contribute to a degradation of local air quality.<sup>24</sup>

### Objective 5—Improve Energy Independence

The Committee’s final objective—to “improve the State’s energy independence and diversity by developing in-state supplies of clean energy”—requires the least discussion here. The development of a new domestic market for LNG—which is always and without exception foreign fuel—is simply antithetical to energy independence.

### Conclusion

We have submitted these comments in the sincere hope that they will be a corrective to a single, though serious, mistake in a plan who’s stated five objectives are so clearly admirable as to please virtually all New Yorkers. And we hope that the merits and facts of the case presented here will be more than enough to convince the Committee,

<sup>23</sup> David Byer, and Heather Saffert, “LNG: An Un-American Energy Source,” Clean Ocean Action, Sep 2008, 42-55; Northeast Gateway Final Environmental Impact Statement, Docket No. USCG-2005-22219, p. 4-33 – 4-35 and p. 4-37 (Oct. 2006)

<sup>24</sup> Byer and Saffert, “LNG: An Un-American Energy Source,” Ibid.



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as well as our Governor, the man who appointed the Committee and commissioned the plan, to make the needed revisions so that New York will finally ‘close the door LNG.’ But it is important to note now that the people of New York—from the two thousand New York based Surfrider Foundation activists to our broader coalition of allied groups and individuals—are already well ahead of the policy makers in their understanding of this issue. Thousands of them have signed petitions against LNG development, attended protests. In literally dozens of packed LNG and Energy Plan hearings the people have given thoughtful, knowledgeable testimony that has been almost without exception antagonistic to all LNG development. In the end this may be and probably should be the most powerful argument. The citizens of New York understand the costs of LNG and they are nearly united against it. We look forward to hearing from you.

Sincerely,

Christopher S. Wade  
Chair, NYC-Chapter of the Surfrider Foundation