

UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

**Federal Consistency Appeal
by Broadwater Energy LLP
From an Objection by the
New York Department of State**

Principal Brief of the New York Department of State

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STATEMENT OF THE CASE

On April 10, 2008, the New York State Department of State (NYSDOS) objected to the consistency certification for the Broadwater Energy, LLC and Broadwater Pipeline, LLC (collectively, Broadwater) project. Pursuant to the Federal Coastal Zone Management Act (CZMA) (16 USC §§ 1451 et seq.), NYSDOS determined that the Project, as currently proposed, would have significant and long term adverse coastal effects, rendering it inconsistent with Policies 1, 3, 6, 9, 10 and 11 of the Long Island Sound Coastal Management Program (LISCMP).

Broadwater proposed installing a Floating Storage and Regasification Unit (FSRU) in the center of the Long Island Sound (Sound), along with a yoke mooring system and a submerged 21.7-mile-long natural gas pipeline that would connect to the existing cross-Sound Iroquois Gas Transmission System (IGTS). Liquefied natural gas (LNG) carriers would deliver their product to the FSRU approximately 3 times each week. The U.S. Coast Guard requires safety and security zones be established around both the FSRU and the LNG carriers, precluding the public and all vessels¹ from using or navigating the zone areas.² The recurring carrier exclusion zones would be present in Long Island Sound or Block Island Sound for 6 out of every 7 days and would last up to 40 hours for each LNG delivery.³ If approved, Broadwater would create an immense floating industrial complex obstructing currently open public waters in the center of the Sound.

The NYSDOS respectfully submits its principal brief in this matter and requests that the Secretary reject Broadwater's appeal in its entirety. Appellant is not entitled to relief because the project is neither consistent with the objectives or purposes of the CZMA, nor necessary in the interest of national security.

¹ The Coast Guard's Letter of Recommendation (LOR), dated June 25, 2008, makes no exceptions for any vessel into the exclusion zones.

² Final Environmental Impact Statement (FEIS) [Doc. # 1911_0007] at 3-140 (BW28987).

³ Waterways Suitability Report (WSR) [Doc. #364_0002] at 39, 56 (BW7645). This would include transiting each way, berthing, offloading and deberthing.

THRESHOLD ISSUES

I. The Safety And Security Zones Represent Coast Guard Conditions Without Which The Project Cannot Be Approved

In its Initial Brief, Broadwater argues that NYSDOS, in its consistency decision, should not have considered the “safety and security zones” for the Broadwater Project. They argue that NYSDOS’s Objection “conflates the coastal effects that may result from the Coast Guard’s [safety and security zones] with effects from the Project itself.”⁴ Broadwater’s initial brief further states that NYSDOS’s “analysis of the coastal effects of the Project in this appeal must be limited to only those effects that result from the Project itself, and not the effects that result from the Coast Guard’s future establishment” of the safety and security zones.⁵ This argument lacks merit and has already been rejected by the Secretary.⁶

The safety and security zones serve two purposes: “to reduce risks to the public by limiting access to the areas of highest consequences should an LNG fire occur, and, to provide a security perimeter to protect the FSRU and LNG tankers.”⁷ The U.S. Coast Guard has the lead responsibility in assessing the safety and security of the FSRU in its classification as a marine facility in U.S. territorial waters, as well as the safety and security for the LNG carriers while berthed at the FSRU and while in transit to and from the FSRU in U.S. territorial waters.⁸ On June 27, 2008, the U.S. Coast Guard issued its Letter of Recommendation (LOR), which incorporated the recommendations of its Waterways Suitability Report (WSR) of September 21, 2006, with respect to the size and limits of the safety and security zones for the Broadwater Project.⁹ In the LOR, the U.S. Coast Guard found that “the waterway is not currently suitable” for the Broadwater Project and its associated impacts, absent implementation of the risk mitigation factors, including establishment of safety and security zones.¹⁰

⁴ Broadwater’s Initial Brief at 3.

⁵ Id. at 3. Indeed, under section 1456(c)(3)(A) of the CZMA, all federal permit and direct actions affecting the coastal zone are future activities in that they are contemplated to occur after completion of the consistency review process.

⁶ See Decisions and Findings in the Consistency Appeals of Weaver’s Cove Energy and Mill River Pipeline from an Objection by the Commonwealth of Massachusetts (June 26, 2008) at 18-19. (“Weaver’s Cove Appeal”).

⁷ Coast Guard Report on the Broadwater Energy LNG Proposal [Doc. #364_0001], September 21, 2006, at 3 (BW7584).

⁸ See WSR [Doc. #364_0002] at 141, n. 249 (BW7730). It should be noted that FERC rendered its Final Order on March 20, 2008, prior to receipt of the Coast Guard’s LOR on June 27, 2008.

⁹ See US Coast Guard Letter of Recommendation (LOR), NYSDOS Supplemental Document # 2, (June 25, 2008), requiring compliance with WSR, § 8.4.1.

¹⁰ See LOR (June 25, 2008), requiring compliance with WSR § 8.4.1; USCG Record of Decision (June 27, 2008) at 1. The recommendation that “the waterway is currently unsuitable is the functional equivalent of the no-action alternative, as described in FERC’s EIS.” Id.

The US Secretary of Commerce considered an almost identical challenge in the Consolidated Consistency Appeals of Weaver's Cove Energy and Mill River Pipeline (June 26, 2008) (“Weaver’s Cove Appeal”). There, Weaver’s Cove argued that LNG tanker transit and delivery plans were beyond the scope of the proposal being reviewed by Massachusetts for consistency. The Secretary rejected Weaver’s Cove’s argument and held that Massachusetts was entitled to consider “reasonably foreseeable future activities” occurring in the coastal zone, especially as may be relevant when considering the cumulative adverse effects of other activities in the coastal zone. The US Secretary of Commerce stated:

Adverse coastal effects are not limited to environmental effects. Rather, the term ‘adverse coastal effects’ can include safety risks to coastal users. 15 C.F.R. § 930.11(g). Given existing regulations and precedent, this assessment must consider any adverse coastal effects associated with the delivery of LNG to the terminal. Safety concerns are plainly adverse coastal effects that are a reasonably foreseeable consequence of the Project.¹¹

Since its inception, the safety and security zones have been an inseparable component of the Broadwater Project. The zones were included in Broadwater’s original and revised federal consistency certifications,¹² the FEIS¹³ and the US Coast Guard’s recently issued LOR.¹⁴ The Broadwater proposal cannot proceed without the establishment by the US Coast Guard of safety and security zones around the FSRU and the LNG tankers and NYSDOS correctly considered them in its consistency decision.

II. NYSDOS Correctly Applied the Enforceable Policies of the Long Island Sound Coastal Management Program to the Broadwater Project

In 2002, the U.S. Commerce Department's Office of Ocean and Coastal Resource Management (OCRM) approved a change to the New York State Coastal Management Program (NYSCMP) to include regional coastal programs as special management areas. At the same time, OCRM approved the incorporation of the LISCMP, a

¹¹ Weaver’s Cove Appeal at 18-19.

¹² Coastal Zone Consistency Determination (April 2006) [Doc. #265_0002] Chapter 4 at 203 (BW4945); Revised Coastal Zone Consistency Certification (October 2006) [Doc. #376] Chapters 2 and 4 and Appendices E & F contain numerous references to the establishment of safety and security zones. For instance: “Now that the WSR has been issued, Broadwater has revised Appendices E and F of the CZCC to reflect the safety and security zones recommended by the Coast Guard in the WSR. The primary changes to these Appendices relate to the Coast Guard’s recommendation for a 1,210 yard safety zone around the FSRU.” Revised Coastal Zone Consistency Certification (October 2006) at BW8190.

¹³ See FEIS [Doc. #1911_0007] § 3.5.1 at 3-126 to 3-129 (BW028973 - BW028976); and § 3.5.5 at 3-139 to 3-145 (BW028986 - BW028992). Two maps at Figure 3-5.3 show the safety and security zones in the Sound, at 3-143 and 3-144 (BW28990 and BW28991). The LNG tanker routes are shown on Figure 3.0-1 at 3-6 (BW28853).

¹⁴ See LOR (June 25, 2008) requiring compliance with WSR. § 8.4.1.

regional coastal management program, into the NYSCMP.¹⁵ The LISCMP contains 13 coastal policies which provide region-specific standards that address the economic, environmental, and cultural characteristics of the Long Island Sound coastal region and serve as the basis for federal and state consistency determinations for activities affecting the Long Island Sound coastal area.¹⁶ NYSDOS utilized the enforceable policies of the LISCMP in objecting to the consistency of the Broadwater proposal.

Broadwater's claim that NYSDOS used other policies in place of or in addition to the LISCMP enforceable policies is incorrect. Citing to the recent Fourth Circuit decision in AES Sparrows Point LNG, LLC v. Smith, 527 F.3d 120 (4th Cir), Broadwater suggests that any background resource material referenced by NYSDOS in its decision must, like the regional policies themselves, first be submitted to NOAA for approval. Broadwater specifically points to the consistency decision references to the Long Island North Shore Heritage Area Management Plan (LINSHA), the Town of Riverhead Comprehensive Plan and Volume 2 of the LISCMP.¹⁷ A review of the consistency decision makes clear that NYSDOS cited several regional and local land use plans for current data, statistics and information on specific matters related to the LISCMP policies. To the extent that any of the referenced documents contained policy directives, they were not followed by NYSDOS and nowise substituted for the enforceable policies of the LISCMP. NYSDOS clearly and exclusively relied upon the LISCMP policies and subpolicies as the standards in reaching its conclusion. Broadwater's attempt to criticize NYSDOS for referring to LINSHA and other plans is particularly surprising since it also referenced such material in its original consistency certification.¹⁸

Broadwater also faults NYSDOS for not utilizing LISCMP subpolicy 13.4, which deals with the safe

¹⁵ See NYSDOS Supplemental document #4; see also 16 U.S.C. § 1452 (3) and § 1455(d)(9).

¹⁶ See January 23, 2002 Routine Program Change at 4; see also LISCMP at 1. The LISCMP "refines the existing New York State Coastal Management Program and incorporates the existing array of programs and laws governing activities in the coastal area."

¹⁷ See Broadwater's Initial Brief at 5 and 6. Broadwater complains that NYSDOS "relied" upon a "so-called" Volume 2 of the LISCMP in its Objection, that Broadwater contends was never submitted to NOAA for approval as an enforceable policy of the LISCMP. Broadwater is wrong. Both the LISCMP and Volume 2 were submitted as a complete package to NOAA, which subsequently approved the LISCMP as a routine program change. The LISCMP states that "[t]he findings which follow are summarized from the detailed analyses presented in Volume 2 of the Long Island Sound Coastal Management Program." LISCMP at 13. The LISCMP as originally drafted consisted of approximately 700 pages. The draft was eventually divided into two volumes in an attempt to make it more reader-friendly. Volume 2, which was filed with NOAA, was a compilation of statistics and background data, not enforceable policies. The LISCMP is the operative document. To the extent Broadwater is challenging OCRM's ability to evaluate and approve a routine program change, such a collateral attack on the February 20, 2002 approval of the LISCMP by OCRM must be rejected in its entirety.

¹⁸ See Broadwater's New York State Coastal Zone Consistency Determination, filed with NYSDOS on April 4, 2006 [Doc. # 265] at 160-161 (BW4902-4903).

siting of LNG facilities, in the Objection.¹⁹ Recognizing OCRM's position that "*exclusive* authority to approve or deny an application for the siting, construction, expansion, or operation of an LNG terminal" has been granted to FERC by the Energy Policy Act of 2005 amendments to the Natural Gas Act, NYSDOS considered its LISCMP subpolicy 13.4 to be unenforceable.²⁰

MAIN ARGUMENT

GROUND I

BROADWATER'S APPEAL SHOULD BE DISMISSED BECAUSE THE PROJECT IS NOT CONSISTENT WITH THE OBJECTIVES OF THE CZMA

In order to find that a project is "consistent with the objectives of the Act" the Secretary must find that the action satisfies each of the following three requirements (or elements) of 15 CFR § 930.121:

- (a) The activity furthers the national interest as articulated in § 302 [16 USC § 1451] or 303 [16 USC § 1452] of the Act, in a significant or substantial manner.
- (b) The national interest furthered by the activity outweighs the activity's adverse coastal effects, when those effects are considered separately or cumulatively.
- (c) There is no reasonable alternative available which would permit the activity to be conducted in a manner consistent with the enforceable policies of the management program.

Broadwater cannot show by a preponderance of the evidence that its proposed activity satisfies any of the elements stated in 15 CFR §930.121. Therefore, Broadwater cannot show that its proposed activity is consistent with the objectives and purposes of the CZMA. To the extent that it attempts to attack the merits of the NYSDOS objection, the state's objection is accorded "an irrebuttable presumption of substantive correctness."²¹ The Broadwater appeal should be dismissed.

Element 1: The Broadwater Project Does Not Further the National Interest in a Significant or Substantial Manner.

Broadwater fails to demonstrate that the Project furthers the national interest, as defined in sections 302 or 303 of the CZMA, in a significant or substantial manner because it attempts to introduce development into a non-

¹⁹ Broadwater additionally attempts to correct the Objection by stating that it should have included a discussion of LISCMP subpolicy 13.3, which deals with the siting "major energy generating facilities." Broadwater's project does not involve major generation of energy, therefore subpolicy 13.3 is inapplicable.

²⁰ Letter by David Kennedy, Senior Policy Analyst, OCRM, to Ruth E. Ehinger, Coastal Program Manager for the New Jersey Department of Environmental Protection, dated October 4, 2006 at 3 (emphasis in original), NYSDOS Supplement Document No. 10; see also Energy Policy Act (2005) § 311(c)(2); Natural Gas Act § 3(d); 15 U.S.C. § 717b(d).

²¹ See Consistency Appeal of Chevron U.S.A., Inc. from an Objection by the California Coastal Commission (October 29, 1990) at 6, 7 ("Chevron Appeal"). Broadwater's attempts to discredit NYSDOS's consistency decision are irrelevant to the issues on appeal.

industrialized location of an Estuary of National Significance. Broadwater's national interest argument is the equivalent of arguing that the nation's energy needs permit the siting of an energy facility in the middle of Yosemite National Park.²² The CZMA does not sanction this result.

1. Siting of the Broadwater Project in a Non-Industrialized Area of the Sound is Not Supported by the CZMA

Congress has defined the national interest in coastal zone management to include both protection and development of coastal resources. A wide variety of activities have been found to meet the competing goals of resource protection and development, including the siting of coastal-dependent energy facilities under certain circumstances. Section 1452 (2)(D) of the CZMA directs that states' coastal programs provide for:

priority consideration being given to coastal-dependent uses and orderly processes for siting major facilities related to national defense, energy, fisheries development, recreation, ports and transportation, and the location, to the maximum extent practicable, of new commercial and industrial developments **in or adjacent to areas where such development already exists.** (emphasis added.)

In recent decisions, the Secretary has emphasized that LNG facility development should occur, to the maximum extent practicable, in areas where industrial development already exists.²³ In Weaver's Cove Appeal, the Secretary declined to override Massachusetts' objection but noted that the project would have been sited in a "73-acre brownfield site formerly used as a petroleum products terminal."²⁴ In AES Sparrows Point II Appeal, the Secretary noted "[t]he 80-acre LNG terminal site would be located in the footprint of a former steel manufacturing and shipbuilding facility in the Sparrows Point Industrial Complex, a heavily industrialized area adjacent to Interstate 695 east of the Port of Baltimore."²⁵

²² In context, Broadwater would be analogous to the construction of a private 900 acre factory in the center of Yosemite National Park, which, at 1,200 square miles in area, is similar in size to Long Island Sound.

²³ Weaver's Cove Appeal at 8-9, 27, 39; Decision and Findings by the U.S. Secretary of Commerce in the Consistency Appeal of AES Sparrows Point LNG, LLC and Mid-Atlantic Express, L.L.C. from an Objection by the State of Maryland (June 26, 2008) ("AES Sparrows II Point Appeal") at 2, 11-12.

²⁴ Weaver's Cove Appeal at 27, 39.

²⁵ AES Sparrows Point II Appeal at 2. The Secretary found that the Project served that national interest because "[t]he Project is a major coastal-dependent energy facility sited in an existing industrial area" (at 11) and the LNG terminal would be located in a section of the Port of Baltimore "that is zoned for heavy industrial use and classified as an Intensely Developed Area under Maryland law" (at 12), ("the Project involves the siting of a major coastal-dependent energy facility in an area where such

At nine miles from the closest shoreline, Broadwater’s project is nowhere near development.²⁶ The open waters of Long Island Sound contain no floating or over-water industrial complexes.²⁷ Long Island Sound has been recognized by Congress as a “national treasure of great cultural, environmental, and ecological importance” where “much of the remaining exemplary natural landscape is vulnerable to further development.”²⁸ Not only has the Sound received federal recognition under the Long Island Sound Stewardship Act, it is also designated as an Estuary of National Significance by the U.S. Environmental Protection Agency (EPA)²⁹ which stated that “[t]he Sound provides feeding, breeding, nesting and nursery areas for a diversity of plant and animal life, and contributes an estimated \$5.5 billion per year to the regional economy from boating, commercial and sport fishing, swimming, and sight-seeing.”³⁰ It is valued for its high natural and scenic quality, its concentration of heritage features and its traditional water-dependent economies, and outstanding ecological, cultural, and recreational values, the benefits of which accrue to all American citizens.³¹

If permitted, the new industrial zone created by Broadwater in the center of the Sound will set a precedent as an area “where such development already exists.”³² Once industrialized, the very programs intended to foster “wise use of the land and water resources of the coastal zone”³³ may bring about a Long Island Sound filled with multiple, private, floating industrial complexes, sited together to take advantage of the CZMA policy favoring the

development already exists”) (at 41).

²⁶ In its Initial Brief at page 8, Broadwater removed the last clause of 16 U.S.C. § 1452(2)(D), which addresses the need to concentrate “new commercial and industrial developments in or adjacent to areas where such **development already exists**” (emphasis added). Broadwater’s selective quotation of 16 U.S.C. § 1452(2)(D) directly contradicts an actual reading of the CZMA.

²⁷ The Secretary has once before determined that the siting of a permanent structure directly in coastal waters did not further the national interest. See Decision and Findings of the Secretary of Commerce in the Consistency Appeal of John K. Delyser from an Objection by New York Department of State, (February 26, 1988).

²⁸ The Long Island Stewardship Act § 2(a)(1) and (8), Public Law 109–359, (October 16, 2006).

²⁹ The EPA National Estuary Program plans for the protection of the environmental and public values of designated estuaries, the benefits of which accrue to all American citizens.

³⁰ EPA website: www.epa.gov/ne/eco/lis/; see also Feb. 19, 2008 letter from Patricia A. Kurkul, NMFS to Kimberly D. Bose, FERC [Doc. #1936] at 2 (BW32866). “The LIS is a unique and highly productive estuarine ecosystem that has been designated as an “Estuary of National Significance.”

³¹ See www.epa.gov/ne/eco/lis/.

³² 16 U.S.C. §1452(2)(D).

³³ 16 U.S.C. §1452(2).

siting of new infrastructure with existing infrastructure, which was intended to minimize impacts in undeveloped areas.³⁴ This disturbing vision is clearly not the intent of the CZMA, which had the foresight to recognize that

(e) Important ecological, cultural, historic, and esthetic values in the coastal zone which are essential to the well-being of all citizens are being irretrievably damaged or lost....(f) New and expanding demands for food, energy, minerals, defense needs, recreation, waste disposal, transportation, and industrial activities in the Great Lakes, territorial sea, exclusive economic zone, and Outer Continental Shelf are placing stress on these areas and are creating the need for resolution of serious conflicts among important and competing uses and values in coastal and ocean waters....(g) Special natural and scenic characteristics are being damaged by ill-planned development that threatens these values.³⁵

Thus, Broadwater's proposed industrialization of an undeveloped open water area in the center of Long Island Sound is not consistent with the articulated findings and directives of the CZMA or the LISCOMP.

Broadwater inaccurately categorizes NYSDOS's consistency determination as a broadly sweeping complete ban on offshore energy development.³⁶ To the contrary, the NYS Coastal Management Program specifically plans for energy facility siting and offshore energy development.³⁷

Broadwater's reliance on the Secretary's decision in AES Sparrows Point II Appeal to meet its burden of proving that the project would develop the coast in a significant or substantial manner by locating the FSRU in

³⁴ Broadwater's attempt to ignore this result, which FERC's apparently accepted, should be rejected. FERC offered no evidence to support their conclusion that the "Broadwater Project would not stimulate new types of offshore industrial or commercial developments." FEIS at ES-9. (BW 28768-28769). Indeed, the Broadwater Project would be the first of its kind and other industrial complexes, not contemplated today, may become a reality in the future.

³⁵ 16 U.S.C. §1451.

³⁶ See Broadwater's Initial Brief at 7. Broadwater cites as its sole authority for this proposition a NOAA document entitled "CZMA Federal Consistency Overview", which specifically states in its introduction that "[t]his overview is for general information and educational purposes only; it is not an enforceable document or intended to establish policy and should not be cited to for CZMA compliance purposes." Broadwater Initial Brief at 13, n. 33; OCRM, U.S. Dep't of Commerce, CZMA Federal Consistency Overview at 3, available at www.coastalmanagement.noaa.gov/consistency/media/FCoverview081007.pdf ("CZMA Overview"); see also Broadwater's Initial Brief at 13. Broadwater inaccurately concludes that NYSDOS's objection would be "tantamount to an outright ban on offshore energy development."

³⁷ NYSCMP Policy 27 states: "Decisions on the siting and construction of major energy facilities in the coastal area will be based on public energy needs, compatibility of such facilities with the environment, and the facility's need for a shorefront location." NYSCMP Policy 29 states: "Encourage the development of energy resources on the outer continental shelf, in Lake Erie and in other water bodies, and ensure the environmental safety of such activities." The NYSCMP assigns no greater priority to siting such facilities than it does to any other non-coastal dependent use nor does it provide that siting these facilities outweighs other critical coastal resource management concerns. Energy facilities are evaluated in the context of other coastal values, including their impacts on coastal resources of special concern, such as New York State's designated Significant Coastal Fish and Wildlife Habitat. The policy narratives recognize the need to develop new indigenous energy resources.

Broadwater's preferred location in Long Island Sound is misplaced. In that consistency appeal decision, the Secretary noted that a local zoning regulation (that had not been submitted to NOAA for approval) improperly effectuated an outright ban on LNG facilities. There are no comparable prohibitions in NYS coastal policy or in state law. Additionally, the LISCMP was submitted to and approved by NOAA.

2. **Broadwater's Project Does Not Advance the CZMA Goal of Energy Self-Sufficiency**

While there is a general national interest in assuring a greater degree of energy self-sufficiency, Broadwater's proposal to import supplies of natural gas from foreign countries does not advance that goal. Energy self-sufficiency is achieved through development of domestic sources of natural gas so the Nation is not dependent on foreign supplies and suppliers. Therefore, it is impossible for the Broadwater Project to further the national interest of the United States in energy self-sufficiency. The federal government clearly understands the difference between foreign and domestic energy sources in attaining energy self-sufficiency. The Commerce Secretary stated in the consistency appeal of Mobil Exploration Appeal.³⁸

Energy self-sufficiency through oil and gas production is a recognized goal of the CZMA (section 302(j)). Moreover, of those Federal agencies that commented on the issue of the national interest in Mobil's proposed activity, **most expressed support for domestic energy production.**" (Emphasis added.)

For all the above reasons, Broadwater has failed to satisfy Element 1 and thus its appeal should be rejected.

Element 2: Any National Interest Furthered by the Activity Does Not Outweigh the Activity's Adverse Coastal Effects, When Those Effects Are Considered Separately or Cumulatively

Element 2 requires that the Secretary weigh the adverse effects of the proposed activity on the land and

³⁸ See Decision and Finding in the Consistency Appeal of Mobil Exploration and Processing Inc. U.S. Secretary of Commerce (June 20, 1995) at 39, (emphasis added), ("Mobil Exploration Appeal").

water uses and natural resources of the coastal zone against its contribution to the national interest.³⁹ Broadwater fails to prove that "[t]he national interest furthered by the activity outweighs the activity's adverse coastal effects, when those effects are considered separately or cumulatively"⁴⁰ by a preponderance of the evidence in the record.⁴¹

Adverse effects on the natural resources of the coastal zone may arise from the normal conduct of an activity either alone or in combination with other activities. Adverse effects can be direct or indirect, and may arise from an unplanned event such as improper conduct of an activity or an accident.⁴²

1. Adverse Coastal Effects

a. Direct and indirect adverse coastal effects

I. Adverse coastal effects on commercial and recreational fishing and navigation

Broadwater's proposal would: convert open waters used for navigation and fish and lobster harvesting into private, industrial zones that preclude commercial and recreational access and use; hinder the recovery of the lobstering industry; and exacerbate on-water use conflicts in the vicinity of major commercial vessel thoroughfares, in congested navigation areas such as "The Race" (a nationally renowned sportfishing area and regionally significant lobster fishery), in the trawling lanes in the vicinity of the proposed FSRU location, and in the trawling lanes in the Montauk Channel.⁴³ The recommended safety and security exclusion zone surrounding the FSRU would remove 950 acres of waters from the public trust, precluding all other vessels from using or transiting the water column and surface waters in the area. The FSRU exclusion zone will impede access and transit by the 200 existing water-dependent uses on the Sound that are vital to the economic health of the

³⁹ See Decision and Findings of the Secretary of Commerce in the Consistency Appeal of Ford S. Worthy Jr. U.S. Secretary of Commerce (May 9, 1984) at 7.

⁴⁰ 15 C.F.R. § 930.121(b).

⁴¹ See AES Sparrows Point II Appeal at 16.

⁴² See Decision and Findings in the Consistency Appeal of Korea Drilling Co., Ltd. from an Objection by the California Coastal Commission, U.S. Secretary of Commerce at 10 (January 19, 1989) ("Korea Drilling Appeal"); see also Decision and Findings in the Consistency Appeal of Texaco, Inc. from an Objection by the California Coastal Commission, U.S. Secretary of Commerce at 6-7 (May 19, 1989).

⁴³ See NYSDOS Objection at 10, 59 (BW33744, BW33793).

Region.⁴⁴ The Coast Guard notes with respect to the existing concentration of commercial vessel traffic in the vicinity of the FSRU:

“...it is evident that the proposed location of the FSRU is in the vicinity of a commercial vessel thoroughfare. There is a concentration of commercial vessel traffic in the following areas relative to the proposed location of the FSRU. First, there is a predominance of east-west transits to the south of the proposed location. Much of this east-west traffic is either through traffic, transiting to or from the Port of New York, or is heading towards Bridgeport, CT or Port Jefferson, NY. In addition, there is a concentration of north-south traffic to the east of the proposed facility.”⁴⁵

The FSRU will interfere with these existing commercial uses.

Broadwater acknowledges that “nearly all of the western two-thirds of the Sound, including the area being considered for the FSRU and pipeline, are classified as a high-use fishery area.”⁴⁶ The FEIS also documents that “[t]he proposed FSRU and pipeline would be located in a dense lobster fishing area; and construction and operation of the proposed FSRU and pipeline could affect the abundance of lobster within the footprint of these components, especially during active construction.”⁴⁷ The dense fishing and lobstering activities documented in the record will be disrupted by the 950-acre FSRU exclusion zone. This exclusion zone will also preclude the use of 413 acres, or 30%, of one of two trawling lanes in the vicinity, which were established in the 1980s by mutual agreement between the lobstermen and trawlers.⁴⁸ Fixed gear such as lobster and conch traps are not set in these designated areas to facilitate their use by trawl fishermen. This gear-free lane also allows east-west transiting commercial vessels to pass through the area without destroying lobster gear. The FSRU exclusion zone will result in the loss of a limited fishing area that is critical to those commercial harvesters who work the territory, and will cause disruption of lobstering activities through gear destruction as commercial vessels navigate outside of the traditional gear-free area to avoid the exclusion zone.

Despite a catastrophic die-off in 1999, lobster remains the most commercially valuable species harvested

⁴⁴ See LISCMP Vol. 2 [Doc. # 2068] at 187-188 (BW038139, BW038140).

⁴⁵ WSR at 33 (BW7622).

⁴⁶ Broadwater EIR-19, Marine/Land Use Compatibility Assessment (April 2006) at 7 (BW5912).

⁴⁷ FEIS at 3-101 (BW28948).

⁴⁸ See NYSDOS Decision [Doc. # 2004] at 57, n. 270 (BW337391).

in the Sound, accounting for more than a third of the total annual value from Long Island Sound landings (New York ports only) in each year from 2004 through 2006.⁴⁹ Prior to the die-off, bi-state commercial lobster harvests ranged from 7 to 11.7 million pounds annually, valued at \$18 to \$40 million.⁵⁰ The importance of lobstering, both as part of the Sound's heritage and a significant component of the economy, resulted in substantial investments by federal and state governments to mitigate losses, initiate population recovery, and reestablish the industry.⁵¹ It is the intention of federal and state government partners to protect and improve the lobstering industry rather than allow interference or displacement by competing land and water uses.⁵²

As noted, the FSRU exclusion zone would disrupt activities in the dense lobster fishing area surrounding the proposed facility. Lobstering would also be disrupted in The Race as a result of the massive LNG carrier exclusion zones transiting this navigationally constrained and congested passage.⁵³ The Race supports a commercial lobster fishery of regional significance.⁵⁴ Lobstermen work their lines only during slack water, and LNG carrier passage would potentially preclude lobstering in The Race during one of the two daily slack water periods because of the estimated 40-60 minute disruption of weighing anchor, moving out of the exclusion zone, waiting for carrier passage, moving back to a fishing spot, and resetting anchor. Existing fishing and lobstering territory in the area west of Orient Point, heading west for 35 to 40 miles up to the eastern edge of the FSRU exclusion zone and north to the NY/Connecticut border in the Sound, will also be disrupted by both transiting LNG carriers and other commercial and recreational vessels that will be forced to alter their travel path to avoid the carrier exclusion zone.

⁴⁹ See NYS DEC, 2007, Anderson P. "A Financial Analysis of LIS Commercial Finfish and Crustacean Fishery 2004-2006." [Doc. #2071] (BW38451-BW38466).

⁵⁰ See N. Balcom and P. Howell, CTSG-06-02, "Responding to a Resource Disaster: American Lobsters in Long Island Sound, 1999 - 2004".

⁵¹ See *id.* According to Balcom and Howell (CTSG-06-02), NOAA, NMFS, EPA, Connecticut Sea Grant, New York Sea Grant, and the states of Connecticut and New York have cumulatively invested more than \$10.8 million in response to the mortality event.

⁵² LISCMP Chapter 4 at 87.

⁵³ See WSR at 129 (BW7718). Only 425 yards on either side of the 2,040 acre LNG carrier exclusion zone would remain available to other craft during carrier passage through The Race.

⁵⁴ See "The Race" Significant Coastal Fish and Wildlife Habitat narrative. Designated March 15, 1987, updated October 15, 2005. (BW33743); see also NYSDOS Decision at 9.

Recreational fishing conducted by charter boats is also a significant water-dependent use in Long Island Sound and an important contributor to the economy. The Race, one of two primary migration corridors for striped bass moving into Long Island Sound in spring, is a nationally renowned sportfishing area which supports an extensive recreational fishery throughout spring, summer, and fall. Much of this activity is by charter and party boats from Greenport, Montauk Harbor, New York, and Connecticut.⁵⁵ In contrast with the slack tide operations of lobstermen, charter and party boats operate during tidal exchanges. These vessels head into the tidal flow, let their boats drift with the tide through The Race and over the shoal, and then repeat the process. Also, charter operations host both day and nighttime trips (to take advantage of nocturnal feeding of striped bass). Therefore, in The Race and in other prime fishing grounds, commercial and recreational fishing and lobstering occur over the full 24 hour daily cycle during peak season.

Considerable commercial vessel traffic also contributes to the high volumes of craft transiting The Race. This passage is the main entrance to the Sound from the east for commercial deep draft vessels, tug and barge traffic, commercial ferries, and military and Coast Guard vessels. The FEIS notes that approximately 4,000 to 7,000 commercial vessels transit The Race annually.⁵⁶ Larger commercial vessels attempting to pass through the Race at the same time as an LNG carrier could be forced to wait up to 30 minutes;⁵⁷ alternatively, commercial vessels electing to alter their transit path will subsequently interfere with other existing uses, including commercial and recreational fishing and boating, such as the lobstermen and trawlers who work along set routes.

East of The Race, LNG carriers using the proposed southern route through the Montauk Channel would conflict with commercial hand line fishing territory and several trawling lanes located along this route. The direct impact of the passage of LNG carriers through the southern route will interfere with these harvesters, as will the indirect impact of LNG carrier passage through the northern route that will cause other vessels to alter their travel

⁵⁵ See “The Race” Significant Coastal Fish and Wildlife Habitat narrative. Designated March 15, 1987, updated October 15, 2005. (BW33743).

⁵⁶ See FEIS at 3-170 (BW29017).

⁵⁷ See *id.* at 3-202 (BW29049).

paths to avoid the carrier exclusion zone, thereby increasing commercial traffic in the Montauk Channel.

While Broadwater has proposed mitigation options to decrease some of these conflicts, there is no mitigation scenario (short of re-locating Broadwater outside of Long Island Sound, as suggested by NYS DOS) that minimizes to an acceptable degree the direct and indirect effects of the FSRU and carrier exclusion zones on the existing Sound commercial and recreational fishing fleet. The New York State Department of Environmental Conservation (NYS DEC) noted that “[T]he FEIS inadequately considers the project’s displacement of traditional commercial and recreational water-dependent uses in Long Island Sound.”⁵⁸ Because of the importance of these activities to the history, culture and economy of the region, Broadwater’s adverse impacts on commercial and recreational fishing and navigation are significant.

ii. Adverse coastal effects on fisheries and Essential Fish Habitat

If permitted, Broadwater will cause significant adverse impacts to Long Island Sound’s fisheries from impingement and entrainment of eggs, larvae and juvenile organisms in the water intakes of the FSRU and LNG carriers. Based on Broadwater’s estimated 28.2 million gallons per day (MGD) average water intake for the stationary FSRU with a berthed LNG carrier, up to 101.9 million finfish eggs and 173.1 million finfish larvae, as well as 44,000 Stage III lobster larvae and 163 post-larval juvenile lobsters, will be impinged and entrained annually.⁵⁹ Of these mortality totals, losses of EFH-managed species are estimated at approximately 3.5 million eggs and 5.3 million larvae annually. Despite these very numbers (which are based on Broadwater’s own studies) appearing in the FEIS, Broadwater continues to insist, somewhat inexplicably, the impact on fisheries will be “insignificant”.⁶⁰ In reviewing Broadwater’s impact under Section 401 of the Clean Water Act, New York’s primary fisheries management agency, NYS DEC, has commented on Broadwater’s selective use of data:

⁵⁸ Letter from John Ferguson, NYS DEC Project Manager, Division of Environmental Permits to Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission Re: Broadwater LNG Project - Final Environmental Impact Statement Docket Nos. CP06-54-000, et al. Issued January 11, 2008, dated March 17, 2008 at 2 (DEC March 2008 letter) [Doc. #1967] (BW33074-BW33080).

⁵⁹ See FEIS at 3-90 (BW28937).

⁶⁰ See Broadwater’s Initial Brief at 19.

“...[Broadwater] argues that DEC’s estimate of entrainment mortality of 274 million per year is too high and an inaccurate presentation of the data BW provided. Broadwater’s application to the Department provides the estimate that annual impingement would be 274 million eggs and larvae per year. Broadwater’s April 8 letter provides a revised estimate of 112 million eggs and larvae entrained annually, and argues that DEC should have used this estimate in assessing the significance of the Project’s potential entrainment and impingement impacts. These different totals reflect variability around the mean number; Broadwater’s estimate of annual entrainment mortality of 274 million per year is the maximum potential impact. Broadwater’s suggested estimate of 112 million egg and larvae mortalities per year indicates the minimum potential impact. Because it must evaluate a project’s potential impacts to the environment, the Department considers the maximum possible effect, based on project data. With maximum potential water usage, **the BW project will destroy approximately 274 million eggs and larvae per year through entrainment, based on BW’s own calculations. This impact will unavoidably cause a significant loss of fish eggs, larvae and adult fish in this region of Long Island Sound.**”⁶¹

These numbers do not account for impingement and entrainment occurring as a result of LNG carrier water intake during transit to and from the FSRU, which the FEIS acknowledges “would be possible.”⁶² NYSDEC also commented on this omission: “[G]iven that the LNG carriers’ intakes withdraw the largest portion of the Project’s overall seawater withdrawal, it is of note that nowhere in the record is consideration given to alternatives that would avoid, reduce or mitigate the intake impacts associated with the LNG carriers.”⁶³ Nor do the FEIS’s mortality estimates include food chain effects that are likely to result in an adverse cumulative impact on the Sound ecosystem. NYSDEC notes that the destruction of 274 million eggs and larvae annually “will damage the aquatic ecology by removing these organisms as a food source for fishery and lobster populations in this area of the Sound. This potential food chain effect is unaddressed anywhere in project documents, and should be given further consideration and evaluation by [Broadwater].”⁶⁴

Moreover, the FEIS ichthyoplankton mortality estimates are themselves considered significant by the primary state and federal fishery management agencies. NYSDEC has stated:

⁶¹ NYSDEC (or DEC) letter dated June 11, 2008 from John J. Ferguson to Murray Sondergard at 2 [NYSDOS Supplemental Document # 5] (emphasis added); see also Letter dated April 8, 2008 from Brett Snyder to Kimberly D. Bose, Secretary, FERC, [Doc. # 1997] at

⁶² FEIS at 3-93 (BW28940).

⁶³ NYSDEC June 11, 2008 letter at 2.

⁶⁴ Id.

“The Department restates its opinion that the loss of 274 million eggs, larvae and juveniles from impingement and entrainment into the intake systems of the Floating Storage and Regasification Unit (FSRU) and the LNG carriers, is a significant adverse impact to the aquatic ecology of Long Island Sound. The FEIS incorrectly concludes that these impacts are of minimal importance to the Sound.”⁶⁵

Additionally, the National Marine Fisheries Service (NMFS) states: “[e]ntrainment of fish or invertebrate eggs and larvae as well as small prey items is likely to be lethal and have consequences for both aquatic resources on both the Connecticut and New York sides of LIS.”⁶⁶

Although Broadwater clearly registers its annoyance at having “committed to the implementation of yet additional technological design and operational measures to absolutely minimize impingement/entrainment resulting from operations of the FSRU and LNG carriers” in its April 2, 2008 Letter to NYSDOS,⁶⁷ NYSDEC subsequently commented that:

“...the proposed five millimeter screen will not avoid, reduce, or mitigate the adverse effects of entrainment mortality. Broadwater’s sole fish-protective proposal is to reduce the exterior grill spacing from two-inch vertical by four-inch horizontal bar spacings to one-inch vertical spacings....This means ichthyoplankton, and all organisms, including adult fish, that are less than one-inch wide will be entrained. And, again, all organisms entering the intake structure will be treated with the chlorine. **Broadwater’s proposal has no effect on entrainment mortality.**”⁶⁸ (emphasis added)

NMFS also raises concerns about the impact of Project operations on other aspects of Essential Fisheries

Habitat (EFH):

“The proposed construction activities, subsequent FSRU operation, and ballast water operations would adversely affect EFH in a variety of ways, including (but not limited to) benthic habitat disturbance, re-suspending fine sediment fractions, removing prey items, and generating noises that may be detrimental to aquatic organisms. In addition, the proposed construction and operation activities and vessel traffic associated with port operations, have the potential to affect ESA-listed

⁶⁵ NYSDEC March 17, 2008 letter [Doc. # 1967] at 2 (BW33075).

⁶⁶ Comments of the National Marine Fisheries Service (NMFS) on the Review of the Draft Environmental Statement (dated January 23, 2007) [Doc. #1064] at 2 (BW14584).

⁶⁷ See Broadwater’s Initial Brief at 21, n. 76.

⁶⁸ NYSDEC June 11, 2008 letter at 2.

sea turtles . . . and whales.”⁶⁹

iii. Adverse coastal effects on benthic habitat and communities

Broadwater will cause significant adverse effects on benthic habitat and communities, in particular at the Stratford Shoal/Middle Ground Complex (Stratford Shoals), where approximately 4,000 feet of pipeline travels to its interconnection with the IGTS pipeline.⁷⁰

The Stratford Shoal is a unique physical feature in Long Island Sound - a “large topographic rise that influences patterns of water flow, sediment erosion and sediment deposition. Together these processes influence the distribution of sedimentary habitats and the organisms that use them.”⁷¹ It provides the “northern boundary for incoming oceanic bottom water”⁷² and its geomorphology plays an important role in the “classical estuarine circulation”⁷³ of saline and fresh waters in the Sound.

Researchers note the fragile balance of ecosystem characteristics present at this unique site: “We hypothesize that the accelerated flows over the shoal maintain suspension feeding epibenthic communities (i.e., sponge, coral and bryozoan species) and enhance prey/food particle delivery while keeping particulates from smothering these organisms.”⁷⁴ Suspension feeding organisms are sensitive to disturbances, in particular activities that scrape them off the substrate, or bury them with sediment.

A recent study at Stratford Shoal conducted transects, including one “which followed the proposed route for the Broadwater natural gas pipeline,” and identified high densities of American lobster and other burrowing organisms, as well as forests of finger sponge (*Haliclona oculata*) and populations of the unique, cold-water

⁶⁹ Feb. 19, 2008 letter from Patricia A. Kurkul, NMFS to Kimberly D. Bose, FERC [Doc. #1936] at 2 (BW32866).

⁷⁰ See FEIS at 3-31 (BW28878).

⁷¹ Office of Long Island Sound Programs, Dep’t of Env. Protection and Nat’l Undersea Research Ctr. and Assoc. Research Professor, Dep’t of Marine Sciences, University of Conn. at Avery Point. “OSV Bold Survey Report. Benthic Habitat Characterization of the Stratford Shoal Region of Long Island Sound. May 29 to June 2, 2007”, (Final Report July 17, 2007) [Doc. #2073] at 3 (BW38471).

⁷² Vieira, Mario E.C. “The Long-Term Residual Circulation in Long Island Sound,” *Estuaries*, Vol. 23, No. 2 pp. 199-207 (April 2000) [Doc. #2033] at 205 (BW35612).

⁷³ *Id.* at 207 (BW35614).

⁷⁴ OSV Bold Survey Report at 18 (BW38486).

northern star coral (*Astrangia poculata*).⁷⁵ Professor Sean Patrick Grace, a researcher at Southern Connecticut State University and an expert on cold-water scleractinian corals, has noted the unique characteristics of this species, and its presence in LIS.⁷⁶

Broadwater's Initial Brief cites the FEIS's incorrect characterization of Dr. Grace's research, which asserts that the northern star coral community is fundamentally different from tropical, reef-building species, and hardy and plentiful in Long Island Sound.⁷⁷ The article referenced by the FEIS actually states that the cold-water corals have the same attributes and structure as Caribbean corals, and their very hardiness in the face of extremely cold conditions results in unique ecological adaptations that make the Sound population worthy of study.⁷⁸ NYSDEC also notes that Stratford Shoal "is a relatively rare Long Island Sound habitat (coarse sand, gravel cobble and boulders), with coral and sponge communities comparatively scarce in LIS."⁷⁹ NOAA's own report "The State of Coral Reef Ecosystems of the United States and Pacific Freely Associated States: 2008" documents the declining conditions of and increasing threats to U.S. coral reef ecosystems.⁸⁰

In addition, Broadwater's Initial Brief incorrectly cites the FEIS regarding anticipated recovery times for the Stratford Shoal cold-water coral community after pipeline construction.⁸¹ The referenced FEIS Section 3.3.1.2

⁷⁵ Id. at 17-18 (BW38486-BW38487).

⁷⁶ See 2007-2008 University Research Grant Proposal from S.P. Grace, PhD, Department of Biology, Southern Connecticut State University. [Doc. # 2046] (BW36998): "One unique temperate coral that has been found recently in Long Island Sound is the scleractinian (hard) coral *Astrangia poculata*. It is unique in that it is one of four corals known world-wide to exhibit a facultative symbiosis with its zooxanthellae (single-celled plants living within the coral host). Most tropical corals die or "bleach" when they lose their zooxanthellae, however, this coral can be found subtidally existing both with and without....The Sound represents a unique habitat for this coral, in that constant freshwater input would seem to put this coral at a disadvantage. This input results in salinity changes and increased sedimentation (particles suspended into the water column) which could interfere with coral feeding (tentacular) by smothering the coral."

⁷⁷ See Broadwater's Initial Brief at 28; see also FEIS at 3-67 (BW28914).

⁷⁸ See Grace, S. P. 2006. The Skeletons of Long Island Sound (February 2006) [Doc. # 2047] (BW37001-BW37002) *available at* <http://www.southernct.edu/faculty/paffairs/news/?file=view.php&id=679>.

⁷⁹ NYSDEC June 11, 2008 letter at 4.

⁸⁰ See Waddell, J.E. and A.M. Clarke (eds.), 2008. The State of Coral Reef Ecosystems of the United States and Pacific Freely Associated States: 2008. NOAA Technical Memorandum NOS NCCOS 73. NOAA/NCCOS Center for Coastal Monitoring and Assessment's Biogeography Team. Silver Spring, MD. 569 pp.

⁸¹ See Broadwater's Initial Brief at 28, citing to the FEIS § 3.3.1.2: "While benthic communities of northern star coral and dead man's fingers in the Stratford Shoal would be impacted by pipeline construction, the available data on such benthic communities in sand/gravel habitats indicates that full recovery takes between 2 to 3 years."

actually states that “Benthic communities that inhabit muds, like those along most of the proposed pipeline route, typically recover within 1 year whereas communities that inhabit sands and gravels can take from 2 to 3 years to recover – **and even longer where rare slow-growing components are present.**”⁸² Unlike warm-water corals, cold-water corals grow, mature and recruit much more slowly, generally at rates between 4 - 25 mm/year, as compared to shallow tropical corals that grow up to 150 mm/year. These characteristics make cold-water corals highly susceptible to anthropogenic and natural disturbances, and regeneration and recovery might take **decades to centuries** for a damaged reef.⁸³

Further, the coral and sponge communities identified by the OSV Bold survey occurred primarily in hard substrate areas, versus other sediment types⁸⁴, as is typical of cold-water scleractinian species globally.⁸⁵ The FEIS depicts the rarity of hard substrate in LIS, with the linear outcropping of bedrock and gravel that comprises Stratford Shoal immediately visible on Figure 3.1-1, “Distribution of Surficial Sediment in Long Island Sound”.⁸⁶ With only a small percentage of appropriate substrate available to support them, these rare ecological communities should not be disrupted by the construction of the Broadwater connector pipeline.

Reef structures cannot be simply recreated and recolonized through backfilling of substrate, as is suggested by FERC and Broadwater. The structure of a coral reef is a function of the life processes of the attached coral organisms, and accretes slowly over time. Further, the cold-water corals and erect sponges, like those found on Stratford Shoal, as well as the unique physical structure of the Shoal itself, enhance habitat value by providing microhabitat for diverse fish and invertebrate assemblages, including juvenile life stages of commercially important fisheries species. The structural features of the coral and sponge community provides enhanced feeding

⁸² FEIS § 3.3.1.2 at 3-70 (emphasis added) (BW28917).

⁸³ See Table 1 in Freiwald, A., Fosså, J.H., Grehan, A., Koslow, T., Roberts, J.M., Cold-water Coral Reefs. UNEP-WCMC, Cambridge, UK, (2004) [Doc. #2048] at 11 (BW37014).

⁸⁴ See OSV Bold Survey Report at 17 (BW38485).

⁸⁵ See Freiwald, A., Fosså, J.H., Grehan, A., Koslow, T., Roberts, J.M., Cold-water Coral Reefs. UNEP-WCMC, Cambridge, UK, (2004) at 21 (BW37024).

⁸⁶ See FEIS at 3-16 (BW28863).

possibilities among aggregating species, a hiding place from predators, a nursery area for juveniles, and substrate for invertebrates.⁸⁷

Stratford Shoal/Middle Ground is indeed an important fishing area in the Sound: it is widely regarded by recreational fishermen as a top fishing spot in the western Sound, and one of the best places to find striped bass and bluefish. The NYSDEC states: “Stratford Shoals is an important recreational fishing area in Long Island Sound.”⁸⁸ Data collected weekly by Connecticut Department of Environmental Protection also reflect the importance of Stratford Shoal as a fishing destination.⁸⁹

The reef communities located on the Shoal would be adversely affected by pipeline trenching: “The communities of northern star coral and dead man’s fingers located along the proposed pipeline route across Stratford Shoal would be impacted by construction of the proposed pipeline.”⁹⁰ Both the proposed trenching and the contingency dredging plan would impose significant adverse effects on the rare ecological communities found on Stratford Shoal, and consequently on their associated fish and invertebrate habitat and species assemblages. The destruction of these communities during construction of the pipeline will result in a long term, if not permanent, loss, due to the unique physical structure of the shoal, the slow growth rate of northern star coral, and, potentially, the existing stress and impairment generally present in the Long Island Sound aquatic environment. Long term or permanent loss of these communities would subsequently alter the highly valued and heavily used lobster and finfishery at Stratford Shoal.

iv. Adverse coastal effects on the character and scenic resources of the Sound

Flouting decades of effort and investment in preservation and restoration of Long Island Sound by federal,

⁸⁷ See NOAA National Marine Fisheries Service Ecosystem Assessment Division, at www.nmfs.noaa.gov/habitat/ead/coldwatercorals.htm; see also Freiwald, A., Fosså, J.H., Grehan, A., Koslow, T., Roberts, J.M. 2004. Cold-water Coral Reefs. UNEP-WCMC, Cambridge, UK. [Doc. #2048].

⁸⁸ NYSDEC June 11, 2008 letter at 4.

⁸⁹ See CT DEP Weekly Fishing Report at http://www.ct.gov/dep/cwp/view.asp?a=2696&q=322752&depNav_GID=1630, accessed 3/20/08 [Doc. #2077] (BW41820-BW41822).

⁹⁰ FEIS at 3-70 (BW28917).

state and local governments,⁹¹ Broadwater proposes to create a new industrial center in undeveloped open water. The natural, cultural and scenic character that local, state and federal governments have worked to protect is derived not only from onshore landscapes, but also from the vast, unbroken open space of the waterbody itself, used by a range of transiting vessels for navigation, commerce and recreation. Broadwater's proposed industrial operation would interrupt the open space of the Sound, fragmenting the open water with a permanent, fixed, private structure, thereby eliminating a key element of the setting's value and appeal, which center on the integrity of the open water experience, unimpeded public access and uninterrupted views.

The Project, if permitted, would permanently change the identity and character of Long Island Sound by introducing a use that is fundamentally different from other existing and previously permitted uses into the center of the waterbody. This difference is acknowledged in the Broadwater FEIS, which states:

“Although there are existing industrial and commercial uses of the Sound, approval of the Project would result in an industrial/commercial use of the Sound that would **differ from most existing industrial or commercial uses**....First, the Project would be **a permanent visible structure** as opposed to most current industrial applications conducted on the shoreline, below the surface of the water, or as a transient activity on the surface of the water.”⁹²

The visual landscapes of the Sound are valued for their sweeping open water vistas, with views to the distant landform of the Connecticut shore, and the transient passage of freighters, ferries, commercial fishing vessels, boats and sailboats. Furthermore, “[v]isual quality is a major contributor to the character of the Long Island Sound region and its communities, and the **primary basis** for public appreciation of the Sound's landscape.”⁹³

Beyond protection and preservation, the LISCMP emphasizes progress and improvement, such as the restoration or removal of deteriorated or degraded scenic elements. It is not acceptable to create new, adverse visual impacts: projects, uses and activities must either preserve (not detract from) the existing high scenic quality

⁹¹ See NYSDOS Objection [Doc. #2004] at 14-15 (BW33748-BW33749).

⁹² FEIS § 3 at 3-134 (BW289981) (emphasis added).

⁹³ LISCMP Policies at 74 (emphasis added).

of the region, or improve (or eliminate) existing, degraded scenic elements.⁹⁴ In order to achieve this goal, the LISCMP delineated special management areas, including a series of maritime centers and waterfront redevelopment areas, which are identified as suitable locations for new, water-dependent commercial and industrial uses. Thus, the LISCMP does not prohibit water-dependent industrial uses; to the contrary, the LISCMP follows the directive of the CZMA and includes water-dependent industrial uses, plans for them, and clearly articulates goals and objectives for such areas.⁹⁵ The creation of new adverse effects on scenic quality and the public availability of high quality visual access to coastal resources as a result of siting a water-dependent industrial use outside of the designated maritime centers and waterfront redevelopment areas is therefore in direct conflict with the LISCMP.⁹⁶

Presently, the commercial and industrial traffic transiting the Sound consists of vessels which come into and pass out of view; 99% of these vessels are smaller than the proposed FSRU and LNG carriers. Operation of Broadwater would introduce a new type of vessel (the LNG carrier) into the Sound waters; would increase the volume of foreign flagged vessels in the Sound by 20-30%; and would increase by 100-150% the number of vessels greater than 700 feet in length transiting the Sound. Broadwater, therefore, would create a fixed zone of discordant industrial activity interrupting the Sound's vast, open maritime land- and waterscapes. Broadwater's project, proposed to be located in the unindustrialized open waters of the Sound sits in stark contrast to Weaver's Cove and AES Sparrows Point, which were both proposed for industrialized sites with pre-existing facilities.⁹⁷ Broadwater's project, if permitted, would introduce an industrial zone into the center of an Estuary of National Significance, significantly changing its character and scenic value and undermining the purpose of its federal designation.

⁹⁴ See id. at Policy 3, Chapter 4 at 74-75.

⁹⁵ See id. at Chapter 4, at 92, Policy 10, Chapter 4 at 84-86, and Chapter 5; see also 16 U.S.C. § 1452(3)

⁹⁶ See LISCMP at 74-75.

⁹⁷ See AES Sparrows Point II Appeal at 2; Weaver's Cove Appeal at 8; see also 16 U.S.C. § 1452(2)(D).

The Broadwater FEIS acknowledges that the project will result in “a moderate, long-term impact to visual resources in a limited portion of Long Island Sound and along the associated shorelines.”⁹⁸ In fact, Broadwater’s fixed, industrial structure would be visible 80% of the time from approximately 44 miles of North Shore coastline (and 92 miles of Connecticut shoreline),⁹⁹ and visible to all waterborne vessels within 25 miles in all directions. Given the industrial nature of the Broadwater Project, the impact cannot reasonably be called “moderate” and given the area’s high visitation and use, the affected population in this vast impacted area cannot reasonably be called “limited”.

Far from minimizing the impact on visual resources and open space,¹⁰⁰ locating the FSRU at the center of the Sound near its widest point ensures that a maximum number of coastal and on-water vantage points are visually impacted by the facility, and that the estuary’s open space is maximally fragmented. In the center of the Sound, the facility would be a component of and interrupt more visual and physical trajectories across the waterbody than one sited near or onshore. Fragmentation of open space is not a function of the perception of that open space,¹⁰¹ but rather is separate and distinct from the visual impacts of an action (which are, in part, related to perception) and relates to the physical disruption and division of an open space into smaller, uninterrupted areas. It is, in part, for these reasons that the LISCMP promotes concentration and consolidation of commercial and industrial uses in areas where such uses already exist.

Both Broadwater’s Initial Brief and the FEIS improperly claim NYSDEC’s “Assessing and Mitigating

⁹⁸ FEIS at ES-9 (BW28768).

⁹⁹ See FEIS, at 3-152, 3-147: “The data suggest that those Project components would be visible from at least one onshore location between 76 and 83 percent of the time. For the purposes of this EIS, we have assumed that the proposed FSRU, YMS, and LNG carriers in Long Island Sound would be visible about 80 percent of the time.” (BW28999), (BW28994).

¹⁰⁰ See Broadwater’s Initial Brief at 14: “Locating the FSRU at the center of the Sound near its widest point maximizes the distance of the FSRU from all possible coastal vantage points, minimizes the reduction of open space, and guarantees that the FSRU will be effectively imperceptible from any urban areas or historic maritime communities.”

¹⁰¹ Broadwater’s Initial Brief at 17 states that “the perceived reductions in open space resulting from facilities less than two miles offshore are orders of magnitude greater than those resulting from a facility nine miles out to sea.”

Visual Impacts” Policy as their basis.¹⁰² The NYSDEC Policy Statement reads:

“Nevertheless, it is the burden of the applicant to provide clear and convincing evidence that the proposed design does not diminish the public enjoyment and appreciation of the qualities of the listed aesthetic resource...An applicant’s mere assertion that the design is in harmony with or does not diminish the values of the listed resource is insufficient for the purposes of reaching findings.”¹⁰³

Despite this clear guidance, Broadwater does not provide adequate evidence that public enjoyment of the Sound will not be diminished.

This lack of applicable supporting evidence was noted by NYSDOS’s visual consultant, who deemed that Broadwater’s conclusions¹⁰⁴ were speculative and unsupportable without a public perception survey.¹⁰⁵

NYSDOS’s visual consultant also found aspects of the Visual Impact Assessment “so generic as to be meaningless,” and focused on specific user groups in a way that “serves to minimize the severity of visual impact”.¹⁰⁶ Thus, despite their volumes of paper and citations, Broadwater’s visual analysis provides no evidence about the actual visual impact on the Long Island public and users of Long Island Sound.

Contrary to the conclusion contained in the FEIS and the assertions contained in Broadwater’s Initial Brief, FERC has not conducted any “scientific analysis”¹⁰⁷ on visual impacts specific to the Project in the Long Island Sound setting.¹⁰⁸ FERC’s analysis, described in the FEIS, consists of a literature review of “the effects of

¹⁰² See Broadwater’s Initial Brief at 15; see also FEIS 3-146 (BW28993).

¹⁰³ NYSDEC Policy Statement DEP-00-2 “Assessing and Mitigating Visual Impacts” at 8.

¹⁰⁴ See Broadwater VIA, Saratoga Associates (2005) [Doc. # 12_0002] at ix and 60: “...visibility of the proposed LNG terminal does not result in a detrimental effect on the perceived beauty of any place or structure; nor will the project cause the diminishment of public enjoyment and appreciation of an inventoried resource, or impair the character or quality of such a place.”

¹⁰⁵ See Broadwater Energy Visual Resource Assessment Review [Doc. #2065], prepared by Richard C. Smardon, Ph.D. Visual Consultant (2/9/2007) (BW37918-BW37932).

¹⁰⁶ Smardon. R. Ph.D., Visual Consultant, (February 9, 2007). Broadwater Energy Visual Resource Assessment Review at BW37922 [Doc. # 2065]. “The language describing stationary views is so generic as to be meaningless and serves to minimize the severity of visual impact for different landscape users...[T]here is no characterization of landscape users other than residential. A more appropriate way to describe this is to talk about the resident, worker or recreationalists; kinds of activities, and typical duration of view toward the facility such as was done for the Oregon Inlet Study of the impact of a coastal structure which included a matrix of landscape users, activities, duration and direction of view.”

¹⁰⁷ Broadwater’s Initial Brief at 17.

¹⁰⁸ Id.

other industrial projects on private property values”¹⁰⁹ (and not on visual impacts or public perception). FERC does not, however, explain or substantiate the application of its conclusions about private property value to its subsequent inference regarding public value. The FEIS does document that FERC “received comments expressing concern that the introduction of a permanent man-made structure to the Long Island Sound viewscape may reduce the public value of the viewshed” and that “[c]ommentors expressed concern related to the viewscape alteration as it would be perceived by boaters”.¹¹⁰

NYSDOS maintains that construction and operation of Broadwater’s proposed new, stationary, permanent, industrial facility in the center of Long Island Sound, an Estuary of National Significance, would result in substantial adverse effects on the visual quality and fundamental character of the resource. Moreover, the unacceptable impacts on the Sound can be avoided by locating the FSRU at one of the reasonable and available Atlantic Ocean alternatives.

v. Adverse coastal effects on public trust lands and waters

New York State holds the bed and waters of Long Island Sound in New York in trust for its citizens. During its expected life of 30-50 years, Broadwater’s proposed FSRU will occupy, and physically limit public access to and recreation in, a substantial portion of the waters and underwater lands of Long Island Sound that is held in public trust by the State of New York. As recommended by the U.S. Coast Guard, the safety and security exclusion zone surrounding the FSRU would extend approximately 1,210 yards from the center of the mooring tower, removing 1.5 square miles (950 acres) of waters from the public trust and precluding all other vessels from using or transiting the water column and surface waters around the FSRU.

The U.S. Coast Guard also specifies that a 2,040 acre moving safety and security zone must be established around each LNG carrier during inbound and outbound transits from the FSRU, extending 2 nautical miles (2.3

¹⁰⁹ FEIS at 3-153 (BW29000).

¹¹⁰ Id.

miles) in front, 1 nautical mile (1.2 miles) to the rear, and 750 yards (about 0.4 mile) to each side of the LNG vessel.¹¹¹ These moving safety and security zones would effectively exclude the public from State-submerged land, the water column and State navigable waters throughout the entire path to the FSRU.¹¹² The recurring exclusion zone would be present in Long Island Sound or Block Island Sound for 6 out of every 7 days and would last up to 40 hours for each LNG delivery.¹¹³ During these constant deliveries and departures, other recreational and commercial uses of Long Island Sound waters would be prohibited from the moving exclusion zone around each carrier, in addition to the zone surrounding the FSRU where all other uses would be prohibited at all times.¹¹⁴ LNG carriers must travel across a number of heavily used fishing and boating areas, including “The Race” and Stratford Shoal/Middle Ground, both documented by the Coast Guard as supporting major volumes of small craft.¹¹⁵ The Race, a navigationally-constrained area, is also the preferred route for deep draft commercial vessels. It should be noted that the passage of Navy vessels in The Race are also associated with security mandates, and these, combined with LNG carrier transits, could result in the frequent clearing of The Race in its entirety.¹¹⁶

It is the State's responsibility to protect public trust lands against unreasonable and unnecessary obstruction and encroachment to the detriment of the public's rights. Broadwater would occupy public waters and

¹¹¹ See WSR at 36-37; see also FEIS at 3-127 (BW28974); U.S. Coast Guard Record of Decision (June 27, 2008) at 1, NYSDOS Supplement 5. The moving exclusion zone around each carrier would be about 2.5 times the size of Central Park in Manhattan.

¹¹² See FEIS at 3-140 (BW28987).

¹¹³ See WSR at 39, 56 (BW7645). This would include transiting each way, berthing, offloading and deberting.

¹¹⁴ See *id.* at 122; see also “Broadwater: Just the Facts” [Doc. #2054] (BW37171). Broadwater indicates that other uses in the Sound have exclusion zones. Broadwater’s fixed and moving exclusion zones differ in size and nature from others currently in operation in the region, and from other commercial and industrial uses of the Sound that were previously approved by NYSDOS, none of which involved exclusion of the public from the use of navigable waters; see also 33 CFR 165.154(a)(2) and 33 CFR 165.151. Existing safety and security zones cited in the record associated with stationary, permanent facilities (such as the FSRU) are all for onshore facilities; offshore security zones cited in the record are all small, temporary areas around anchored Coast Guard vessels and specified fireworks barges. None of the existing exclusion zones, therefore, have the magnitude of impact that would be permitted for Broadwater. The scale and permanence of Broadwater’s exclusion areas result in an unacceptable adverse effect on the public interest in the estuary.; see also WSR at 42 (BW7631). Offshore security zones cited by Broadwater are the temporary, 100-yard radius exclusion areas around anchored Coast Guard vessels (an area of 6.5 acres), and the temporary, annual exclusion areas around specified fireworks barges, ranging in size from 600-foot to 1200-foot radii around the barge (from 26 to 104 acres), which are enforced only between 8 p.m. and 11 p.m. for those days the barge is in place.

¹¹⁵ See WSR at 16-23; 79-80

¹¹⁶ See *id.* at 80, 104, 126, and 163.

underwater lands, currently used for recreation, boating, fishing, swimming, and visual enjoyment, for private benefit. The public lands and waters of Long Island Sound generate billions of dollars for New York State's economy,¹¹⁷ and the FEIS documents the trend towards increased recreational use over the previous decade.¹¹⁸ These uses would be significantly disrupted should Broadwater's proposal be realized.

The public trust doctrine also prohibits the government from surrendering large tracts of public trust resources to a private entity.¹¹⁹ Any attempt by the State to relinquish its dominion and control over a public resource can be invalidated under the doctrine as an abdication of sovereignty. Broadwater's proposal would privatize a fixed area of more than 950 acres of submerged lands, water column and water surface of Long Island Sound, removing these publicly owned resources from the public realm.¹²⁰ The Broadwater Project therefore poses significant "public trust" encroachments for current and future residents of the region who wish to enjoy, recreate, and make a living on the waters of Long Island Sound.

b. Cumulative adverse coastal effects

Broadwater's adverse impacts on Long Island Sound are numerous, significant, and most troubling, permanent. Using the definitions suggested by Broadwater,¹²¹ the record shows that the FSRU will be both

¹¹⁷ See LISCMP Vol. 2 [Doc. #2068] at 183 (BW38135).

¹¹⁸ See FEIS at 3-137 - 3-138 (BW28984-BW28985).

¹¹⁹ See Illinois Central Railroad v. Illinois, 146 U.S. 387 (1982); see also Smith v. New York, 153 AD2d 737, 739 (2d Dept. [1989]).

¹²⁰ In Illinois Central Railroad v. Illinois, the US Supreme Court invalidated the transfer of 1000 acres of submerged public trust lands to a private entity, as an abdication of the state's dominion and sovereignty. "The State can no more abdicate its trust over property in which the whole people are interested, like navigable waters and the soils under them, so as to leave them entirely under the use and control of private parties ... than it can abdicate its police powers in the administration of government and the preservation of peace." 146 US at 453. The exclusion area around just the FSRU, at 950 acres, is almost the same size as the Illinois Central tract. In the case of Lake Michigan Federation v. US Army Corps of Engineers, 742 F.Supp. 441 (N.D. Illinois, E.D. 1990), Loyola University applied to the State of Illinois for a grant to fill approximately 18.5 acres of the lake bed and subadjacent waters of Lake Michigan to expand its campus. In doing so, the filled area would, while presumptively serving a beneficial educational purpose, preclude the public from using the water area for trust purposes. The District Court enjoined Loyola University from constructing the lakefill because the conveyance of 18.5 acres was so extensive as to violate the public trust doctrine. Broadwater's private interests can not trump the general public interest, by excluding the public from the Project area.

¹²¹ See Broadwater's Initial Brief at 15, n. 39 and 40.

“permanent” and “fixed”. The FEIS characterizes the FSRU as a “permanent visible structure”¹²² that differs from existing commercial traffic on the Sound because of “its lack of movement.”¹²³ It also unambiguously states in the first sentence of the document that the FSRU will be permanently moored.¹²⁴ In its WSR, the Coast Guard refers to the FSRU as a “fixed structure.”¹²⁵ For the purposes of consistency review, NYSDOS considered the Project, including its articulated lifespan (30-50 years), and, to the extent that during this lifespan the FSRU will “continue or endure without fundamental or marked change,”¹²⁶ has reasonably defined the structure as permanent. Even outside the context of consistency review, a 30 to 50-year lifespan is reasonably defined as permanent in many disciplines,¹²⁷ and is essentially equivalent to a generation in the human population.

The cumulative adverse coastal effects of the Project over its lifespan are substantial. Over the course of 30-50 years of operation, the FSRU and berthed LNG carriers alone would directly cause the mortality of 8.2-13.7 billion finfish and 1.3-2.2 million lobster organisms. This is a significant level of mortality, especially when one considers the undisputed role of estuaries (such as Long Island Sound) as larval and juvenile sanctuaries, acting as critical incubators for adult fish populations that are subject, in many cases, to unsustainable levels of harvest. This new source of impingement and entrainment will also augment the cumulative burden to the Long Island Sound ecosystem from existing onshore facilities, such as the AES Thames River facility (155 MGD), NRG Norwalk facility (312 MGD), PSEG New Haven facility (410 MGD), KeySpan Northport facility (938 MGD), the Millstone nuclear power plant (2,189 MGD),¹²⁸ and the Ravenswood Generating Station in Queens,¹²⁹ as well as the array of existing marine vessels regularly transiting the Sound. Contrary to Broadwater’s assertions, NYSDOS

¹²² FEIS at 3-134 (BW28981).

¹²³ Id. at ES-9 (BW28768).

¹²⁴ See id. at ES-1 (BW28760).

¹²⁵ WSR at 104 (BW7693).

¹²⁶ Broadwater’s Initial Brief at 15, n. 39 and n. 40.

¹²⁷ For example, the U.S. Army Corps of Engineers considers a design life of 25 - 50 years standard for well-designed coastal engineering projects. See Coastal Engineering Manual - Part V (EM 1110-2-1100), Chapter 3 Shore Protection Projects, at V-3-10.

¹²⁸ See Broadwater’s Initial Brief at 21, n. 73.

¹²⁹ See FEIS at 3-62, 3-121 (BW28909, BW28968).

is not requiring that all proposed actions achieve zero ichthyoplankton mortality; rather, NYSDOS is, as directed by the CZMA, exhibiting appropriate concern regarding the cumulative effects caused by siting new industrial water intake systems in the estuary, when alternatives outside the estuary are available.

In addition, for up to 50 years, the Project would alter the character and use of Long Island Sound by introducing an industrial structure and exclusion zones into a previously undeveloped, public open water area. Project operations would disrupt navigation and boating in the Sound during at least 260 days every year¹³⁰ as a result of LNG carrier transit and berthing; over 50 years of projected operations, this is equivalent to up to 35 solid years of LNG carrier transit and berthing. For up to 50 years of operations, Broadwater will interfere with the commercial fishing industry in Long Island Sound. Using the economic information submitted by the East Hampton Town Commercial Fisheries Advisory Committee, a single commercial fisherman using the trawl lane that would be affected by the FSRU exclusion zone will gross up to \$6,750,000.¹³¹ Six trawlers¹³² will gross up to \$40,500,000; 12 trawlers¹³³ will gross up to \$81,000,000.

The public adversely affected by Broadwater encompasses a substantial population of users, investors, and interests. This adversely impacted audience would include, among others, the Long Island residents along the 44 miles of coast from which the Project would be visible twenty-four hours a day; passengers and crew of the 36 ferry transits daily between Bridgeport and Port Jefferson; the 182 commercial harvesters registered in New York who made 4,400 trips in LIS in 2006; the 126,000 registered boat owners in Suffolk, Nassau and Westchester counties; the 2.4 million people that visit the five Long Island north shore State Parks annually; the marine recreational users who made approximately 5.5 million fishing trips in New York waters in 2006; the 8.4 million

¹³⁰ Based on the WSR: 3 shipments per week x 40 hours per transit x 52 weeks = 6,240 hours = 260 days.

¹³¹ See Letter from East Hampton Town Commercial Fisheries Advisory Committee (LA-10), FEIS Appendix N RTC Part 7 [Doc. #1911_0023]. The calculation is based on \$1000/day gross x 15 days trawling/month x 9 month trawling season. (BW29743-BW29775).

¹³² See WSR Section 3.1.2.3.1 at 53 (BW7642). The Coast Guard's assessment was based on a personal communication with a single individual from the Connecticut Lobsterman's Association.

¹³³ See FEIS Section 3.7.1.3 at 3-194. The FEIS estimates that between 2 and 12 commercial fisherman use this trawl lane (BW29041).

people currently living along the Long Island Sound estuary; the 19.3 million residents of the State of New York for whose benefit public lands and waters of the State are held in trust; and all the members and participants in the Long Island Sound Study (LISS), conducted pursuant to the 1987 National Estuary Program designation, as well as the United States taxpayers who have contributed to the \$54 million granted under the LISS since 1987 to implement program goals. None of these populations can reasonably be considered numerically small, and cumulatively they represent a diversity of interests that is certainly not limited.

2. Balancing National interests Versus Adverse Coastal Effects

Broadwater's project will not further any national interest articulated in sections 302 or 303 of the CZMA in a significant and substantial manner. Despite an overwhelming body of evidence that the project is associated with substantial, permanent adverse coastal effects to an Estuary of National Significance, Broadwater argues that their project will "benefit" coastal resources. Broadwater's project will privatize and industrialize the Sound, and will cause serious and sustained harm to public trust lands and waters and their public use and enjoyment, to the character and scenic quality of the area, to commercial and recreational fishing and navigation, to its fisheries and Essential Fish Habitat, and to its benthic habitat and communities. These adverse effects are numerous and substantial as they will affect a nationally recognized resource, will be permanent, will affect a significant population of residents and users, and will undermine the declared national policy to preserve and protect the resources of the Nation's coastal zone. Such adverse effects cannot be - and are not - outweighed by any national interest that may be advanced by Broadwater.

Element 3: Reasonable Alternatives Are Available Which Would Permit the Project to be Consistent with the Enforceable Policies of New York State's Coastal Management Program

An alternative may be available if changes in the "location" or "design" of a proposed project make it consistent with the NYSCMP, while achieving the project objective.¹³⁴ The CZMA does not require a State agency to identify an alternative nor should "State agencies . . . be responsible for the design of a project,

¹³⁴ Decisions and Findings in the Consistency Appeal of Virginia Electric and Power Company from an Objection by the North Carolina Department of Environment, Health and Natural Resources, (May 19, 1994) at 38 ("VEPCO Appeal").

although States should describe alternatives with sufficient specificity to demonstrate their reasonableness.”¹³⁵ A proposed alternative is "reasonable" if the environmental advantages of the alternative outweigh its increased cost.¹³⁶ A proposed alternative does not have to meet the exact specifications of the proposed project to be available but “must meet the primary purpose of the proposed project.”¹³⁷

Since there are two reasonable and available alternatives that will enable Broadwater to achieve its Project objective, “to deliver a large supply of natural gas into a regional market including Long Island, New York City, southern Connecticut and upstate New York,”¹³⁸ the Secretary should find that Broadwater has failed to prove its burden that the two sites are unreasonable and unavailable. Both of the Atlantic Ocean alternatives NYSDOS has identified are reasonable, available and consistent with the NYSCMP.¹³⁹ Moreover, both alternative locations have fewer conflicts with users and resources and are consistent with the state’s coastal policies.

During the consistency review, NYSDOS held extensive discussions with Broadwater about various alternatives that would eliminate the project’s adverse effects on coastal uses and resources in Long Island Sound while still providing new natural gas supplies to New York.¹⁴⁰ Based on these discussions, and NYSDOS’s review of all submitted materials, NYSDOS identified two different Atlantic Ocean locations and two different LNG import facility options: (1) a yoke-moored FSRU located 13 miles offshore of Long Beach, New York and connecting via a subsea pipeline to the Transco Leidy to Long Beach pipeline and (2) a turret-moored FSRU located off Fire Island and connecting via subsea and overland pipeline to the connection with the IGTS. To the extent that Broadwater seeks greater specificity, it is improperly requesting that NYSDOS “design” its alternative.

¹³⁵ 65 Fed Reg. 77141-77142.

¹³⁶ VEPCO Appeal at 38, 118, n. 266; Decision and Findings in the Consistency Appeal of Yeamans Hall Club from an Objection by the South Carolina Coastal Council, August 1, 1992 at page 6.

¹³⁷ Decision and Findings in the Consistency Appeal of Carlos A. Cruz Colon, (September 27, 1993) at 6 (“Carlo Cruz Colon Appeal”).

¹³⁸ Letter from Murray Sondergard, Broadwater Project Director, to Susan Watson, General Counsel NYSDOS (December 18, 2007) [Doc. #2016] (BW034057).

¹³⁹ See 15 C.F.R. § 930.64(b)(2); see also Korea Drilling Appeal at 10 (January 19, 1989); VEPCO Appeal at 38

¹⁴⁰ See NYSDOS Objection at 62, n. 283 (BW33796).

Broadwater complains that NYSDOS introduced coordinates which differ from its discussions of S1 (Alternative 1) and S2 (Alternative 2).¹⁴¹ In rendering its consistency determination, NYSDOS added greater specificity by referencing approximate coordinates to the ocean sites. The nautical coordinates for Alternative 1 (Long Beach) closely approximate the location S1, which has been discussed extensively by NYSDOS and Broadwater.¹⁴² The nautical coordinates for Alternative 2 were chosen in response to a need for greater water depth to accommodate the mooring of the FSRU. Those waters are approximately 50 feet deeper than at S2 and are intended to be just outside the Ambrose to Nantucket Traffic Lane.

Broadwater disingenuously represents that it has been “prejudiced” through claims that NYSDOS presented the Atlantic Ocean alternatives for the first time in the Objection. While NOAA regulations impose no obligation on states to actively assist applicants to design alternatives during the consistency review,¹⁴³ NYSDOS early on provided Broadwater with a study of ocean conditions, prepared by its consultant Battelle Memorial Institute, demonstrating the feasibility of various alternative Atlantic Ocean locations.¹⁴⁴ Moreover, Broadwater has independently analyzed both Alternative 1 and 2, including Broadwater generated maps of the same pipeline routes suggested in the Objection.¹⁴⁵

Broadwater scoffed at NYSDOS’s suggestion of Atlantic Ocean alternatives as not providing access to the New York metropolitan and Long Island region “without substantial, disruptive, and environmentally damaging

¹⁴¹ See Letter from Brett Snyder (June 20, 2007) to Kimberly D. Bose, Secretary, FERC [Doc. # 1502] at BW18211. Both S1 and S2 are located on Broadwater’s map and correspond to Alternative Locations 1 and 2, respectively.

¹⁴² In NYSDOS’s decision, coordinates for these two general locations were provided, in addition to general descriptions, as 13 miles south of Long Beach NY (S1) and 22 miles south of Fire Island Inlet (S2). The slight change in distance in each case reflects a slight adjustment to improve water depth to accommodate the FSRU.

¹⁴³ In accordance with 15 CFR § 930.56, since the inception of the project, NYSDOS has offered its views on the project, impacts on enforceable policies and the means for ensuring that the proposed activity would be conducted in a manner consistent with the management program.

¹⁴⁴ Battelle, Review of Ocean Conditions Data and Their Impact on Project Feasibility, NYSERDA Contract 9562, Task 6 (May 2007). BW041954-BW041985. Battelle Memorial Institute is a world leader in marine science, deep sea research, pipeline safety and infrastructure integrity, and national security. Battelle has been retained by energy providers and by such federal government agencies as the Environmental Protection Agency, the Navy, the Marine Corps and the U.S. Department of Homeland Security. See <http://battelle.org>.

¹⁴⁵ Letter from Brett Snyder (June 20, 2007) to Kimberly D. Bose, Secretary, FERC [Doc. # 1502] at BW18211.

pipeline infrastructure enhancements across Long Island.”¹⁴⁶ The Atlantic Ocean location alternatives proposed by NYSDOS have been found consistent with the NYSCMP, satisfy Long Island and New York City’s needs and free up other natural gas energy projects to meet upstate New York and Connecticut’s needs.¹⁴⁷ FERC has not fully evaluated the alternatives proposed by NYSDOS primarily because those alternatives would involve a transfer of its jurisdiction to the US Coast Guard under the Deepwater Port Act to review these Atlantic LNG facilities.¹⁴⁸

In proposing two Atlantic Ocean alternatives, NYSDOS stated:

As part of this consistency review, DOS describes alternatives that, if adopted by Broadwater, would permit the proposed project to be conducted in a manner consistent with the enforceable policies of the NYSCMP. During the consistency review, DOS held extensive discussions with Broadwater about various alternatives that would eliminate the project’s adverse effects on coastal uses and resources in Long Island Sound while still supplying new natural gas supplies to New York.¹⁴⁹ Based on these discussions, and DOS’ review of all submitted materials, **DOS concludes that there are at least two reasonable, feasible and available alternative locations in the Atlantic Ocean south of Long Island for an LNG import facility that would meet regional needs for natural gas. These alternatives would be consistent with the NYSCMP and would not require further coastal consistency review by DOS.**¹⁵⁰

Broadwater complains that “[t]he Objection states only that NYSDOS’s proposed alternatives could be conducted in a manner consistent with the New York State Coastal Management Program (‘NYSCMP’).”¹⁵¹ It contends that the alternatives should have focused solely on consistency with “the LISCMP, the coastal management program upon which NYSDOS based its Objection.”¹⁵² It argues that the “Secretary is limited to

¹⁴⁶ Letter dated December 18, 2006 from Murray Sondergard, Broadwater Project Director to Susan L. Watson, General Counsel, NYS Department of State (BW34057).

¹⁴⁷ See NYSDOS Objection at 61, n. 282 (BW33795).

¹⁴⁸ See FEIS § 4.4.2.1 at 4-38 to 4-39.

¹⁴⁹ Broadwater and DOS met seven times between April and August 2007. Materials from these meetings were submitted by Broadwater and appear on the FERC docket CP06-54, under Accession number 20070815-5024.

¹⁵⁰ NYSDOS Consistency Decision at 62-63 (emphasis added).

¹⁵¹ Broadwater’s Initial Brief at 35.

¹⁵² Id.

considering alternatives to the Project that NYSDOS states are consistent with the same coastal management program that formed the basis of the Objection – *i.e.*, the LISCMP.”¹⁵³

In footnote 147 of its Initial Brief, Broadwater reveals the faulty logic underlying its attempt to distinguish between the programs:

The LISCMP and the NYSCMP are separate and distinct “management programs” under the CZMA and its implementing regulations. Not only did the LISCMP and the NYSCMP go through separate coastal management program approval processes under 15 C.F.R. Part 923, but the LISCMP explicitly “replaces” the NYSCMP “for the Sound shorelines of Westchester County, New York City to the Throgs Neck Bridge, Nassau County, and Suffolk County.” LISCMP at 1.

Intentionally or otherwise, Broadwater misconstrues the nature of the LISCMP as being “separate and distinct” from New York’s Coastal Management Program. In 2002, the U.S. Commerce Department’s Office of Ocean and Coastal Resource Management (OCRM) approved designation of the Long Island Sound as a regional “special management area” under the NYSCMP and the incorporation of the LISCMP into the NYSCMP.¹⁵⁴ In Section 302 of the CZMA, Congress specifically encourages state coastal programs to develop special area management plans for important coastal areas, which provide for increased specificity and improved predictability in governmental decisionmaking.¹⁵⁵ The special area management plans are components of, and not “separate and distinct from”, the state’s coastal management program. The LISCMP was developed and approved as a regional element of New York’s federally approved Coastal Management Program in accordance with the federal Coastal Zone Management Act.¹⁵⁶

¹⁵³ Id. (emphasis added).

¹⁵⁴ See NYSDOS Supplemental Document #4 for NOAA approval letter. In 16 U.S.C. § 1455(d)(9), the CZMA encourages that a State’s coastal management program “include procedures whereby specific areas may be designated for the purpose of preserving or restoring them for their conservation, recreational, ecological, historical, or esthetic values.”

¹⁵⁵ See 16 U.S.C. §1452 (3); see also 15 CFR 923.122 (a)(6).

¹⁵⁶ See Letter dated February 20, 2002 from John King, NOAA, to George Stafford, NYSDOS. Supplemental document (NYSDOS) #4.

Broadwater's suggestion that NYSDOS was required to locate any proffered alternatives to the Project only in Long Island Sound must be rejected. The alternatives element is not meant "to deter a State, or other parties, from proposing to move the proposed activity to another site to make better use of existing infrastructure."¹⁵⁷ Moreover, as a component of the NYSCMP, the LISCMP policies only apply to projects located in or affecting land or water uses or natural resources of Long Island Sound. Outside of Long Island Sound, the NYSCMP policies apply to federal agency actions in or affecting land or water uses or natural resources in the designated coastal area (except where a federally approved local waterfront revitalization program exists in which case its local enforceable policies apply). NYSDOS identified two reasonable alternative locations in the Atlantic Ocean available to Broadwater to site an FSRU, mooring system and pipeline with interconnection in New York. NYSDOS determined that the Atlantic Ocean alternatives were consistent with the NYSCMP, which incorporates the LISCMP.

Alternative 1: Long Beach

The Long Beach site is an alternate location NYSDOS described with specificity in the consistency decision. It is both reasonable and available. An FSRU with a yoke-mooring system could be located 13 miles offshore south of Long Beach, NY, west of Cholera Bank, in about 80 feet of water situated between the outbound Ambrose to Nantucket Traffic Lane and the inbound Hudson Canyon to Ambrose Traffic Lane, separated from each lane by about one nautical mile (1.3 miles). The FSRU could connect via a minimum diameter 24-inch submerged pipeline that could run approximately 12 miles¹⁵⁸ to a subsea interconnection with the existing Transco Leidy to Long Beach Pipeline (also referred to as the Lower Bay Extension) at a location about 1 to 2 miles

¹⁵⁷ 65 Fed. Reg. 77151.

¹⁵⁸ See Broadwater's Initial Brief at 38, n. 154. Broadwater inaccurately claims that the Atlantic Ocean alternatives would require the construction of a "substantially longer pipeline to the connect the terminal to the existing pipeline transmission system." However, the pipeline length at Alternative 1 would be almost half the length of the 21.7 mile subsea pipeline Broadwater proposed for the Sound.

offshore.¹⁵⁹

The Transco Pipeline crosses the Lower Bay of New York Harbor from New Jersey and Raritan Bay and comes ashore at Long Beach, NY. Transco is upgrading this segment of its pipeline system from a maximum allowable operating pressure (maop) of 800 pounds per square inch (psig) to 960 psig, which will increase the maximum throughput of the Transco line from 600 to 700 million cubic feet of gas per day.¹⁶⁰ Upon arriving at Long Beach, natural gas would enter the Keyspan Energy Delivery distribution system.¹⁶¹ Keyspan indicates that this area of their service territory, including the Boroughs of Queens and Brooklyn and Nassau County on Long Island, is a load pocket capable of absorbing significantly greater levels of natural gas.¹⁶² Further, natural gas from an offshore location south of Long Beach, NY would provide a source of fuel for the 350 MW Barrett Generating

¹⁵⁹ See www.atlanticseaislandgroup.com/project_overview.shtml. Atlantic Sea Island Group, LLC has proposed Safe Harbor Energy, and LNG facility located 13.5 miles south of Long Beach, New York and 23 miles southeast of the New York Harbor entrance between the Ambrose-to-Nantucket and Hudson Canyon-to-Ambrose international shipping lanes. The proposal states it is capable of delivering up to 2 billion cubic feet of natural gas per day to the New York metropolitan region and is expected to be operational in 2014.

¹⁶⁰ See FERC Docket CP06-34-001, Leidy to Long Island Expansion; see also Broadwater materials presented to NYSDOS at the May 2, 2007 meeting [Doc. #1592] at 19 (BW19170). A 24-inch pipeline operating at 900 psig can carry in excess of 1 billion cubic feet of gas per day over a distance of up to 15 miles.

¹⁶¹ Energy Market Decisions, Inc. analyzed the viability of connecting a different proposed LNG facility with the Transco Pipeline and found that:

“For gas flowing eastward from the connection point into the Transco Pipeline, Safe Harbor Energy can deliver all of the supply to satisfy market requirements up to the maximum takeaway capacity from the Long Beach Meter Station (located onshore in the Town of Long Beach), which is determined to be 530 million cubic feet per day (Million cubic feet of gas per day) based on the Transcontinental Gas Pipe Line Corporation FERC gas tariff and the system upgrades recently approved by FERC. To the extent that additional take away capacity can be developed downstream of the Long Beach Meter Station, the Transco Pipeline has design capability to deliver additional volumes eastward from Safe Harbor Energy to the Long Beach Meter Station.”

Safe Harbor LNG Deep Water Port Act Application, Environmental Report, 2007. Letter from Energy Market Decisions, Inc. (March 31, 2007) [Doc. #2074] (BW38497-BW41428).

¹⁶² See Telephone conversation between Thomas Amerige of Keyspan Energy Delivery, Kevin Law of Long Island Power Authority and DOS staff on November 9, 2007 [Doc. #2088] (BW41869); see also NYSDOS Decision at 69-70 (“Gas coming into the western part of Long Island would be preferable”).

Station, which, fully repowered, could generate as much as 525 MW of supply,¹⁶³ absorbing a significant quantity of natural gas.¹⁶⁴ Incremental fuel into the Transco-Long Beach Pipeline could be directly utilized at this location.

Some of the natural gas entering the Transco Pipeline could displace fuel currently entering into Long Beach, or it could flow bi-directionally into New Jersey. This would allow natural gas to remain in New Jersey and move into New York via other Transco interconnects with ConEd and Keyspan.¹⁶⁵ Further, the entire Transco Pipeline System would be reinforced by having an additional fuel source at its eastern end, reducing reliance on Gulf Coast supplies and temporary underground winter storage. Additionally, New York is moving towards increased interconnection with the New Jersey electrical grid and associated natural gas infrastructure. The recent completion of the Neptune electric cable system from Sayreville, New Jersey to Long Island will provide up to 660 MW to LIPA.¹⁶⁶ Several power plants in northern New Jersey serve the New York metropolitan region.¹⁶⁷ Therefore, increased natural gas supply into northern New Jersey would have beneficial effects on the New York natural gas and electricity markets because New Jersey power plants support a regional electrical system that serves both New Jersey and New York.

In attempting to meet its burden that the Long Beach location is not reasonable or available for the

¹⁶³ See Cordaro, M., (January 2005). “The Environmental Benefits of Re-Powering KeySpan Electric Generating Plants in Meeting Future Demand”, Long Island University, Center for Management Analysis [Doc. #2021] (BW34175-BW34205). See NYSDOS Objection at 70.

¹⁶⁴ Assuming a heat rate of approximately 7,500 BTU/kWh, a repowered Barrett plant generating 525 MW of electricity would consume approximately 95 million cubic feet of gas per day of natural gas.

¹⁶⁵ See NYSDOS Decision at 69-70.

¹⁶⁶ See www.lipower.org/newscenter/pr/2007/062807_neptune.html [Doc. #2063] (BW37910-BW37912). In addition, there are two transmission projects pending for cross Hudson electrical cables from New Jersey into New York City. Hudson Transmission Partners, LLC has won approval from the New York Power Authority to provide up to 660 MW from Ridgewood, NJ into Manhattan. Cross Hudson Corporation has obtained all necessary state permits to provide up to 550 MW into 49th Street in Manhattan.

¹⁶⁷ See NYSDOS Decision at 64, n. 292. The Linden Cogen Plant, in Linden NJ provides up to 750 MW of supply into the New York City grid and is considered “in-city” capacity by the NY-ISO. In addition, the recently announced Bayonne Energy Center Project would generate 512 MW on the New Jersey side of the Hudson and be connected into the New York City grid in Brooklyn, NY via a cross Hudson cable.

mooring of a FSRU, Broadwater analyzed the reliability of an Atlantic Ocean alternative using a 2-meter wave height as a threshold for operations using a wave conditions data set for NOAA buoys located 33 miles south of Islip, Long Island.¹⁶⁸ However, proposed Alternative 1 would be located closer to shore (13 miles south of Long Beach) in an area that experiences lower wave height conditions than those recorded at the NOAA buoys.¹⁶⁹ Battelle also considered the duration of significant wave height periods and found that at U.S. Army Corps of Engineers Hydraulics Laboratory Wave Information Studies Hindcast Wave Data 124 (WIS124), which is located 2 kilometers from Alternative 1 and reflects anticipated wave conditions at that location, between December and February, a one-day average wave height greater than 2 meters occurs 7.4% of the time; a two-day average above 2 meters occurs 5.6% of the time; a four-day average, 2.2%; and an eight-day average, only 0.3% of the time.¹⁷⁰ The WIS124 data supports the conclusion that the FSRU would be unable to conduct berthing and deberthing operations for at least one day 7% of the time and for at least 8 days less than 1% of the time at Alternative 1.¹⁷¹ The LNG stored aboard the FSRU could be vaporized and discharged during the brief periods of time when a LNG carrier may not be able to berth due to weather or ocean conditions and therefore the FSRU would still be a reliable source of natural gas.¹⁷² Broadwater has not produced any data to prove that this 7% unavailability rate for one full day constitutes unreliability as the onboard storage would provide continuous supply. The onboard

¹⁶⁸ See NYSDOS Decision at 65 (BW33799).

¹⁶⁹ NYSDOS used the United States Army Corps of Engineers Wave Information Studies (WIS) hindcasting model data set that more accurately describes the conditions at the Alternative 1 location. WIS124 is located two kilometers from the proposed Alternative 1 and represents anticipated wave conditions at that location and using Broadwater's operational threshold of 2-meter waves, LNG carriers would be unable to berth or deberth from the FSRU between December and February on average only 8% of the time (2.4 days out of 30). In summer months the wave height would be lower. Battelle Consultants (Battelle), "Review of Ocean Conditions Data and their Impact on Project Feasibility." May 2007, Battelle, Task 6, at 6 (BW41961).

¹⁷⁰ Battelle Task 6 at 6-7 (BW41961-BW41962); see also NYSDOS Decision at 66 (BW33800). Exxon-Mobil has proposed a FSRU facility 30 offshore from Long Beach and using their 3-meter wave height criterion, the percentage of time that berthing/deberthing could occur at both alternative locations increases significantly.

¹⁷¹ See Battelle Task 6 at 6-7 (BW41961-BW41962).

¹⁷² See NYSDOS Objection at 66 (BW33800). Reliability is largely a function of the ratio of storage-to-discharge and a FSRU facility located in the Atlantic Ocean with 8 bcf of storage could discharge 720 million cubic feet of gas per day for eleven days and this meets the reliability requirements as acknowledged by FERC; see also FEIS at 4-26 (BW29199).

storage would also provide a continuous supply during the 1% of the time berthing or deberthing could not occur over 8 consecutive days.¹⁷³ Further, Broadwater has inappropriately used several incomparable data sets to evaluate Alternatives 1 and 2 for wave height frequencies. Battelle notes: “Broadwater has chosen the worst-case scenario in each instance.”¹⁷⁴

The location of the FSRU at Alternative 1 is reasonable as it avoids conflicts with fishing and commercial navigation that travel in assigned lanes. Moreover, the state’s public trust doctrine does not apply to submerged lands beyond the 3-mile state limit. The exclusion zone for the FSRU would be small and may not be required at all for LNG carriers.¹⁷⁵ The actual ship traffic movements in adjacent lanes are considerably lower, by two orders of magnitude, than the inaccurate level of traffic cited by Broadwater and included in the FEIS.¹⁷⁶ Transiting commercial vessels in the Atlantic Ocean would not have to compete for passage through a heavily used channel, such as The Race in the Sound.¹⁷⁷ In addition, the U.S. Coast Guard determined that a security zone/escort for LNG carriers would not be needed in the Atlantic Ocean and there would be no real navigational safety risk at a location 12 miles offshore.¹⁷⁸ The offshore pipeline connection to the existing Transco-Long Beach pipeline would eliminate adverse impacts to the near shore environment. There would be no visual or community character effects on Long Beach or surrounding communities as the FSRU would not be visible from the shoreline.

Broadwater has not produced any technical evaluation to support its claim that the mooring system and tower could not be designed to withstand higher wave heights associated with the Atlantic Ocean.¹⁷⁹ Instead,

¹⁷³ See Battelle Task 6 at 7 (BW41962); see also 65 Fed. Reg. 77151. “The Secretary is limited in consideration to reasonable alternatives that meet in whole or at least in part the appellant’s purpose.” Broadwater’s assertion of unreliability are flawed in demonstrating that the onboard storage and de minimus down time, if any, would not allow then to meet the project purpose, “at least in part.”

¹⁷⁴ Battelle Review of Supplement Information (July 25, 2008) at 2.

¹⁷⁵ See NYSDOS Decision at 67 (BW33801); see also Meeting between the Coast Guard and NYSDOS on August 17, 2007.

¹⁷⁶ See NYSDOS Decision at 67, n. 303, 304 (BW33801).

¹⁷⁷ See *id.* at 68 (BW33802).

¹⁷⁸ See Meeting between Coast Guard and NYSDOS Staff (August 17, 2007)[Doc. # 2093] (BW41986).

¹⁷⁹ NYSDOS Objection at 69 (BW33803). The FEIS does not present any evidence that an FSRU, mooring system and tower could not be designed, constructed and safely operated at the proposed Alternative 1 location.

Broadwater asserts that “[t]he FSRU is designed to send out at a constant rate of 1.0 Bcfd”¹⁸⁰ but produces no proof that an alternate FSRU design could not achieve that same send out rate.¹⁸¹ Sloshing in the FSRU located at Alternative 1 would be minimized by a design for alternative tanks, such as the Ishikawajima Heavy Industries Self-Supporting Prismatic, Type B (ISI-SPB).¹⁸²

Broadwater has relied solely upon select 2-meter wave data as a basis for determining reliability for either Atlantic Ocean location in comparison to its “preferred” location in the Sound.¹⁸³ However, many other factors unrelated to wave height, such as equipment reliability, ship delivery reliability, and FSRU design capacity, will play a direct role in the reliability of the natural gas supply. The need for reliability also “depends on the existing regional supplies/demands on the system, the prices that people are willing to pay for their natural gas supplies, and the contracts that have been negotiated.”¹⁸⁴ However, even if Broadwater’s sole reliability analysis of wave height data is used, its own study demonstrates that operability up to 3-meter wave heights (as proposed by the BlueOcean project discussed below) increases the reliability to 98.7% for Alternative 1 and 95.8% for Alternative 2 and the differences in these percentages are statistically identical when compared to the Sound location.¹⁸⁵

Alternative 2: Fire Island Inlet

The Fire Island Inlet site, located in the Atlantic Ocean 22 miles south of Fire Island Inlet, is a second alternate location that NYSDOS described with specificity that is both reasonable and available and is consistent

¹⁸⁰ Broadwater’s Initial Brief at 45.

¹⁸¹ VEPCO Appeal at 38; The alternatives “need not meet the exact specifications of the proposed project . . . [but] rather it must meet the primary purpose of the proposed project.” Carlos Cruz Colon Appeal at 6.

¹⁸² See NYSDOS Decision at 69 (BW33803).

¹⁸³ See NYSDOS Decision at 65 (BW33799).

¹⁸⁴ Battelle Review of Additional Supplemental Information (August 15, 2008) at 2. Broadwater’s economic rationale for choosing between the Sound preferred location over the Atlantic Ocean sites and does not provide sufficient analysis to justify why such high reliability levels are required. Additional considerations are the contracts local distribution operators enter into with end users (residential, commercial, and industrial). The larger end users may also include industrial users, such as power generating facilities, as well as interconnections with other pipeline operators. Contracts with industrial end users will often provide for service interruptions and suggests lower reliability rates are acceptable.

¹⁸⁵ See Broadwater Supplemental Document 1 at SD9; see Exxon Mobil BlueOcean Energy Project presentation to NYSDOS December 18, 2007 (BW37936-BW37945); BlueOcean Energy press release available at www.blueoceanenergy.com/tabid/69/Default.aspx?udt_410_param_detail=5.

with the NYSCMP. The turret-moored FSRU design located in approximately 130 feet of water at low tide would connect to the IGTS pipeline via a new subsea pipeline, with a minimum width of 24 inches and would run approximately 22 miles from the FSRU to Fire Island.¹⁸⁶

Broadwater states that “extensive onshore pipeline construction required for Alternative 2 will result in significant adverse environmental impacts outside of the coastal zone,” but any impacts will occur for the most part in previously disturbed corridors.¹⁸⁷ With respect to coastal effects, the FSRU would be located beyond the primary nearshore squid and surf clam fishery area and would also not be visible from the shore.¹⁸⁸ Dredging would be restricted to timeframes that are consistent with protecting habitat value and would be scheduled during late summer and fall to minimize impacts on aquatic organisms and the shorebird summer breeding season (April-July). Pipeline route and installation techniques would include horizontal directional drilling and careful routing of trenches around sensitive sites and conducting work during specific timeframes to minimize environmental impacts.¹⁸⁹ The State Legislature enacted legislation authorizing easements across parkland to companies like Broadwater for gas lines.¹⁹⁰

Broadwater has asserted that an Atlantic Ocean location is not available and would result in unreasonable costs.¹⁹¹ Increased cost alone does not render an alternative unreasonable. Even where an alternative is “expensive” and “uncertain” as well as “time consuming,” case precedent establishes that the alternative is still

¹⁸⁶ See *id.* at 70-71 (BW33804-BW33805). NYSDOS’s Decision specifically describes the pipeline description originating from the FSRU at Alternative Site 2 to its connection with the IGTS pipeline in South Commack.

¹⁸⁷ Broadwater’s Initial Brief at 46 n.187

¹⁸⁸ The south shore of Long Island is heavily used for clam and squid fisheries, including the surfclam as a significant contributor to New York’s commercial landings. The heaviest population and catch densities would be located east and west of the pipeline. See NYSDOS Decision at 72, n.312 (BW33806).

¹⁸⁹ See NYSDOS Decision at 72 (BW33806). Recent projects which have received DOS consistency concurrences using such methods include the Neptune electrical cable, the Verizon cable across Moriches Bay, and the Verizon cable from East Islip to Saltaire. Trenching or excavation could occur only in fall to avoid effects on aquatic organisms, as well as impacts on recreational users.

¹⁹⁰ New York State Parks, Recreation and Historic Preservation Law § 13.06.

¹⁹¹ Broadwater’s Initial Brief at 46-47.

reasonable and available.¹⁹² Rather than the test for reasonableness relying solely on cost, "[w]hether an alternative will be considered 'reasonable' depends upon its feasibility and upon balancing the estimated increased costs of the alternative against its advantages."¹⁹³ In calculating costs for Alternative 2, Broadwater has excessively escalated the cost for the Atlantic site versus the Sound site by a factor of 1.76 although the pipeline lengths for the Sound location and the Alternative 2 location are essentially the same.¹⁹⁴ Furthermore, Broadwater also included a high-end estimate of \$69 million for the 13 miles of onshore pipeline when average onshore pipeline costs for a 30-inch pipeline is about \$2 million per mile.¹⁹⁵ Broadwater's excessive calculation of costs for locating in the Alternative 2 location does not deem the site unreasonable.

Exxon-Mobil, in direct contradiction to Broadwater's claims alleging that an Atlantic Ocean location would be unavailable or unreasonable, recently announced their proposed BlueOcean Energy project which is a turret-moored FSRU located in the New York Bight area, approximately 20 miles east of New Jersey and 30 miles south of Long Beach, New York.¹⁹⁶ The BlueOcean Energy project will provide 1.2 bcf/d of natural gas to the New York and New Jersey markets and is scheduled to be operational by 2015 with a 25-year project life.¹⁹⁷ By comparison to Broadwater's 2-meter wave data, which Broadwater inexplicably attempts to establish as the industry standard, Exxon-Mobil has a 3-meter wave height operations threshold for its BlueOcean Energy project. When the Exxon-Mobil 3-meter wave height criterion is applied to wave height data used to evaluate Alternatives 1 and 2, then the percentage of time that berthing/deberthing could occur increases significantly.¹⁹⁸

¹⁹² See Decision and Findings by the U.S. Secretary of Commerce in the Consistency Appeal of Millennium Pipeline Company, L.P. From an Objection by the State of New York, Dec. 12, 2003 at 29 (Millennium Decision), citing Decision and Findings in the Consistency Appeal of Chevron U.S.A. Inc., Oct. 29, 1990 at 59.

¹⁹³ Decision and Findings in the Consistency Appeal of Southern Pacific Transportation Company to an Objection from the California Coastal Commission, Sep. 24, 1985 at 18.

¹⁹⁴ See Battelle Review of Additional Supplemental Information (August 15, 2008) at 1. Broadwater has also escalated the costs of pipe lowering for Alternatives 1 and 2 by factors of 3 and 4.7, respectively, when compared to the Sound location. Id.

¹⁹⁵ See id. at 1-2; see also Chevron Appeal at 59.

¹⁹⁶ NYSDOS Supplement 11 "Potential American LNG Import Terminals"; BlueOcean Energy press release available at www.blueoceanenergy.com/tabid/69/Default.aspx?udt_410_param_detail=5

¹⁹⁷ Exxon Mobil's BlueOcean Energy presentation to NYSDOS December 18, 2007 [Doc. #2067] (BW37936-BW37945).

¹⁹⁸ See id. at (BW37936-BW37945); see also NYSDOS Decision at 66 (BW33800)

Broadwater's assertion that the Alternatives are not available relies largely on its own Supplemental Documents I and II,¹⁹⁹ but these documents contain vague, biased, and imprecise methods for assessing Alternative 1 or 2 availability.²⁰⁰ Nowhere in either Supplemental Document I or II were changes in design of the FSRU or the anchoring technology considered that would improve operational availability and reliability.²⁰¹ Furthermore, Broadwater fails to consider factors other than wave conditions when reviewing the Alternatives. In the Long Island Sound, factors such as weather, traffic patterns, traffic volumes and supply interruptions could affect the operational reliability of the proposed Project when compared to the alternative locations, and Broadwater has essentially chosen to ignore these factors in their analysis.²⁰² For example, "the reliability percentages noted in the Witness Model for the Sound assumes that the only delays that will occur in shipping are normal weather delays similar to those conditions that LNG vessels have experienced in the past."²⁰³ Broadwater has not included delays in the Sound due to other vessels transiting through The Race during the time the LNG carriers are also in the Sound.²⁰⁴ By contrast, Alternatives 1 and 2 are located in the open waters of the Atlantic Ocean and navigational delays are not likely to occur because of the availability of federally established navigation laws.²⁰⁵

¹⁹⁹ See Battelle Review of Additional Supplemental Information (August 15, 2008) at 3. Broadwater's submission of the "Witness Model" in Supplemental II is unverifiable as Broadwater did not submit the model that would allow for further analysis. Id.

²⁰⁰ See id. at 4. Broadwater has used a mixture of 10-year and 20-year datasets to calculate and compare data from the three different locations. In analyzing Alternatives 1 and 2, Broadwater chose to use the data set with the highest seas (sometimes choosing not to use the additional 10-years of data because overall the higher wave heights were less). In order to accurately compare locations, data from the same period should be used when comparing locations. This would provide the most accurate comparison of how waves at each site differed through the same weather systems. Id.; see also Supplemental Document I at SD22.

²⁰¹ See Battelle Task Report 3: Review of Proposed Project and Alternatives to Ensure All Reasonable Alternatives have been Considered [Doc. # 2090] at 7-8 9BW41896-BW41897). The conditions and water depths in the Atlantic Ocean would support the use of a shuttle regasification vessel (SRV). Id.

²⁰² Battelle Review of Supplement Information (July 25, 2008) at 5.

²⁰³ Battelle Review of Additional Supplemental Information (August 14, 2008) at 3.

²⁰⁴ See id.; see also WSR at 21-37 (BW7610-BW7626). The WSR notes that there is on average 2,300 commercial vessel arrivals per year and a similar level of departures may also occur and numerous recreational vessels that use the Race. The USCG is requesting that "LNG carrier arrivals and departures should be scheduled to minimize conflicts with other waterway users, with particular emphasis on avoiding transiting The Race during times when used by commercial and recreational fishermen is highest and avoiding interfering with regattas." Id. Broadwater has not taken these factors into consideration in their Supplemental Documents I or II.

²⁰⁵ See Battelle Review of Additional Supplemental Information (August 14, 2008) at 3.

In Supplemental Report I, Broadwater reran the analysis Battelle performed in its April 2007 Task 6 Report with the WIS data using the 20-year time window (1980-1999) rather than the 10-year time window (1990-1999).²⁰⁶ Whereas Battelle chose to use consistent methods for each station to ensure the information was comparable (the 10-year data set for all models), Broadwater used different data sets for each model depending on which produced more favorable data to their position. For Alternative 2, Broadwater used the nine year frequency data from NDBC 44025 data, rather than the 20-year WIS119 data, which had slightly lower frequencies of 2m waves. On the other hand, for Alternative 1, Broadwater used the 20-year WIS124 station data rather than the 10-year WIS124 data.²⁰⁷ Based on the minimum information Broadwater has provided, the data in Supplemental Documents I and II is contradictory.

An analysis by Battelle of Broadwater's Supplemental Report I found that Site 2 is located approximately midway between WIS119 (12.8 km), the location used by NYSDOS for wave data, and NDBC 44025 (9.6 km), the buoy used by Broadwater for wave data.²⁰⁸ The wave measurement data from both stations reflect percent frequency of occurrence of wave heights by month and the difference between the two data sets are small.²⁰⁹ NDBC 44025 has a 4.3% greater frequency of 2-meter waves than WIS119 annually and a 1.2% greater annual frequency of 3-meter waves. These small differences are within the statistical variability expected for wave climatology data. Variances occur due to spatial separation of stations in the study area and for different time windows. Broadwater chose to selectively use the station and time period with slightly higher waves than that used by Battelle.²¹⁰

²⁰⁶ Battelle Task 6 at 1-9 (BW41956); Broadwater Supplemental Document I at SD-24.

²⁰⁷ Id. at 1-2 (BW41956-BW41957).

²⁰⁸ Battelle Supplemental Report (July 25, 2008) at 1.

²⁰⁹ Id.

²¹⁰ See Battelle July 25, 2008 Analysis, NYSDOS Supplemental Document at 2. In Broadwater's Supplemental Document 1, data is presented that reflects an annual downtime of 9.3% or 99 days for Alternative 1. See Broadwater Supplemental Document I at SD30. However, Broadwater's Witness Model, Supplemental Document II, reports that 50% of the vessels using Alternative 1 will exceed the 36-hour turn around time. See Broadwater Supplemental Document II at SD111, Table 5. If weather affects reliability at Alternative 1 less than 10% of the time in a year, this in turn should not adversely affect half of the shipments. Broadwater's Supplemental Documents I and II also present the same contradictory data for Alternative 2 by representing that annual downtime of 14% or 51.1 days should adversely impact 63% of the LNG carrier shipments using the 36-hour timeframe. See Broadwater Supplemental Document I at SD31; see also Broadwater Supplemental Document II at SD111, Table 5.

Broadwater insists that its business plan can only be met if the FSRU is sited in the protected waters of the Sound because it is a “baseload LNG facility and is designed for no planned shutdowns.”²¹¹ Broadwater has not supplied sufficient information justifying such a high reliability (98%) is necessary. Based on current information, Broadwater has, to date, not provided any firm contracts demonstrating that it will need to meet the supply goals of its own business plan.

If Broadwater’s position is such that any proposed LNG project utilizing a FSRU facility with a project objective of 1 bcf/d can be operated only in protected waters, then all future FSRU facilities would need to be in protected waters such as the Sound. This would lead to further industrialization of the Sound’s open water in order to meet possible future natural gas needs of the same geographical region.²¹² The proposed Safe Harbor and BlueOcean LNG facilities slated for the Atlantic Ocean belie this claim. The reality is that Broadwater has categorized the Sound location as the “preferred site” so that it can connect into its own pipeline at IGTS.²¹³ Broadwater partners own 44.48% of the IGTS Pipeline, which is primarily owned and operated by TransCanada. NYSDOS attempted to accommodate Broadwater’s preference by proposing Alternative 2.²¹⁴

Based on the foregoing, Broadwater has not met its burden in proving that either Alternative 1 or 2 are not available because of a “technical or legal barrier, or the resources do not exist.”²¹⁵ Broadwater has also failed to meet its burden of proving that either Alternative 1 or 2 is unreasonable because differences in the minimal environmental impacts at either Alternative 1 or 2, which NYSDOS has already determined to be consistent with its NYSCMP, do not outweigh any changes in cost between the alternative and proposed project.²¹⁶ The

²¹¹ Murray Sondergard December 18, 2007 letter to Susan Watson stating that the “project objective is to deliver a large supply of natural gas into a regional market including Long Island, New York City, Southern Connecticut, and upstate New York” (BW34057).

²¹² See Broadwater’s Initial Brief at 18-19. Broadwater’s assertion that up to 1 bcf/d can be supplied only if the project is located in the “protected waters” of the Sound is in direct contradiction to Broadwater’s own assertion that its project would not lead to further industrialization of the Sound.

²¹³ Resource Report No. 10 (Jan. 30, 2006) [Doc. #14] at 10-32 (BW2480).

²¹⁴ See www.iroquois.com/new-Internet/igts/CorporateInformation/ourpartners.asp.

²¹⁵ Korea Drilling Appeal at 40, n. 233.

²¹⁶ See id. at 45, n. 265

alternatives proposed by NYSDOS are reasonable, comparable market alternatives to Broadwater and are, therefore, available.

GROUND II

THE BROADWATER PROJECT IS NOT NECESSARY TO NATIONAL SECURITY

The second statutory ground (Ground II) for override of a state objection is that the proposed activity is “necessary in the interest of national security.”²¹⁷ To make this finding, the Secretary must determine that “a national defense or other national security interest would be significantly impaired if the activity were not to go forward as proposed.”²¹⁸ Additionally, the Secretary must seek and accord considerable weight to the views of the Department of Defense and other federal agencies in determining the national security interests involved in the project although the Secretary is not bound by such views.²¹⁹

Although geographic diversification of energy infrastructure and increased access to energy amount to notable national security interests, the Project is inessential to realizing these national security interests. Consequently, not permitting the Project to proceed as proposed would not significantly impair the national security. The Secretary explained in the Mobil Exploration Appeal that the regulations at 15 C.F.R. § 930.122 compel the existence of a “specific link between a particular project and a significant impairment of national security if the project is not allowed to proceed as proposed.”²²⁰ No such link has been claimed.

In Weaver’s Cove, the Appellant argued that a LNG facility located in Massachusetts was necessary to national security because it protected against the impact that natural disasters like Hurricanes Katrina and Rita can have on energy supply when the energy infrastructure is concentrated in one region.²²¹ The Secretary dismissed this argument concerning geographic diversification of energy infrastructure as merely a “general statement” and

²¹⁷ 16 USC §§1456(c)(3)(A),(B); 1456(d).

²¹⁸ 15 CFR 930.122 (emphasis added).

²¹⁹ See 15 CFR 930.122; see also Decision and Findings in the Consistency Appeal of Amoco Production Company from an Objection by the Division of Governmental Coordination of the State of Alaska (July 20, 1990) at 56-58.

²²⁰ Mobil Exploration Appeal at 46, n.70.

²²¹ Weaver’s Cove Appeal at 37.

concluded that “[Appellants] fail to identify any significant impairment to national security that would result should the Project not go forward.”²²²

In addition, the proposed BlueOcean Energy and Safe Harbor projects ensure a reliable natural gas supply to New York/New Jersey metropolitan areas. No “specific link” exists between not permitting the Broadwater Project to proceed as proposed and significantly impairing the national security interest. Furthermore, arguably the Broadwater Project would harm the national security by straining the resources of the Coast Guard in the populous Long Island Sound region.²²³ Thus, the Project is not necessary in the interest of national security.

V. CONCLUSION

Broadwater has not met its burden of persuasion for an override of NYSDOS’s objection on either Ground I or Ground II and NYSDOS requests that the Secretary reject Broadwater’s appeal in its entirety.

²²² Weaver’s Cove Appeal at 37.

²²³ See WSR at 156-157 (BW7745-BW7746).