



FEB 19 2008

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, D.C. 20426

20080219-5081 FERC PDF (Unofficial) 02/19/2008 03:02:28 PM

Re: Final Environmental Impact Statement for the Broadwater Liquefied Natural Gas Project
(Docket Nos. PF-05-4, CP06-54-000, and CP06-55-000)

Dear Secretary Bose:

The National Oceanic and Atmospheric Administration (NOAA) is pleased to provide comments on the Final Environmental Impact Statement (FEIS) of the lead agency, the Federal Energy Regulatory Commission (FERC), dated January 2008 for the Broadwater Liquefied Natural Gas Project (Docket Nos. PF-05-4, CP06-54-000, and CP06-55-000). According to the FEIS, Broadwater Energy LLC and Broadwater Pipeline LLC are proposing to construct and operate a liquefied natural gas import, storage, and regasification facility, approximately 9 miles off of New York, and a new offshore pipeline to connect to an existing natural gas transmission system in Long Island Sound.

The comments and recommendations enclosed are based on NOAA's special expertise and responsibility to protect essential fish habitat under the Magnuson-Stevens Fishery Conservation and Management Act and to protect listed species under the Endangered Species Act and protected species under the Marine Mammal Protection Act. These comments and recommendations also reflect NOAA's views as to the possible effects of the operation of the proposed facility on the marine environment.

In licensing and regulatory matters, decisions and judgments are made based on the best scientific data available at that time. Where data is abundant, precise requirements may be in order. Where available scientific data is not comprehensive, precision is not always possible, and more projections and judgments are used. While NOAA has certain scientific data relevant to the effects of the operation of the proposed facility on ocean resources, marine species and habitat, they are not necessarily comprehensive on all matters related to the projected effects of the facility operation. In fact, in certain areas the available scientific data are quite sparse. Therefore, estimated ranges of effects are included in portions of the comments and recommendations.

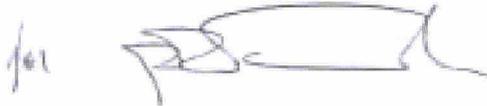


It should also be noted that the Deepwater Port Act provides that a license condition should require the best technology available to prevent or minimize "adverse impact on the marine environment." The enclosed comments describe what NOAA considers to be significant adverse impacts on the marine environment.

NOAA appreciates the opportunity to comment at this time and looks forward to continuing to provide the FERC with assistance on the subject action. Please contact Diane Rusanowsky at 203/ 882-6504 for EFH and FWCA issues, and Kristen Koyama at 978/281-9300, ext. 6531, for ESA issues.

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Sincerely,

A handwritten signature in blue ink, appearing to read 'R. Weiher', is written over a horizontal line.

Rodney F. Weiher, Ph.D.
NOAA NEPA Coordinator
Office of Program Planning and Integration

Enclosure



UNITED STATES DEPARTMENT OF COMMERCE
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FEB 19 2008

The Honorable Kimberly D. Bose
 Secretary
 Federal Energy Regulatory Commission
 888 First Street, N.E.
 Washington, D.C. 20426

Re: Docket Nos. PF-05-04; CP06-54-000; and CP06-55-000; by Broadwater Energy LLC and Broadwater Pipeline LLC; Permanent Deployment of a Floating Liquefied Natural Gas Import Terminal and Subaqueous Installation of a Natural Gas Pipeline in Long Island Sound

Dear Secretary Bose:

NOAA's National Marine Fisheries Service (NMFS) has reviewed the January 2008 final environmental impact statement (FEIS) for this project, and is providing these comments pursuant to our responsibilities under the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), the Endangered Species Act of 1973 (ESA), as amended, the Fish and Wildlife Coordination Act (FWCA), the Marine Mammal Protection Act (MMPA), and the National Environmental Policy Act (NEPA). The FEIS describes a proposal by Broadwater Energy LLC and Broadwater Pipeline LLC to construct and maintain a liquefied natural gas (LNG) import terminal and natural gas pipeline in New York State waters of Long Island Sound (LIS). The proposed terminal would be deployed approximately 9 miles from the nearest shoreline on Long Island and about 10 miles from the nearest shoreline in Connecticut. The project design features a "floating storage and regasification unit" (FSRU) that would be attached to a yoke mooring system embedded in the floor of LIS. The FSRU is described as a double-hulled vessel approximately 1,215 feet long and 200 feet wide, fitted with a closed-loop, shell-and-tube vaporization system. The FSRU would have a total storage capacity of 350,000 cubic meters. In addition, approximately 21.7 miles of subaqueous natural gas pipeline would deliver natural gas from the FSRU to an offshore connection with the existing Iroquois Gas Transmission System (IGTS) pipeline in LIS.

The MSFCMA, the ESA, and the FWCA require federal agencies to consult with one another on projects such as this. When a project involves essential fish habitat (EFH), as this project does, this process is guided by the requirements of our EFH regulation at 50 CFR 600.905. This regulation generally outlines each agency's obligations in the EFH consultation procedure and mandates when an EFH assessment must be prepared. We also note FERC's responsibilities under the Energy Policy Act of 2005 and its implementing regulations. While the FEIS captured most of our concerns provided in response to the DEIS, we offer these additional comments and recommendations below pursuant to the above referenced regulatory process.



Section 7 of the ESA requires federal agencies to consult with NMFS to ensure that “any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or adversely modify or destroy (designated) critical habitat . . .” (*See also* 50 C.F.R. part 402). Due to the presence of listed species in the action area and the potential for the proposed activities to affect these species, FERC has been engaged in informal Section 7 consultation with NMFS for the proposed project. We have reviewed the content of the FEIS that addresses ESA-listed species, and provide comments below. However, NMFS will provide conclusions regarding impacts on endangered and threatened species under separate cover when the section 7 consultation has been completed.

General Comments

LIS is a unique and highly productive estuarine ecosystem that has been designated as an “Estuary of National Significance” under the U.S. Environmental Protection Agency’s National Estuary Program since 1987. LIS supports many water-dependent uses, including a wide range of activities such as swimming, commercial and recreational fishing, and boating. Since 1999, LIS waters have been designated as EFH for a variety of species and life stages of federally managed fishery resources. These include Atlantic salmon (*Salmo salar*), red hake (*Urophycis chuss*), winter flounder (*Pseudopleuronectes americanus*), windowpane (*Scophthalmus aquosus*), Atlantic sea herring (*Clupea harengus*), bluefish (*Pomatomus saltatrix*), fluke (*Paralichthys dentatus*), king mackerel (*Scomberomorus cavalla*), Spanish mackerel (*Scomberomorus maculatus*), cobia (*Rachycentron canadum*), little skate (*Raja erinacea*), and winter skate (*Raja ocellata*). In addition, LIS supports many other species of concern, notably hard clams (*Mercenaria mercenaria*), soft shell clams (*Mya arenaria*), Atlantic silversides (*Menidia menidia*), striped bass (*Morone saxatilis*), blackfish (*Tautoga onitis*), American lobster (*Homarus americanus*), and a wide array of crustaceans and invertebrate forage species. Sea turtles listed as threatened or endangered under the ESA, including the federally endangered Kemp’s ridley (*Lepidochelys kempii*), loggerhead, (*Caretta caretta*), green (*Chelonia mydas*) and leatherback (*Dermochelys coriacea*), also may be present in the project vicinity from May through November of any calendar year. Federally listed northern right (*Eubalaena glacialis*), humpback (*Megaptera novaeangliae*), and fin (*Balaenoptera physalus*) whales, while not present within LIS, are known to transit past the mouth of LIS.

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 sea turtles, while vessel traffic associated with port operations has the potential to affect ESA-listed sea turtles and whales.

Essential Fish Habitat Conservation Recommendations

As noted in the EFH assessment for this project, all aquatic habitats in the project study area have been designated as EFH under the MSFCMA for a number of species and life stages. We note

that both the construction and proposed operation of the LNG facilities would adversely affect the habitat of various species and life stages, some for the life of the project. To avoid and minimize the adverse impacts, NMFS recommends pursuant to Section 305(b)(4)(A) of the MSFCMA that FERC adopt the following EFH conservation recommendations:

- FERC should select the least environmentally damaging project alternative to meet the stated project purpose and need. From the perspective of living aquatic organisms and their habitats, selection of any alternative proposed in LIS relies heavily on ensuring that NMFS' conservation recommendations be implemented in the final project design, construction, and operation plans. While the FEIS includes a number of such measures, these largely are presented as FERC staff's recommendations. We have highlighted key measures recommended by FERC staff among our more specific conservation recommendations below. NMFS recommends these measures be adopted as specific and enforceable conditions in any federal authorizations that may be granted for this project. This conservation measure is necessary to ensure that water quality, benthic sediment integrity, and other primary habitat features are restored to the extent practicable in order to maintain the important habitat values and functions necessary for the affected areas of LIS to continue functioning effectively as EFH.
- The FSRU should be located distant from sensitive aquatic biological resources and habitats, which are in the nearshore, shallow water areas. For this reason, we recommend that the FSRU be placed in waters no shallower than 80 feet. This conservation recommendation is necessary to avoid and minimize impacts in highly productive or otherwise sensitive ecological areas.
- In conjunction with the US Coast Guard, FERC should ensure that adequate risk mitigation conditions have been developed and will be implemented to ensure that the project waterway would be suitable for safe use by LNG carriers to and from the proposed FSRU. This conservation recommendation is necessary to ensure that any environmental risks associated with LNG tanker or FSRU failure that would accrue damage to aquatic resources and habitats have been avoided and minimized to the extent practicable. These practices should include, but are not limited to, establishing and enforcing: appropriate regulated navigation areas (including a plan to address potential conflicts of use that could result in marine accidents); appropriate and effective security zones; safety features and procedures for both final project design and operation; an emergency response plan (e.g., to address spills, hurricanes or other adverse meteorological events, etc.); and an effective environmental inspection and monitoring plan to ensure that all necessary mitigation measures have been implemented and continue to be met for the life of the project. This conservation recommendation is necessary to ensure that project construction and operation will not introduce significant new risks that would result in habitat damage or degradation.
- FERC should ensure that appropriate emergency response designs, plans, and procedures developed in concert with the U.S. Department of Homeland Security will include all appropriate aquatic resource/habitat protection measures developed and implemented in the final construction and operation plans.

- Before FERC issues a license it should make sure that Broadwater obtains all federal permits and authorizations that would apply to FERC's recommended environmental inspection and monitoring program. This ensures compliance with the mitigation measures, and that FERC agrees to follow any applicable permitting requirements of the State of New York, Corps of Engineers, US Coast Guard, or other state, federal, or local permitting authorities that have jurisdiction over the proposed project. This conservation recommendation is necessary to ensure that all necessary environmental protection measures, notably those that protect and preserve local aquatic habitat functions and values, are met for the life of the project.
- FERC should require that Broadwater use a silicon-based anti-fouling paint on the hull of the proposed FSRU and any other structures requiring anti-fouling paint. Verification that the selected coatings would not introduce unacceptable risks to aquatic life should be completed by FERC prior to installation activities in LIS. The appropriate material safety and data sheets for the anti-fouling paint would be acceptable surety.
- The final construction plans should be amended to require the use of properly configured and maintained mid-line buoys on all anchor cables, including the lay barge. Alternatively, it would be acceptable that a dynamically positioned lay barge is used to install the pipeline and associated structures. This conservation recommendation is necessary to avoid and minimize cable scour disturbance to the ambient sediment, including areas that would have to be remediated post construction to maintain necessary habitat conditions for fishery resources and their prey.
- Consultation with NMFS must be re-initiated pursuant to 50 CFR 600.920(l) if new information becomes available or the project is revised in such a manner that affects the basis for NMFS' EFH conservation recommendations. Specifically, should final design plans determine that a dredging contingency installation method across Stratford Shoal is necessary, FERC must re-initiate consultation. Consultation must occur prior to implementation to ensure that a suitable disposal site is obtained for extracted material, and that additional conservation measures that may be warranted are included in the final design plan. In particular, NMFS will need a narrative description that outlines the specific alternative excavation method, potential impacts associated with that construction methodology, and proposed mitigation measures that would be developed and finalized in coordination with federal and state agencies to avoid and minimize potential impacts associated with pipeline installation. This coordination must be completed prior to implementation of any alternative pipeline installation method across Stratford Shoal.
- All benthic areas that would be disturbed during project construction should be restored to pre-construction condition. This may require mechanical backfill. FERC must require Broadwater to prepare a benthic substrate restoration plan that describes in detail how they would successfully return the excavated material to the trench post-pipe installation. This plan should be developed in coordination with the ACOE, USEPA, NMFS, and New York State agencies that have jurisdiction of such matters to identify the conditions under which backfilling would be required, the appropriate methods for backfilling, and detailed post-construction monitoring criteria to assess success (including use of a multi-beam echo sounder system or comparable technology).

- FERC should ensure that all best available technologies and practices to reduce impingement/entrainment associated with water intakes are incorporated in the final project design and operation plans. These should include, but are not limited to, the proposed mid-depth position of the water intakes in the water column, limiting intake flow velocities to 0.5 foot per second, and fitting the intakes with wedge wire screens.
- FERC should ensure that any biocides (such as sodium hypochlorite) are used at the minimum effective concentration and all appropriate methods are employed to limit their introduction into LIS. This conservation recommendation is necessary to avoid and minimize mortalities of plankton and other living aquatic organisms that would be susceptible to biocide exposure.
- FERC should ensure that timing of construction activities that would have adverse impacts on susceptible species and life stages of aquatic organisms (generally younger, less mobile life stages) are undertaken when they would be least damaging. This is generally from October 1 to early January. This conservation recommendation is necessary to maintain the local habitat conditions necessary for the affected area to support species and life stages with EFH designations in the immediate project vicinity.

Prior to installation activities in LIS, FERC should ensure that:

- Broadwater is able to determine, through conducting the appropriate geotechnical investigations and analyses proposed by FERC, that the sediment in the proposed FSRU installation area has suitable soil strengths to meet the necessary detailed foundation design requirements. Broadwater should also ensure that seismic soil liquefaction will not accrue beneath the proposed yoke mooring system (YMS) or in the area of sediments disturbed during project construction and operation. Should investigations indicate that soil liquefaction is possible, another site should be considered. This conservation measure is necessary to maintain suitable conditions to support macrofauna that ordinarily would comprise the local benthos, and to preclude the potential for damage to the proposed YMS that could have adverse effects to EFH in the immediate project footprint.
- Broadwater and the involved federal regulatory agencies complete the necessary coordination with NMFS to identify appropriate mitigation measures as they relate to construction (especially pile-driving) and operational noise. This process can be conducted in conjunction with the additional marine mammal and sea turtle coordination that is proposed in the FEIS. To this end, we ask that the NMFS Habitat Conservation Division is copied on these future documents in order that we have an opportunity to provide any additional comments that are necessary to protect EFH in the affected areas. This conservation recommendation is necessary to address potential impacts that would accrue from unacceptable noise levels being generated during construction and operation.
- Broadwater completes and files with the FERC Secretary for review and approval of the Director of FERC's Office of Energy Projects (OEP), a detailed lighting plan that will be protective of aquatic resources including fish and invertebrates. This plan should be approved by

NMFS and other resource agencies prior to its finalization as described in the FEIS. This conservation recommendation is necessary to ensure that the project will not adversely affect local habitat conditions in a manner that reduces the quality or quantity of EFH.

- Broadwater should develop and file a benthic restoration plan with the FERC Secretary, for review and written approval by the Director of OEP. The filing should contain a backfilling plan for the 2-mile-long pipeline section closest to the FSRU (MP 0.0 to MP 2.0). The plan should include the use of native sediment from the spoil piles, as appropriate, to overlay the backfill to minimize the amount of sediment conversion that would occur. This conservation recommendation is necessary to ensure that benthic impacts and thermal effects associated with project operation are addressed to the extent practicable.
- FERC should ensure that all pipeline and other project components that have potential to create a change in water temperature are adequately insulated and/or buried to avoid adverse thermal effects that would accrue to living aquatic resources. This conservation recommendation is necessary to ensure that local habitat conditions continue functioning appropriately as EFH.
- Broadwater should file with the Secretary, for review and written approval by the Director of OEP, an offshore-specific spill prevention, control and countermeasure (SPCC) plan that includes the estimated volumes associated with a worst-case spill scenario; an appropriate evaluation of the associated potential impacts on water resources and marine life; and appropriate mitigation measures to minimize the likelihood of a spill, as well as measures to contain and clean up a spill if it were to occur during construction or operation. The offshore SPCC plan would include a worst-case spill scenario, identify potential impacts, and specify measures to avoid and minimize impacts on water resources and marine life. As a condition of any licenses or permits, Broadwater would be required to implement its offshore SPCC plan to minimize the likelihood of any release, and to maximize the containment and cleanup of any accidental spills of fuels, lubricants, or solvents in an appropriate manner. This conservation measure is required to ensure that any impacts on water resources from accidental releases would be avoided and mitigated to the extent practicable.
- Broadwater should not begin installation activities in LIS until FERC completes EFH consultation with NMFS, particularly on those project elements that remain under development (including, but not limited to, detailed mitigation plans or measures to address project construction or operation impacts). We advise that these remaining details are finalized jointly with the ACOE permitting process. This conservation recommendation is necessary to ensure that any project impacts that would accrue as a result of the final project design and as a result of additional site information that is collected (e.g., detailed soil engineering and local surveys; design changes resulting from future negotiations with AT&T and the Cross Sound Cable companies, etc.) are addressed during construction and for the life of the project.

Please note that Section 305(b)(4)(B) of the MSFCMA requires the federal action agency with which we are consulting to provide NMFS with a detailed written response to the above EFH conservation recommendations, including a description of the actual measures that will be

adopted for avoiding, mitigating, or offsetting the impact of the project on EFH. In the case of a response that is inconsistent with NMFS' recommendations, Section 305(b)(4)(B) of the MSFCMA also indicates that the federal action agency must explain its reasons for not following the recommendations. Included in such reasoning would be the scientific justification for any disagreements with NMFS over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects pursuant to 50 CFR 600.920(k).

Again, please also note that a distinct and further EFH consultation must be reinitiated pursuant to 50 CFR 600.920(l) if new information becomes available or the project is revised in such a manner that affects the basis for the above EFH conservation recommendations.

Endangered Species Act Comments

The FEIS concludes that the proposed construction and operation of the Broadwater LNG project is not likely to adversely affect any species listed as threatened or endangered under the ESA, and requests NMFS concurrence with this determination. Although FERC has issued appropriate recommendations to mitigate impacts on listed sea turtles and whales, NMFS cannot concur with FERC's determination until we receive confirmation that the recommended measures have been adopted. In addition, FERC recommended that Broadwater continue to coordinate with NMFS to develop appropriate mitigation measures to address impacts such as acoustic harassment and vessel strike. NMFS agrees that further discussions are necessary, and cannot complete section 7 consultation until these discussions take place and result in mitigation plans that eliminate or reduce to insignificant levels, adverse effects to listed species. We look forward to working with FERC and Broadwater to complete section 7 consultation on this project.

Marine Mammal Protection Act Comments

While not protected under the ESA, several other species of marine mammals are present in LIS. These include several pinniped species, with the harbor seal (*Phoca vitulina*) and gray seal (*Halichoerus grypus*) being the most abundant. All marine mammals are protected under the Marine Mammal Protection Act of 1972 (MMPA). The FEIS indicates that pile-driving during construction may generate noise levels that could result in harassment of marine mammals present in the area. FERC has recommended that the applicant coordinate with NMFS to develop appropriate mitigation measures to reduce impacts to marine mammals during construction and operation of the facility, and that additional acoustic modeling may be necessary in order to determine the need for permits under the MMPA. If it is felt that this project has the potential to take marine mammals through injury, harassment, or mortality, then the applicants are responsible for obtaining an incidental take permit from the NMFS Office of Protected Resources.

Fish and Wildlife Coordination Act Recommendations

As described above, LIS provides important habitat values and functions to a variety of aquatic resources of concern. The measures prescribed above to safeguard EFH that supports federally managed fishery resources, and for federally listed endangered or threatened resources, are appropriate and satisfy any concerns that we might otherwise advance pursuant to the FWCA. Accordingly, we apply the comments above and offer no additional comments under this

authority.

Conclusions

In summary, NMFS recommends that FERC implement the above EFH conservation recommendations to mitigate for the reasonably foreseeable construction and operation impacts on EFH that would accrue in association with the Broadwater proposal. We look forward to your response to our EFH conservation recommendations on this project. We also recommend that FERC and Broadwater initiate discussions with NMFS as soon as possible regarding ESA-listed species so that section 7 consultation can be concluded.

Should you have any questions about these comments, please contact Diane Rusanowsky at 203/882-6504 for EFH and FWCA issues, and Kristen Koyama at 978/281-9300, ext. 6531, for ESA issues.

Sincerely,


Patricia A. Kurkul
Regional Administrator

cc: F/NER4 – Milford
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USACE – NAN
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USFWS – Region 5
USEPA - Regions 1&2
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NYSDEC – Albany & Region 1
CTDEP - OLISP

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