**Before the**
**Environmental Protection Committee**
**of the**
**New York City Council**

Comments of
John Hritcko, Jr.
Sr. Vice President & Regional Project Director
Broadwater Energy, LLC

Concerning The Reconsidered Resolution By
Council Member James F. Gennaro
Supporting the proposed Broadwater Energy Project

250 Broadway, 16th Floor
New York, New York
June 26, 2007

Chairman Gennaro and distinguished members of the Environmental Protection Committee. My name is John Hritcko, Jr. and I am Senior Vice President and Regional Project Director for Broadwater Energy. Broadwater is a joint venture comprised of subsidiaries of Shell Oil Company and TransCanada Corporation.

Thank you for this opportunity today to once again appear before the Environmental Protection Committee, this time in support of the Reconsidered Resolution by Council Member Gennaro urging the appropriate state and federal agencies to provide a favorable review of the project in light of the critical role it will play in ensuring reliable, affordable, and clean energy for New Yorkers.

The proposed Broadwater project would bring a new source of reliable, long-term, competitively priced natural gas supply to the New York City, Long Island, and Connecticut markets ("the Region"). Broadwater has undertaken an extensive regulatory review process at both the federal and state level lead by the Federal Energy Regulatory Commission designated as the lead agency. As part of that review, a draft Environmental Impact Statement ("DEIS") was released by FERC late last year. Broadwater anticipates that the final EIS as well as many other federal and state permits will be issue later this year and that the project would be constructed and ready to commence deliveries of natural gas to New York City around 2011.

The key findings of the DEIS were that in an environment of increasing natural gas consumption, LNG imports would provide a needed diversification to currently available natural gas delivered via pipeline from the Gulf of Mexico and Canada. By providing a local supply of natural gas that uses existing distribution facilities, Broadwater would reduce the Region's future need for new or expanded interstate natural gas pipelines that are difficult to build in this region. As proposed, the construction and operation of the

Broadwater project would result in a minor environmental impact, and impacts to resources could be further avoided or minimized through mitigation measures that will be included with any authorization that may be issued by FERC. The proposed project was also found to result in fewer environmental impacts than any alternatives considered. Finally, the U.S. Coast Guard who assisted FERC by assessing the safety and security of the proposed facilities and operations, stated in their report that by implementing their recommendations, the Long Island Sound can be made suitable for the Broadwater project and that its proposed location near the middle of the Sound offered significant safety and security related benefits.

The economic benefits of having 1.0 Bcf per day of natural gas delivered directly into the Region by Broadwater are extremely compelling. Broadwater estimates that wholesale energy savings to the Region would total nearly $10 billion over the life of the project. This savings translates into approximately $680 million per year during the first years of service. Breaking that annual savings down to an average residential consumer, Broadwater would provide approximately $300 to $400 per year in direct and indirect energy cost savings for the average household in the Region.

Beyond the economic benefits, Broadwater would provide a substantial amount of natural gas that could greatly assist in helping New York meet its clean air requirements as well as climate change goals under the Regional Greenhouse Gas Initiative and is consistent with and supportive of the City's 2030 plans to improve the City's environment. In addition, dependable, new sources of natural gas will be required if we intend to repower this Region's older, less efficient power generation infrastructure. Reducing emissions from these old power plants leads to cleaner air and is especially important for those New Yorkers suffering from asthma and other respiratory problems. The future reliability of New York City's utilities is critically important and Broadwater would enhance that objective.

The proposed project is a major addition to New York's energy infrastructure and Broadwater has made an extraordinary commitment to stakeholder engagement. Since announcing this project in November 2004, the project has strived to reach out to as many New York City, Long Island, and Connecticut interest groups and individuals as possible. We have taken much of the feedback and incorporated it into the development of the project so that the benefits of the facility are maximized and the impacts are avoided or minimized. As the extensive state and federal regulatory review has progressed, Broadwater is gratified to garner growing support from many diverse segments of the community. This support includes ACORN, the New York Energy Consumers Council, the Real Estate Board of New York, the Rent Stabilization Association, and organized labor. This is testament to the fact that New Yorkers understand the need for the energy that Broadwater will bring as well as its resulting wide-ranging benefits.

In closing, I wish to take this opportunity to thank the Environmental Protection Committee for this chance to appear before you. You have previously demonstrated your understanding of the looming energy crisis and the important role of natural gas in achieving cleaner, plentiful and more affordable energy for all New Yorkers. It takes real

leadership to stand up and support specific solutions as the New York City Council has done with its past support of Broadwater. I ask that you continue in this laudable role by approving this Resolution in support of the proposed Broadwater Energy project.

Thank you.

RENT STABILIZATION ASSOCIATION • 123 William Street • New York, NY 10038

# MEMORANDUM IN SUPPORT

Resolution supporting the proposed Broadwater Energy Project, a floating liquefied natural gas storage and re-gasification facility to be located in the New York State waters of Long Island Sound, and urging the appropriate state and federal agencies to provide a favorable review of the project in light of the critical role it will play in ensuring reliable, affordable, and clean electricity for New Yorkers.

The Rent Stabilization Association (RSA), a trade association of 25,000 property owners and managing agents who own or manage approximately one million apartments in New York City, submits this Memorandum in Support of the Resolution supporting the Broadwater Energy Liquefied Natural Gas Terminal (Broadwater) proposed for the Long Island Sound.

RSA is concerned about New York City's current energy costs, long-term energy needs and the lack of clean burning energy supplies to meet future demand. The 2004 New York City Task Force Report evaluated the City's energy needs and found that, given the increased reliance on natural gas for electricity generation, there could be serious reliability and cost impacts from the lack of natural gas infrastructure. The Task Force recommended that the City support the development of additional gas supply projects in the area as a means to enhance reliability, increase diversity and reduce price volatility.

As the cleanest burning fossil fuel, additional supplies of natural gas will also enable the City and the State to meet its clean air and climate change obligations.

Recently, Broadwater received positive reviews from the independent agencies which review such projects. The United States Coast Guard found that Broadwater can be operated safely and securely in Long Island Sound and the Federal Energy Regulatory Committee's Draft Environmental Impact Statement found that Broadwater would have limited adverse environmental impacts. These are two significant milestones for the project and RSA is very encouraged by these findings. Given the multi-purpose nature of Long Island Sound – which is an important estuary not only for recreation and fishing, but commercial transport – Broadwater can be built and operated in such a way that would have little impact on its current use and would have profound benefit for all energy consumers in the region.

Stable energy costs have many implications for economic development and business expansion in New York State. Reliable, affordable energy promotes a more robust and competitive economic climate. It is estimated that Broadwater would save the City approximately $330 million per year in electricity and natural gas costs combined. For the average household, this translates into a savings of $300 per household.

Broadwater presents our region with a unique and real opportunity to move forward with a project that will bring cleaner burning, more affordable energy to New Yorkers. Many other projects have failed on the drawing boards. If we are to address our growing energy needs, we must build more capacity.

Accordingly, RSA urges the adoption of the Resolution in support of Broadwater as an important step towards cleaner, more affordable energy for New York.

**Testimony of Bertha Lewis, Executive Director of New York ACORN**
**Testifying in favor of the Broadwater LNG Facility Resolution**
**June 26, 2007**

On behalf of thousands of low and moderate income.ACORN members, we want to convey our full support of Broadwater Energy's proposed Liquified Natural Gas Facility in Long Island Sound; and Councilmember Gennaro's Resolution

New York ACORN is New York's oldest and largest community organizing group of low and moderate income families. Founded in 1982, NY ACORN now numbers over 30,00 members across New York City, Long Island and Westchester, and Buffalo working to fight for justice in our communities.

**Why is this Broadwater proposal so important to us?**
Because we need clean air.
We need safer, cleaner burning, more efficient fuel.
Our communities suffer high asthma rates and if Broadwater makes our air one particle cleaner, we need it.
We need to stop promoting environmental racism by citing harmful fossil fuel burning plants in low income neighborhoods.

A few weeks ago the American Lung Association released their annual "State of the Air" report for 2007. The study found 101, 576 adults and 32, 964 childen suffer from asthma in Suffolk County. In Nassau, 92,66 adults and 28,204 children have asthma. As we know, the numbers are even worse in low-income neighborhoods here in the city.

The bottom line is that air pollution from coal and oil fired power plants is polluting the air that our members and their children breathe and our members disproportionately suffer from asthma caused by air pollution.

More than that, Broadwater will help New York City and Long Island families struggling to get by. As the Long Island Business News wrote in an editorial on April 13, "after affordable housing, the cost of energy is the No. 1 threat to the future economic well being of Long Island."

Low-income families in New York City and on Long Island, especially those of color, are burdened with some of the highest utility costs in the nation . In addition, many families live in homes that are not energy efficient – further driving up their monthly bills while contributing noxious emissions to the local environment.

This is a sentiment we hear every day from members of our Long Island and New York City chapters struggling to get by. For low-income families Broadwater would mean a $300 annual reduction in utility bills through 2025. That savings is more that the pretax earnings our member make during a 40 hour work week at the minimum wage!

We've heard many people railing against this facility because it will bring too many ships to the sound, that it will be unsightly to north shore residents of Long Island and that it could be a terrorist target.

1) The facts are that there already are 1000's of ships that go through the sound each year and this will add only ~~5-6~~ 2-3 new ships per ~~year~~ week a tiny increase in the over all commercial boat traffic that may, in fact, be partially offset by the reduction in oil use and the consequent reduction in oil delivery.
2) From the shore of either Long Island or Connecticut, the Broadwater facility will be barely bigger than a thumbnail on the horizon. Quite frankly, that "inconvenience" doesn't even begin to compare with the overwhelming asthma rates in our communities and the high utility bills faced by our members.
3) Lastly, even if, as a worst case scenario, this became a terrorist target, we would much rather have the target be 9 miles off shore than in the middle of our community. The maximum range that it could possibly affect would be a 1.5 radius – still far away from any homes, schools or businesses.

For years, our communities have suffered the burden of environmental racism. If there were benefits, our communities were ignored. Here we have an opportunity to take a small step in the right direction – a step that will positively affect our communities – in New York and on Long Island – for years to come.

We must take energy issues seriously. We commend the City of New York , Councilmember Gennaro and Mayor Bloomberg for taking action on this issue. We need as many approaches to generating clean energy and cutting down energy costs as well as weaning ourselves off oil. Either we believe we are in a crisis or we don't. Either we are all willing to share the burden of solving this crisis or we're not.

On behalf of ACORN members throughout the region, we hope you will move quickly to pass this resolution.

New York ENERGY CONSUMERS COUNCIL



# "EDUCATING ENERGY CONSUMERS TOWARD ECONOMICAL ENERGY OPTIONS"

June 25, 2007

Good afternoon, Chairman Gennaro, Members of the Environmental Protection Committee, and guests. Thank you for affording me an opportunity to address this critical issue. My name is David F. Bomke, and I offer these comments in my capacity as the Executive Director of the New York Energy Consumers Council, Inc, or the NYECC, based in New York City. The NYECC is a non-profit organization focused on the advocacy and education of large energy consumers in the five boroughs of New York City and Westchester County. To our knowledge we represent more energy consumer interests than any other energy advocacy group in New York City. I am convinced that the Broadwater project represents significant benefits for energy consumers in both New York City and Westchester County, as well as on Long Island.

I see essentially three compelling reasons for our support of the Broadwater Project. First, it promises to deliver additional energy sources to our region. Second, increases in natural gas supply promise environmental benefits to the extent to which such increased natural gas supply reduces demand for petroleum. Third, it represents a significant benefit to our region's security.

Let me elaborate further on each of those reasons.

The Broadwater Project affords us access to natural gas supplies from locations that otherwise could not reach us. A well-proven technology already exists for refrigerating natural gas at major sources throughout the world, permitting natural gas to be shipped across the globe in liquid forms. The Broadwater Project provides the essential interface that would permit liquefied natural gas, or LNG, to be received, restored to its gaseous condition, and distributed into the existing natural gas distribution system at a point well beyond the majority of system constraints. This benefit is itself two-fold. First, increased supply represents increased energy reliability for our region. At present, both our winter heating requirements and summer cooling loads face reliability constraints because of potential interruptions to the raw fuels that drive boilers and generators. New generation facilities that will be required to meet the long-term electric requirements throughout our region are most likely to increase demand for clean natural gas. An increased availability of natural gas supply should strengthen the environment for building new and/or rebuilding existing generating facilities. Second, any increase in supply promises competitive pressure to reduce costs – both the costs of natural gas used for heat and of electricity generated by natural gas.

In addition, I believe that the Broadwater Project promises significant environmental benefits for our entire region. I see two distinct types of environmental benefits. Simply put, natural gas burns far cleaner than fuel oil. Accordingly, the atmospheric benefit promised by increasing the ratio of natural gas to fuel oil is undeniable. Perhaps a less frequently discussed benefit – and one that may not be readily quantified at this stage – is the potential benefit of reduced shipments of fuel oil to our region. At the very least, increased natural gas supply should reduce the rate of increased oil shipments. Anyone who has walked a beach along our eastern seaboard – from Maine to Florida – is likely to have seen the tar deposits associated with the massive oil tankers that sail our east coast. Although major disasters such as the Exxon Valdez incident several years ago grabbed tremendous media attention, tanker rupture and leakage continues on smaller scales – as evidenced by the tar on the beaches. I understand that there is no history of LNG ship failure in the decades that LNG has been transported across the globe. Of course, the technical complexity of shipping this specialized fuel warrants far greater infrastructure integrity, so the opportunity for failure is reduced accordingly. If there were a

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breach of the ship carrying LNG, however, the substance leaked would leak to atmosphere and readily dissipate – without creating environmentally damaging oil slicks.

Finally, I believe that the Broadwater Project offers significant national security benefit to our region and to our nation. Regrettably we continue to use far more energy than we have available locally. Increasing our access to LNG shipped from all corners of the globe – but not from the politically tumultuous Mideast! – helps reduce our dependence upon foreign oil. It is largely acknowledged that the extent of our current reliance on fuel oil from the Mideast increases our exposure to terrorist pressures – directly and indirectly. Equally important, the proposed location of the Broadwater Project reduces the region's attractiveness as a terrorist target. The foundation of terrorism is fear, and fear is exacerbated by human casualties. An LNG refueling point in the middle of the Long Island Sound and more than nine miles away from our coastline represents much less of a terrorist threat than the fuel depots in the harbors of New York, Long Island, or New Haven.

Thank you very much for your kind attention to my perspectives on this vital project.

Respectfully Submitted,

David F Bomke

David F. Bomke
Executive Director

DFB/hs

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# Journal News

**Millennium Pipeline to tackle Rockland, Orange terrain**
By LAURA INCALCATERRA
THE JOURNAL NEWS

(Original publication: June 23, 2007)

Work is under way on a new pipeline that advocates say will significantly increase the supply of natural gas available to the New York metropolitan area.

The first phase of the project will also be the most challenging, said the pipeline's builders, the Millennium Pipeline Co.

The project involves replacing about 182 miles of existing pipeline with a line that is wider and able to carry more natural gas, the company said. The line is referred to as the Millennium Pipeline and it will run from upstate Corning to Montebello.

The company will start the project in the area near the border of Rockland and Orange counties. That spot that is expected to prove challenging because of steep terrain and the presence of rock, spokesman Mike Armiak said.

Millennium began staging equipment and clearing trees and brush near the Laurel Ridge Estates neighborhood in Tuxedo yesterday, and work will begin in earnest this morning, Armiak said.

Earlier yesterday, the Columbia Gas Transmission Co. conducted a "blowdown," which involves forcing gas from a certain section of pipeline in preparation for removing that section, company spokesman Kelly Merritt, said.

The overall project is expected to take about two years to complete, with restoration work extending into 2009, Millennium said.

But Millennium probably will spend most of that time on the 9 miles that stretch from Tuxedo through Sloatsburg and into Montebello. Much of the route will pass through Harriman State Park and Rockland's Kakiat County Park.

The steep slopes and rocky terrain will require a slower pace, and the company will need to blast some of the rock to make room for the wider pipeline, said Kenneth Austin, Millennium's vice president and general manager.

Most of the existing line is 10 inches in diameter, which was installed in the 1950s, and will be replaced with 30-inch pipe, he said.

Millennium Pipeline was formed by affiliates of NiSource Inc., KeySpan Corp. and DTE Energy, which will own the pipeline and lease capacity to others who need to transport the gas they are buying and selling.

Customers will include Orange and Rockland Utilities, Consolidated Edison, Central Hudson, Keyspan Energy and New York State Electric and Gas.

Columbia Gas Transmission owns the A-5 Line, which is the line to be replaced. Columbia will essentially turn the line over to Millennium.

R. Allan Beers, the coordinator of the Rockland County Division of Environmental Resources, said representatives of the county and Millennium had met to review the company's plans.

The Division of Environmental Resources oversees the county's parks, including Kakiat.

Beers said the county reviewed Millennium's plans regarding habitat protection and disturbance, and restoration to make sure the integrity of the park and its animal and plant life were protected.

The Federal Energy Regulatory Commission approved the project and, along with other federal and state agencies, issued the permits necessary for it to move forward.

Armiak said Millennium would have supervisors on the site daily, including third-party inspectors, and federal and state regulators would also visit the work site.

The Millennium Pipeline is part of Northeast '07, which includes a series of pipelines and interconnections stretching from the Canadian border in the north into New York City in the south, New Jersey to the west and New England to the east.

Northeast '07 is a scaled-down version of a project that was first proposed in 1998 and immediately generated controversy. It is a $1 billion project. Millennium's portion is expected to cost $665 million.

Environmentalists and citizen groups, among others, successfully sought to prevent a 36-inch pipeline from crossing the Hudson River at Haverstraw Bay and terminating in Mount Vernon.

The project faltered after New York state and the U.S. Army Corps of Engineers declined to issue needed permits, in 2002 and 2004, respectively.

The new project was approved by the Federal Energy Regulatory Commission in December.

It relies on existing - but smaller - pipelines to get the additional gas supply to the market, sidestepping the need to cross the river or run a line into Mount Vernon.

But Rockland will continue to see pipeline work in coming years, because Algonquin Gas Transmission Co. will soon add 5 miles of 42-inch pipeline to replace an existing 26-inch line that starts at its Ramapo metering station in Kakiat Park in Montebello and continues into Stony Point.

*Reach Laura Incalcaterra at lincalca@lohud.com or 845-578-2486.*

*Meeting New York's Energy Need*

# Without Broadwater

***A brief overview of proposed and recently added energy projects***


***Citizens Campaign for the Environment***
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***January 2007***

**Meeting our Energy Needs**

The lack of a comprehensive regional energy plan has created a sense of insecurity concerning the ability to meet current and future energy needs in the New York City, New York City metropolitan area, Long Island and Connecticut. **However, the absence of a comprehensive regional energy plan should not pressure policymakers to support a 'quick fix', particularly a project that involves creating energy infrastructure, which will negatively impact one of our nation's most important estuaries, the Long Island Sound.**

Broadwater energy, a joint venture between Shell Oil and TransCanada Pipeline, is proposing to build a floating storage and regasification unit (FSRU). The unit would receive, store, and regasify liquefied natural gas (LNG) from oversea gas fields. Proposed for the middle of Long Island Sound, the LNG barge would require a 25-mile pipeline dug into the bottom of the Sound to connect the facility to the existing Iroquois pipeline. Two to three tankers, carrying up to 2 to 5 billion cubic feet of natural gas, would deliver LNG to the facility every week. Each tanker would take up to 15 hours to offload into the FSRU. The FSRU would be able to store 8 billion cubic feet of natural gas and plans to deliver 1 billion cubic feet per day into the Iroquois pipeline.[1]

A comprehensive energy plan should encompass a variety of energy initiatives and technologies including: renewable energy, energy conservation, pipelines, and re-powering antiquated power plants. An energy plan that relies almost exclusively on one source of power and centralizes our energy infrastructure has the greatest potential of putting the public at risk. Establishing a single source of energy for our region, such as Broadwater, puts our regional economy and the public in immense jeopardy of price vulnerability from the chronically unstable governments of several major LNG producing foreign nations.

The misguided assumption that increasing LNG in the US is necessary for the US to overcome its reliance on the Middle East is completely fictitious.[2] Several countries that supply the US with oil are the same countries that supply LNG, such as Qatar, Iran, Russia, Angola, Yemen, and Algeria.[3] Other LNG supplying nations include Trinidad, Tobago, Nigeria and Australia. The second assumption that LNG will supply the US with a "cheap" form of energy is a marketing strategy, rather than a reality for the American public. In April 2005, Qatar and 12 other gas-rich nations, including, Iran, Egypt, Nigeria, and Venezuela, met to discuss the "...ways to keep LNG prices satisfactorily high."[4] Trinidad Energy Minister Eric Williams said agreeing on an ideal price was part of the group's effort to better understand the natural gas market. He also stated that the group had no immediate plans to coordinate production policy to influence

[1] Broadwater application to FERC, January 30, 2006, pg 6.
[2] "*Bush raises hopes for LNG*," The Australian, February 22, 2006.
http://www.theaustralian.news.com.au/printpage/0,5942,18230265,00.html
[3] "*Demand for Natural Gas Brings Big Import Plans, Objections*," The New York Times, June 15, 2005.
[4] "*Ibid.*

gas prices as OPEC does with oil prices, but he could not rule out such a possibility in the future.[5]

The Broadwater LNG proposal is neither a quick fix nor a cure-all. A regional comprehensive energy plan is needed to help assess our region's energy needs. Several key projects are proposed or have already been approved that leave Broadwater unnecessary.

**The Broadwater Draft Environmental Impact Statement (DEIS) and Alternatives**

The DEIS for the Broadwater proposal makes several energy and alternatives assumptions that are not validated or are incorrect. The DEIS bases its alternatives on the assumption that an additional 1bcf a day is needed to the region, without a comprehensive analysis of whether or not this is a real need. The DEIS does not contain a substantiated calculated analysis of what the future need will be. The DEIS points to LIPA's Energy Plan for 2004-2013 as evidence of increasing demand for energy. The DEIS then recognized that the LIPA Energy Plan lays out a comprehensive plan to meet the increasing energy need, which includes a variety of projects. The LIPA plan does not indicate nor discuss the need for a LNG project. It is unclear how the DEIS translates facts such as these into a demonstrated need for an additional 1 bcf a day.

In the alternatives section of the DEIS, many proposed and currently under construction projects appear to only be evaluated at the standard of 1bcf/per day. The projects are not looked at holistically; rather each project is looked at and then eliminated due to the fact that the project will not produce 1 bcf of natural gas per day. For example the DEIS looks at expanding additional pipelines such as the Algonquin Pipeline that serves the Northeast region. The document reads (page 4-7), "To supply an additional 1.0 bcf per day of natural gas to the region, the Algonquin system would require significant modification and expansion."

The DEIS needs to look at permitted pipeline expansion projects, such as Millennium Pipeline, the expansion of the Iroquois Pipeline (called Market Expansion), and Islander East, in conjunction with renewable projects, such as the Long Island Offshore Wind Project. In addition, the potential for Long Island to re-power old, antiquated power plants, which is estimated to increase energy efficiency by 50-90%, should be factored in.

CCE believes that this comprehensive assessment provides for a more a complete picture and understanding of our true energy need and any alleged lack of supply or proposed infrastructure. In addition, From a public perspective smaller projects that are less intrusive, less damaging and less dangerous are preferable over one large massive project.

[5] "*Gas Exporting Countries Explore Possibility of Target Price for Liquefied Natural Gas*," The Associated Press, April 27, 2005.

**The DEIS needs to further evaluate a true offshore location**

Broadwater is proposed in a two-shore location, between NY and CT. It is proposed in an Estuary of National Significance, a federally designated Essential Fish Habitat area, a commercial trawl lane, a prime lobster ground.....yet, the DEIS claims a location in the Atlantic ocean would have greater environmental impacts because the pipeline would have to be longer. This is simply NOT correct.

CCE believes that the DEIS did not adequately evaluate this important alternative. **This project needs to be seriously evaluated outside of the Long Island Sound estuary**. CCE believes that this option was handily rejected in the DEIS because it would increase the cost to the applicant. FERC, as well as New York State's review needs to consider the cost of Broadwater to the many and real negative impacts to the estuary's ecosystem, public use and commercial and recreational value and not just infrastructure cost to the applicant.

**The DEIS and NYS DOS needs to further evaluate a SRV open-ocean facility.** The SRV is a pipeline that rises up and accepts re-gasified LNG from incoming tankers and then lowers down to the ocean floor. Massachusetts's Governor Mitt Romney recently approved The Bay State Plan, which are 2 offshore SRV's, the Northeast Gateway and the Neptune Project. The two sites, 13 miles and 7 miles offshore will be on the ocean floor off Gloucester. This compromise plan came out AFTER a FSRU was proposed to the Massachusetts area. It was determined that the SRV, located in the open ocean would have less environmental impacts and require less security by the US Coast Guard, while still being able to supply 1 bcfd to the region. These two SRV projects will boost New England's supply of natural gas by 20%. Also, such structures can be built quicker. The Northeast Gateway project is projecting they will begin construction in 2009 and complete it by the end of that year.

This was a compromise plan created after massive opposition to an LNG barge called Weavers Cove. This option is not adequately evaluated in the DEIS.

## Alternative Energy Proposals

CCE believes that there are many current energy proposals that have not been fairly evaluated in the Broadwater DEIS. Many of these are already permitted and under construction.

1. **The Atlantic Sea LNG Island proposal.**

Safe Harbor Energy, a project of the Atlantic Sea Island Group, LLC, has proposed an offshore LNG Island. This proposal is to construct an island that would be capable of storing and re-gasifying LNG. The Island would be 13.5 miles off of New York, in the Atlantic Ocean. Its storage capacity would be 15 bcf of natural gas and it is currently projected to be 60.5 square acres in size and 160 feet about the water line. The Island would serve the same markets as Broadwater and be capable of supplying 2 bcfd, *twice*

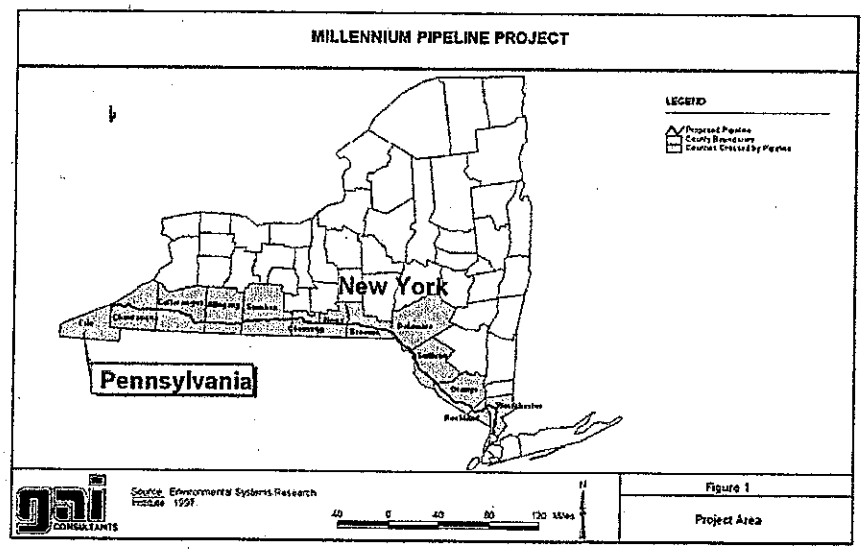
*the capacity of Broadwater*. The DEIS identifies the Atlantic Sea Island as a project that will serve the same market as Broadwater and then side steps this as a potential alternative with erroneous information. The DEIS identifies the pipeline connection for the Atlantic Sea Island as being problematic because of the distance that would be needed for the pipeline to travel to shore. However, when CCE representatives met with Howard Bovers, Chairman of the Atlantic Sea Island Group, he conveyed that the necessary pipeline connection would be14 miles from the proposed island to the existing Transco Pipeline. This is 8 miles ***LESS*** that what is needed for the Broadwater connection. It is curious why the DEIS identifies the Atlantic Sea Island pipeline connection as problematic while identifying Broadwater's pipeline, which is a longer pipeline and in an estuary, as having only minimal impacts.

In addition, the DEIS cites concerns that the Atlantic Sea Island maybe to close to shipping lanes. This same fact for Broadwater was addressed by declaring that ships, commercial and recreational boaters will just have to navigate around the structure. Also, according to representatives of the Atlantic Sea Island the location is between shipping lanes as opposed to Broadwater which is directly in the middle of a heavily trafficked shipping lane.

The Atlantic Sea Island proposal should be assessed as a real alternative to Broadwater. This alternative may prevent damage to lobster populations and avoid public access concerns in the estuary and in the Race. CCE believes that the DEIS is an inadequate assessment and believes that FERC and NYDOS should further analyze this alternative.

**2. Millennium Pipeline**

The Millennium Pipeline is a proposed 425-mile natural gas pipeline that will extend from the Canadian border across the Southern Tier of New York State to NYC. This pipeline will provide a key component of the infrastructure to meet the Northeast's energy needs.

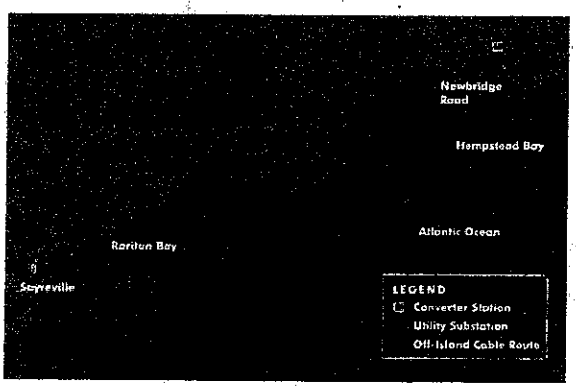


- ***Phase 1*** of the project covers 186 miles, running from Corning, NY to Ramapo, NY, ending at the Hudson River. This section replaces and upgrades an existing Columbia Gas Transmission natural gas pipeline. Phase 1 of the pipeline will transport 500,000 dekatherms of natural gas per day. Upstream supply for the pipeline will be provided via a 250,000-dekatherm/day expansion of the Empire system that includes an 83-mile extension from near Rochester, N.Y., to Corning, N.Y.[6]

- ***Phase 2*** of the Millennium pipeline will cross the Hudson River, linking to the New York City metropolitan market. While Phase 2 of the project was originally opposed by the New York State Department of State. This opposition was primarily due do the location of where the pipeline crossed the Hudson River. However, the project has been retooled and now phase two of the project will use the already existing Algonquin Pipeline. This existing pipeline already crosses the Hudson River and can supply the NYC market.[7] In December 2006, FERC approved the $1.04 billion interstate natural gas pipeline project that will provide more than 525,400 dekatherms per day of natural to lower New York from new sources of gas from Canada.

### 3. Neptune Cable

The Neptune Cable is a 660-megawatt cable that will connect Long Island to New Jersey, and the mid-Atlantic and southeastern states for the first time.[8] The 67-mile-long cable in conjunction with the Cross-Sound Cable between New Haven, Connecticut, and Shoreham, will create a natural gas corridor from the Mid-Atlantic States through Long Island on into New England and Canada.[9] This is enough power for 660,000 average-sized houses on Long Island. The Neptune Cable is currently under construction and scheduled to be operational in 2007. This is an important component to the Long Island Energy Plan and will provide new source of electricity for Long Island.




[6] Press Release: "*Millennium announces phased development plan*" February 17, 2004.
[7] "Retooled Millennium Pipeline construction slated to begin in 2006," Associated Press, November 24, 2005.
[8] "*Neptune Project Moving According to Plan*," Hicksville Illustrated News, January 13, 2006.
[9] http://www.lipower.org/projects/neptune.html

Diagram from Neptune Regional Transmission Systems
http://www.neptunerts.com/

In addition, the Long Island Power Authority (LIPA) has already begun to plan for a second Atlantic cable that would transport natural gas to Long Island from New Jersey and the mid-Atlantic and southeastern states. LIPA is in the process of putting out a Request for Proposal (RFP) for this project.

### 4. Islander East Pipeline

The Islander East Pipeline, L.L.C. is a proposed interstate natural gas pipeline project that will supply natural gas to Connecticut, New York City and Long Island, NY. According to Islander East's website, "Islander East will fully integrate the natural gas transmission systems between New England and New York, enhancing access to virtually every major supply basin in North America. The region will benefit from a secure and dependable supply of energy from diverse sources, the importance of which dramatically came to the nation's attention during the 2005 hurricane season." Islander East is an equally owned, limited liability company formed between subsidiaries of Duke Energy Corporation and KeySpan Energy.

Islander East representatives have informed CCE that if Islander East were approved they would be able to bring NEW sources of natural gas to Long Island from both the approved LNG facility in Canada and the two newly approved sub-sea LNG pipelines to be located 14 miles offshore of Massachusetts. These two pipelines will be providing 1 bcf of gas to the northeast market.

The Islander East Pipeline is mired in Connecticut politics. The pipeline has been approved by FERC and NY State and has the support of New York environmental groups. The pipeline is designed to supply 240,000 dekatherms of natural gas per day. In October of 2006, the U.S. Court of Appeals for the Second Circuit ruled that Connecticut's Department of Environmental Protection was "arbitrary and capricious" when it rejected a water quality permit for the proposed pipeline. The court gave Connecticut 75 days to conduct a review and issue a new response.

### 5. Iroquois Expansion – Market Access Expansion Project

Iroquois Gas Transmission System, L.P. is the owner of an interstate pipeline extending 411 miles from the US-Canadian border at Waddington, NY, through the state of Connecticut to South Commack, Long Island, NY. The Iroquois pipeline also includes an approximate 36-mile mainline extension from Northport, New York through the Long Island Sound to Hunts Point, New York, and transports nearly one billion cubic feet of natural gas a day throughout the northeastern United States.[10]

[10] http://www.iroquois.com/new-Internet/igts/MarketAccess/marketaccess_projdesc.asp

In 2006, Iroquois Gas Transmission System raised numerous questions regarding the Broadwater facility and its proposed hook up to the Iroquois Pipeline. In a letter addressed to The Federal Energy Regulatory Commission, Iroquois listed several concerns, including:

- The lack of information regarding where the Broadwater's anticipated daily one billion cubic feet of vaporized natural gas would be delivered;
- The impact on the pipeline flow should Broadwater deliveries be interrupted;
- The compatibility of Broadwater's planned lateral pipeline with the Iroquois system; and
- The placement of metering facilities in the Broadwater design.[11]

While Broadwater struggled to answer these important concerns, Iroquois launched a new project, the **MarketAcess Expansion Project**. This project will transport an additional 100 million cubic feet of natural gas into NYC a day.

This expanded pipeline will transport natural gas from storage facilities near Corning, New York and deliver natural gas to the new Millennium Pipeline, which will connect with the Algonquin pipeline in Ramapo, New York. From this point, Algonquin will transport the gas to the Iroquois interconnection in Brookfield, Connecticut. From Brookfield, the Iroquois pipeline will transport the gas to the existing interconnection facilities with Con Ed in the Bronx, New York. To provide this transportation service, Iroquois is proposing to add a new transfer compressor station with cooling facilities at the existing interconnection with Algonquin in Brookfield, Connecticut and new cooling facilities at its existing compressor station in Dover, New York.[12]

### 6. Re-powering antiquated plants

Re-powering is the process of upgrading old, dirty power plants to become more efficient, using less fuel, while producing more energy. Re-powering also significantly reduces harmful pollutants such as nitrogen oxide, carbon dioxide, sulfur dioxide, and fine particulate particles.

One of the dirtiest power plants in the Northeast is located on Long Island. According to a national public interest research organization, the Northport power plant was ranked second for highest carbon dioxide emissions in the Northeast.[13] Soon to be forty years old, the first unit of the Northport plant opened in 1967 and three more units opened up within 10 years.

In addition to the Northport plant, Long Island is home to many other old power plants. The Glenwood Landing power plant first began generating electricity in 1952. The

[11] "Pipeline Firm New Foe for Broadwater," Long Island Business News, December 5, 2005.
[12] http://www.iroquois.com/new-Internet/igts/images/2005MarketAccess.pdf
[13] "More Heat than Light; Global Warming Pollution from the Northeast's Dirtiest Power Producers," USPIRG, July 2005.

following year, Far Rockaway power plant began operation. The Island Park E.F Barrett plant opened in 1956 and the first unit of the Port Jefferson Plant began firing in 1958.

The Long Island Power Authority (LIPA) is currently considering re-powering the Island Park, Far Rockaway, and/or the Glenwood Landing Power plants. LIPA is waiting until the Neptune Cable is operational before repowering begins.[14]

Considerable public support exists to re-power the Northport and Port Jefferson plants. The efficiency gained by repowering the old antiquated plants throughout Long Island and New York State must be considered to accurately assess the region's energy need.

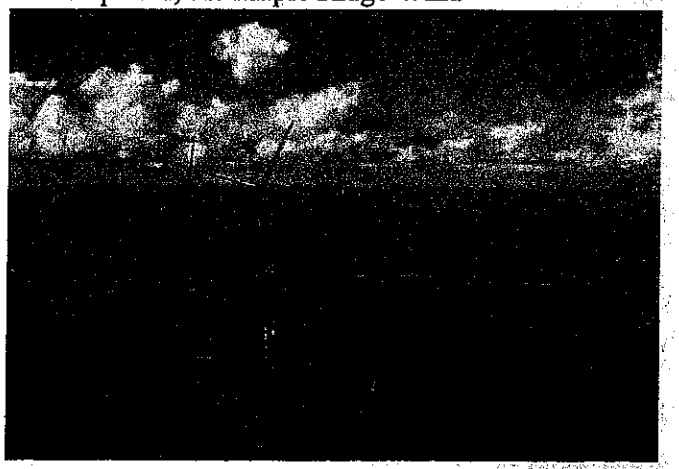
### 7. Renewable Energy

New York State has been very aggressive in striving towards energy independence. NY has set a renewable energy goal of 25% renewable energy by the year 2013. Over 60 counties, towns and villages in NY have adopted renewable energy goals, ranging from purchasing 18% renewable energy to 100% renewable energy for municipal electricity. Members of the public have begun to purchase renewable energy for their homes and businesses through a variety of green choice programs available throughout the state.

In response to the growing demand for renewable energy there has been an increase in wind farm projects throughout the state. Currently, New York generates approximately 247 megawatts of wind energy and has another **approximately 900 megawatts of wind energy** in planned projects.[15] One of the projects, already generating electricity is now the largest wind farm east of the Mississippi.

***Maple Ridge Wind Farm***

The Tug Hill Plateau, located in Lewis County, New York is known for its steady southwest winds off Lake Ontario. This steady wind has made it the perfect location for the largest wind farm east of the Mississippi. Once completed, the Maple Ridge Wind Farm will generate over 320 megawatts of electricity, enough to power 250,000-300,000 average homes.[16]



In late December 2005, the first phase of the project was completed, quadrupling the amount of wind power in New York State.[17] The 120, 1.65-megawatt, turbines have the ability to produce 198 megawatts of power. In the summer of 2006, an additional 75 wind turbines will be added to complete the project.

[14] "*LIPA Sets Review of Aging Plants*," Newsday, October 5, 2005.
[15] http://www.awea.org/projects/newyork.html
[16] "*Powerful Change in Wind*," Times Union, January 30,2006.
[17] Ibid.

***Lackawanna Urban Wind Farm***
One of the most recent New York wind farms to gain approval is located in Lackawanna, New York. This 10-turbine land-based wind farm will produce between 15-30 megawatts, depending on the type of turbine the developer chooses. While many existing wind farms are located on private farms, the Lackawanna wind farm is unique because it is the first wind farm in the state sited on an abandoned Brownfield site.[18]

***Other New York Wind Farms***
There are several other wind farms throughout New York that are either proposed or in the review process. The proposed Prattsburgh Wind Farm, for Stueben and Yates counties would produce 100.5 megawatts of power. In Western New York the Chautauqua Wind Farm, proposed in towns of Ripely and Westfield, would generate 51 megawatts of power and the Bliss Wind Park, proposed for the towns of Eagle and Bliss would generate 70 MW. Four wind parks generating a total of 400 MW are proposed for the North Country towns of Altona, Clinton, and Ellenburgh.

The Long Island Offshore Wind Park (LIOWP) is one of the first proposed offshore wind farms in America. It is proposed to be located in the Atlantic Ocean, off the south shore of Long Island. If approved, the offshore wind park will consist of 40 turbines, capable of producing 140 megawatts of clean energy, which is enough power to generate 44,000 average Long Island homes.[19]

## Summary

The "energy crises" theory promoted by Broadwater is a marketing tool and not a reflection of the energy need in New York. We have a need not a crisis. It is up to the policy makers in New York, Connecticut and the Northeast region to set an energy policy that meets our energy demand but also protects our environment and our national security. Energy companies are aggressively and vehemently fighting to set our national energy policy for the next 30 years. Corporate energy policies will be carefully crafted to benefit their corporate bottom line rather than benefit neither the public nor our nation.

The projects outlined in this summary are either recent additions to the New York energy grid or need to be considered as potential energy sources for the future. Each will help New York meet our energy demand. This compilation of projects, in addition to the analysis prepared by Synapse Energy Economics, January 23, 2006, provides a more objective and comprehensive energy assessment of our region's growing energy infrastructure and needs.

The facts divulge a diverse energy infrastructure can be established that will serve the public need and protect our social and natural resources, such as the Long Island Sound.

[18] http://www.bqenergy.com/steelwinds.html
[19] http://www.fplenergy.com/projects/contents/long_island_wind.shtml

BROADWATER

# Broadwater: Just the Facts

Broadwater Energy welcomes a thorough and constructive review of its proposal, including opposing viewpoints based on scientific evidence. But upon review of many of the statements made by opponents of the project, it is abundantly clear that Broadwater Energy must make an effort to separate fact from fiction.

**What We've Heard:** *"Broadwater will industrialize Long Island Sound."*

**The Facts**

For centuries, a tremendous amount of goods have moved into, out of, and through Long Island Sound. In 2000, 311.5 million tons of freight moved through the region in some form. This represented $797.6 billion worth of goods. Bridgeport is the most active commercial port in the Sound, with more than 10,000 vessels per year. New London registers more than 5,000 vessels per year, and New Haven approaches 2,000 vessels per year.

Petroleum and coal products make up the bulk of marine movements with 47 million tons transported through Long Island Sound annually. Much of this cargo makes its way to the Northville oil terminal situated one mile off the coast of Riverhead, N.Y., or to a coal-lightering area three miles from the Bridgeport shoreline, where coal is off-loaded from the ships onto barges for use in the Bridgeport power plant. Other cargos such as lumber, steel, copper and fruit are offloaded at Bridgeport, New Haven and New London many times each month. These activities are vital to maintain the local and regional economy and provide hundreds, perhaps thousands of jobs for marine pilots, dock workers, freight forwarders and the myriad of people who handle those goods as they move through the supply chain to you, the consumer.

So, the Sound has been "industrialized" for quite some time. Our challenge now is to develop new, cleaner, more efficient energy facilities that will reduce pollution that goes into the air and water. One way to do that is by replacing oil and coal with cleaner burning natural gas from Broadwater.

**What We've Heard:** *"Broadwater will devastate the region's local tourist industry."*

**The Facts**

There has been no substantiation as to how or why Broadwater could affect local tourism. LNG carriers supplying the Broadwater facility would be of a similar size and nature to many commercial vessels that routinely transit the Sound delivering the $800 billion worth of goods. The wide expanse of the South will allow shared transit for both commercial and tourist traffic, as has been the case for many years.

**What We've Heard:** *"Broadwater will be a visual blight and will light up the night sky."*

**The Facts**

Much has been said about the size of the Broadwater terminal. Some perspective is in order. The Sound covers 844,800 acres; the terminal would take up fewer than 5 acres. If the Sound were a baseball infield, the terminal would be a pebble.

Based on existing weather patterns, the FSRU could be visible from some shorelines near the central portion of the Sound on about 80 percent of the days. When visible from the nearest shoreline, a side view of the FSRU and a berthed LNG carrier would be most visible and would appear as a small two-dimensional rectangle on the horizon. This image would be about the same size as a standard paper clip held at arm's length (approximately 1 inch long by 0.25 inch high).

In the spirit of "a picture is worth a thousand words," we encourage you to visit the Broadwater website at http://www.broadwaterenergy.com/index.php?page=location to see what the facility would look like during day and night from areas along the Connecticut and Long Island shorelines.

**What We've Heard:** *"Projects like Broadwater do not belong in an Estuary of National Significance."*

**The Facts**

Predictions of dire consequences for an Estuary of National Significance contradict nearly 30 years of real-life experience. The Cove Point, Maryland LNG import facility has been situated since 1978 on the Chesapeake Bay – the estuary that created the foundation for the National Estuary Program. The Cove Point facility is an example of how energy and environmental interests can work together for the benefit of all. There is no reason why Broadwater cannot be equally successful operating in the Long Island Sound.

By opposing Broadwater and the clean-burning natural gas it would bring, opponents tacitly endorse the continued use of less efficient and older forms of power generation that are, in part, responsible for hypoxia in Long Island Sound. To address hypoxia, the Long Island Sound Study Comprehensive Management Plan – the plan created as a result of the National Estuary Program – has established a goal of reducing nitrogen inputs into the Sound by more than 50%. This goal is only achievable if more natural gas is used to generate electricity instead of the coal and oil that is currently used. The Management Plan not only recognizes the importance of commercial activities within the Estuary but also contemplates continued commercial activities.

**What We've Heard:** *"Broadwater will do nothing to provide the region with cleaner air and will only add to, not replace current dirty emissions from power plants in the region."*

**The Facts**

Natural gas is the cleanest burning fossil fuel available today and serves as an important bridge between fossil fuels, renewables and other future fuels.

Introducing 1 billion cubic feet per day of natural gas into the Long Island Sound region will provide a cleaner-burning substitute for oil and other more emission-intensive fossil fuels that are currently transported through Long Island Sound. This new supply of natural gas is critical to enable older oil and coal power generation facilities to "repower" (modernizing or upgrading an existing facility in order to increase its capacity or efficiency) - resulting in a dramatic decrease in emissions. Not allowing a new supply of gas in the region will simply perpetuate the status quo.

**What We've Heard:** *"Broadwater will require more than 20 miles of new pipeline embedded in the floor of the Sound and its disastrous effect on shellfish beds and other marine life."*

**The Facts**

Broadwater will require new pipeline, but unlike previous pipeline projects, this pipeline would be located in some of the deepest sections of the Sound. Broadwater's pipeline avoids the more sensitive shallow areas of the Sound, where most of the flora and fauna and shellfish beds are located. Broadwater has committed to using all of the latest technologies available to minimize any potential damage done during the installation of this pipeline. With the implementation of these construction measures, the seafloor would begin to recover immediately following construction, and Broadwater would expect that the seafloor would be entirely restored within 1 to 2 years.

**What We've Heard:** *"Broadwater is too dangerous to have so close to populations and it will increase our terrorism risk."*

**The Facts**

The Coast Guard concluded in its Waterways Suitability Report, "There are currently no known, credible threats against the proposed Broadwater Energy facility." Further, the report stated, "The proposed location of the FSRU (approximately 9.2 miles from New York and 10.2 miles from Connecticut) has a number of significant safety and security benefits associated with its remoteness, especially with respect to threat and consequence since it would be remote from population centers. This fact would also serve to lessen the FSRU's attractiveness as a target."

Dr. Phani K. Raj, a researcher in the field of LNG safety, who has conducted experiments on the behavior of LNG for over 30 years, testified before the House Committee on Homeland Security on March 21, 2007. Among his remarks, he stated:

The LNG industry has operated safely both in the US and worldwide for over six decades. In the U.S., LNG has been used in peak shaving operations (liquefying pipeline natural gas during periods of low demand, storing the liquid, and re-gasifying it to meet peak demand, generally during winter months) for over 60 years. Trans-continental shipments of LNG in ocean-going tankers started in 1959. The safety record the LNG industry is enviable and unmatched by any other comparable industry – not a single injury or fatality to the member of the public for over 50 years. Over 45,000 tanker shipments have occurred world wide to date, without any significant LNG spills.

**What We've Heard:** *"All security associated with Broadwater will be paid for by taxpayers and the Coast Guard is ill-equipped to provide this security."*

**The Facts**

Following release of the Coast Guard's Waterways Suitability Report (WSR) on Broadwater, there has been speculation and claims that safety and security recommendations laid out in the report would burden state and local taxpayers. This is not the case. Broadwater included costs for safety and security in its overall project cost estimates.

Broadwater's intent is to ensure that the terminal is self-sufficient with respect to safety and security – as would be the case if the facility were onshore, where facility operators are responsible for safety and security within their fence line. Broadwater will continue to work cooperatively with federal, state and local regulatory and law enforcement authorities to develop the project's detailed Emergency Response Plan and associated costs, which will cover the terminal as well as the LNG carriers delivering LNG to the terminal, as required by the U.S. Coast Guard.

The Coast Guard has stated in the media, "We do have the resources if the liquefied natural gas facility is going to be on the Long Island Sound."

**What We've Heard:** *"The Federal Aviation Administration would need to implement a no-fly zone to protect Broadwater from a potential terrorist attack."*

**The Facts**

The Coast Guard's Waterways Suitability Report, which is part of the Draft Environmental Impact Statement (DEIS), considered air security threats as part of the review of potential attack scenarios. Further, the DEIS clearly states, "the FAA generally does not establish no-fly zones around energy facilities such as oil or petroleum product storage tank areas, oil platforms, or nuclear plants." The FAA has not established "no-fly" zones around the five existing LNG import facilities in the United States, or around the Millstone and Indian Point nuclear power plants in New York and Connecticut. Additionally, "no-fly" zones have not been placed over the three onshore LNG storage

facilities in Connecticut or the three on Long Island, so why would one be established over Broadwater, which would be over 9 miles from the nearest shoreline?

**What We've Heard:** *"There are other new supplies of natural gas coming online in the near future making it unnecessary to build Broadwater. LNG facilities in Canada, Maine, and Massachusetts will provide us with the energy."*

**The Facts**

It appears the only real feature that makes these other proposed facilities more attractive to opponents is that they are not located near Long Island or Connecticut.

Most of the energy being consumed is not in Maine and Canada, but rather in New York and Connecticut. In fact, since the release of the STS-sponsored Synapse Energy Economics study, one of the Canadian projects has been terminated. Furthermore, transferring LNG from a new facility in Canada, Maine, or Massachusetts would require additional onshore and offshore pipelines, all of which have significant environmental impact. And, facilities located far away from the end user will not help lower the price of energy for consumers because they will still have to pay the costs of transporting the energy through the pipelines. Delivering the natural gas directly to the market that will use it reduce the transmission costs that help make energy so expensive in New York and Connecticut.

**What We've Heard:** *"Save the Sound's paid consultants, Synapse Energy Economics, claim that Broadwater will have little or no impact on natural gas and energy prices."*

**The Facts**

Long Island, New York City, and southern Connecticut currently depend on pipeline gas from the Gulf of Mexico and Western Canada for 85% of natural gas supplies. Broadwater will supply natural gas directly to the region - providing approximately 30% of daily natural gas requirements. This equates to 5800 Megawatts, or enough energy to power 4 million homes.

Because the region is located at the end of the natural gas pipeline system, the regional price of gas reflects the cost to transport gas a great distance over multiple pipeline systems. Having a substantial local supply of natural gas will contribute to lower, more stable energy prices.

There are also a number of public studies that provide estimates that are similar to Broadwater's. For example, in July 2004 the INGAA Foundation released a study where estimates were made of the increased consumer costs associated with delays in the development of new natural gas facilities. Increased consumer costs for New York State for the period of 2005 to 2020 were estimated to be $11.4 billion, or $760 million per year. Increased consumer costs for Connecticut were estimated to be $1.9 billion over the same period, or $125 million per year. The average increased costs for New York and Connecticut combined were $885 million per year, greater than Broadwater's

estimate of $680 million per year. This public study is available at http://www.ingaa.org/foundation/recent.htm

**What We've Heard:** *"The Broadwater technology is untested."*

**The Facts**

All the technology on the Broadwater project has been tested and proven through many years of use in the natural gas and petroleum industry. The mooring system has been in operation for over 25 years. In 2005, the Energy Bridge Deepwater Port, 'Gulf Gateway,' which is an offshore regasification terminal with the ability to re-gasify LNG on board a floating facility, commenced operation and delivered the natural gas into existing pipelines in the Gulf of Mexico. Floating LNG terminal technology is a reality.

Learn more by visiting our website at www.broadwaterenergy.com.


# Why is Broadwater Needed?

New York and Connecticut pay some of the highest energy prices in the United States. Underpinning these high prices are three key factors:

- Natural gas demand is increasing because it is a cleaner-burning fuel of choice for electric generation, as well as for heating and cooking. The New York State Energy Plan projects a 37% growth in state-wide natural gas use by 2021 and Connecticut forecasts the use of natural gas for electric generation will double from 24% in 2002 to 47% by 2008.

- North American natural gas supplies are unable to keep pace with growing demand. The U.S. Energy Information Administration (EIA) is predicting a national gap of 28% between U.S. supplies and demand by 2025.

- Consumers in the Northeast are farthest away from North American natural gas supplies in the Gulf of Mexico and Western Canada, and therefore pay higher transmission costs to bring supplies through thousands of miles of pipelines.

Part of the solution to alleviate these rising energy costs and seasonal price spikes is to increase the diversity and availability of natural gas supplies locally. While renewables, conservation and efficiency programs are critical to slow the growth in demand for natural gas, they will not supplant demand and it will take time to fully develop these programs. To close the gap between demand and supply, stabilize energy prices and continue to advance air quality and economic goals, the region must look to new sources of natural gas that can be delivered directly into the region. A solution is to import liquefied natural gas (LNG).

## What is LNG?

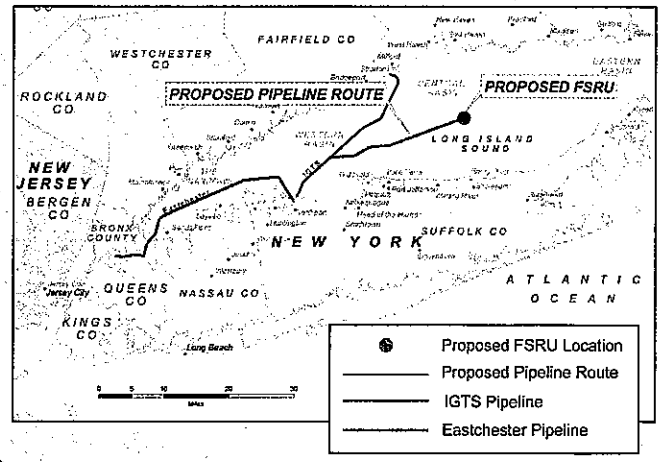
LNG is simply natural gas that has been cooled to –260 F. In liquid form, natural gas takes up 600 times less space than it does as a gas, allowing it to be efficiently stored and economically transported to regions where natural gas is needed. LNG is not like LPG and propane, which are stored under pressure, and unlike oil, LNG evaporates if spilled, leaving nothing to clean up. There are approximately 113 LNG facilities in the U.S.; five import terminals, one export terminal and 108 storage facilities. There are currently three storage facilities in New York and three in Connecticut, including one under construction.

## What is Broadwater Proposing?

Broadwater is proposing to build an offshore LNG import terminal that will connect with the existing Iroquois natural gas pipeline in Long Island Sound. The Broadwater facility will consist of a ship-like vessel, known as a Floating Storage Regasification Unit (FSRU). The FSRU will be approximately 1,200 feet long and 180 feet wide. It will rise approximately 75 to 80 feet above the water.

The FSRU will be moored near the middle of the Sound, approximately 9 miles from the closest New York shoreline and about 10 miles from the nearest Connecticut shoreline. Every two to three days, the FSRU will receive an LNG shipment from ocean-going carriers that will offload the LNG into the double-hulled storage tanks within the FSRU. The LNG will be re-gasified and sent through an approximately 22-mile connecting pipeline to the Iroquois pipeline where it will be distributed to consumers in Long Island, New York City and Connecticut.

## Proposed Project Location



## Project Benefits

### *Meet the Region's Natural Gas Demands and Enhance Energy Reliability and Security*

Locating an LNG terminal in the region will significantly increase and diversify local supplies by providing approximately **30%** of daily natural gas requirements. At peak send-out, Broadwater will supply enough natural gas to fuel approximately **5800 MW** of electricity generation or enough energy for approximately **4 million homes**.

### *Help New York and Connecticut Achieve Air Quality Goals*

Natural gas, the cleanest burning fossil fuel, is lower in harmful emissions that contribute to smog and acid rain. Repowering local oil and coal-powered facilities with natural gas can reduce $SO_x$ and particulate emissions by up to 90% and $NO_x$ and $CO_2$ by up to 50%.

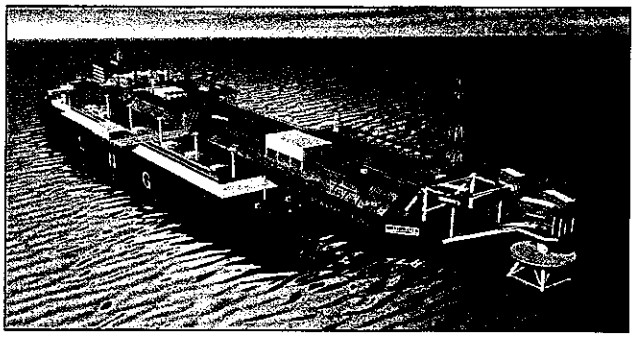
### *Provide Economic Benefits for the Region*

Broadwater estimates that the project will reduce future natural gas and electricity prices by an average **$680 million** per year in the New York, Long Island and Connecticut regions. The median household energy cost savings attributed to Broadwater will be **$300 per year**. The commercial sector (hospitals, schools and other businesses) will see an economic benefit of nearly **$1.2 billion** on an annual basis, which includes both direct energy cost savings as well as the economic stimulus of the energy cost savings.

The project has projected an expenditure of **$2-3 million** per year for the life of the project to be contributed to a Social Investment Plan. The Plan will be dedicated to promoting the health and sustainability of the Long Island Sound environment. The Plan will be developed through consultation with local and regional stakeholders.

## Project Impacts

Broadwater intends to design, construct and operate the project in a manner consistent with environmental and community interests. Any major project requires a careful balance of benefits and impacts. For Broadwater, the impacts of the project are currently under review in the federal and state regulatory processes. This review will consider benefits and impacts of the project in relation to the surrounding environment (air, water, habitat, existing uses), as well as safety and security considerations. The draft report of these impacts is called the Draft Environmental Impact Statement (DEIS) and is expected to be available in Autumn 2006.



**Aerial view of the proposed Broadwater Floating Storage and Regasification Unit (FSRU) and docked LNG carrier.**

## Safety and Security

Safety and security are top priorities for Broadwater. The proposed FSRU will incorporate state-of-the-art design, stringent security measures, technologies and procedures that will meet or exceed international and federal requirements. Our goal is to bring an important new source of energy to the region, with minimal risk to the public.

The marine transport of LNG has a strong safety and security record of approximately 80,000 carrier voyages over 40 years, covering over 100 million miles without major accidents or security problems.

Locating the facility offshore, 9 miles from Long Island and 10 miles from Connecticut, provides the public with an additional layer of safety and security. Broadwater is committed to working closely with local, state and federal law enforcement agencies throughout the design, construction and operation of the project.

## Regulatory Process

The Federal Energy Regulatory Commission (FERC), in conjunction with other federal and state agencies, will develop a DEIS for public comment. Those comments will be incorporated into the Final EIS (FEIS). FERC will consider the findings of the FEIS and any subsequent comments in their decisions to issue a license for the project. The U.S. Coast Guard also plays a major role in the review process and will issue the safety and security assessment known as the Waterways Suitability Report (WSR). The WSR is expected to be available in September 2006.

Additionally, the New York State Department of State, Department of Environmental Conservation and Office of General Services are cooperating agencies in the FERC review process and are concurrently conducting their own reviews of the project.

Cleaner, affordable energy is on the way.

BROADWATER


# How Will Broadwater Benefit the Economy?

The project will be located nine miles off the north shore of Suffolk County; therefore, the majority of tax revenues will accrue to Suffolk County and its communities. However, economic, energy, and environmental benefits accrue to the broader region, which includes Long Island, New York City, and Southern Connecticut.

- Broadwater estimates that the project would reduce future natural gas and electricity prices by an average **$680 million** per year in the New York, Long Island and Connecticut region.
- The median household energy cost savings attributed to Broadwater would be **$300** per year from 2011 – 2025.
- The commercial sector can be expected to have an economic benefit of nearly **$1.2 billion** on an annual basis, which includes both direct energy cost savings as well as the economic stimulus of the energy cost savings. The top three commercial sector beneficiaries are: 1) hospitals, 2) schools, and 3) retail and office building owners and managers.
- Broadwater will use local and regional resources where possible and, as a result, the construction and operation of the project will generate significant, positive economic impacts at both the local and state levels.

## Direct Expenditures and Jobs

In Suffolk County, direct expenditures during the construction period (2009-2010) will have a one-time, positive economic impact of **$20 million** and support **118 regional jobs**. During operations (2010-2040), it will support a total of **90** permanent jobs with **$93 million** in employee earnings generated over the life of the project. The project will have an annual economic benefit of **$39.5 million** per year, which includes both the direct spending by Broadwater on goods and services in the region as well as the boost to the regional economy as a result of these expenditures.

In New York State (including Suffolk County), direct expenditures during the construction period will have a total one-time benefit of **$20.13 million** and generate **122 jobs** statewide. During operations, the project will support **95** permanent jobs in New York State and a total of **$112 million** in employee earnings over the life of the project. The total economic benefit to New York State is estimated at **$41.3 million** per year.

## Direct, Indirect and Induced Tax Benefits

In Suffolk County, tax receipts during the construction period are estimated to be **$1.78 million.** During operations, annual tax receipts are estimated at **$4.6 million.**

In New York State (including Suffolk County), tax receipts during the construction period are estimated to be **$1.93 million**. During operations, annual tax receipts are estimated to be **$5.2 million**.

Because the project will be located offshore, there will be minimal demands on public services and infrastructure and the host communities will receive a net positive, long-term fiscal impact of **$25.5 million**. These revenues will be over and above the money the communities receive through the Payment in Lieu of Taxes (PILOT) program.

Local government tax receipts based on PILOT are expected to be approximately **$15 million** per year, directly attributable to the property taxes that will be paid by Broadwater to the local towns and school districts on Long Island.

Additional tax revenue generated from the increased economic growth will result in an additional **$94 million** per year to local and state governments from the commercial and industrial sectors.

## Increased Energy Diversity, Reliability and Reduced Future Energy Prices

Long Island, New York City, and Southern Connecticut currently depend on pipeline gas from the Gulf of Mexico and Western Canada for 85% of natural gas supplies. Broadwater will supply natural gas directly to the region – providing approximately 30% of daily natural gas requirements. This equates to **5800 Megawatts** or enough energy to power **4 million homes**.

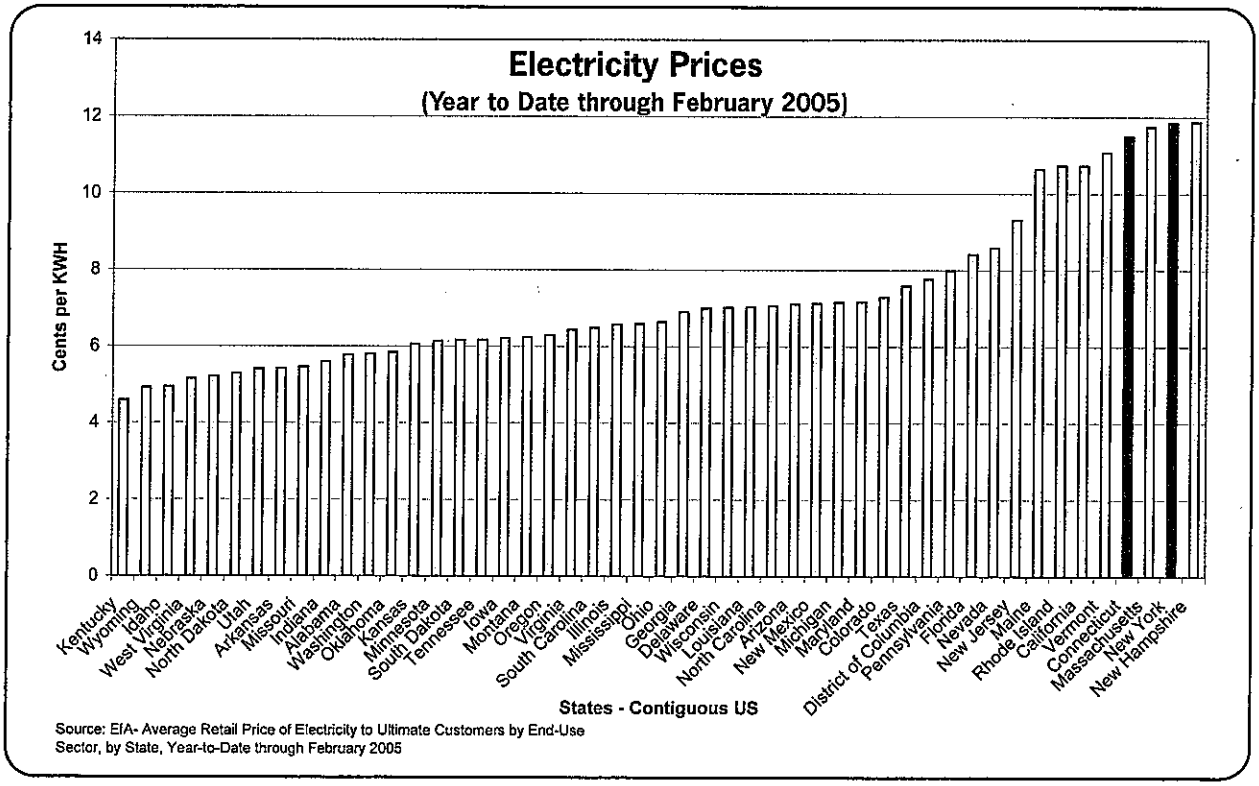
The additional supply of natural gas provided to the region will impact the regional price of gas. Because the region is located at the end of the natural gas pipeline system, the regional price of gas reflects the cost to transport gas a great distance over multiple pipeline systems. During peak demand periods, the region can pay up to **six times** more than the rest of the country. Having a substantial local supply of natural gas will shave off these peaks, resulting in lower, more stable energy prices.

## Environmental Economic Benefits

Environmental economic benefits of **$31-51 million** per year are estimated based on fewer air pollutant emissions resulting from the greater use of natural gas over other fossil fuels (i.e. avoided environmental damage). An avoided environmental damage represents a public benefit because it represents avoided regional public health costs, materials damages, and environmental damages caused by air pollution and acid rain. The benefits are expressed in monetary terms so that they can be compared with other monetary costs and benefits.

## Social Investment Plan

Broadwater has projected an expenditure of **$2-3 million** per year for the life of the project to be contributed to a social investment plan. The plan will be dedicated to promoting the health and sustainability of the Long Island Sound environment. The plan will be developed through consultation with local and regional stakeholders.



Source: EIA- Average Retail Price of Electricity to Ultimate Customers by End-Use Sector, by State, Year-to-Date through February 2005

*The Broadwater economic fact sheet was developed using data submitted to FERC as part of Resource Report 5. Future economic impacts were modeled using IMPLAN (Impact Analysis for Planning, MIG, Inc.).*

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BROADWATER

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Cleaner, affordable energy is on the way.

# How Will Broadwater Help the Environment?

Energy and environment need not be mutually exclusive aims. Broadwater recognizes that its project has been proposed in an area of aesthetic, environmental and economic value, and is working to ensure that the project is designed, constructed and operated in a way that is consistent with these values. Broadwater will provide energy reliability and security while advancing the region's environmental goals.

- Natural gas is the cleanest burning fossil fuel available today and serves as an important bridge between fossil fuels and renewables and other future fuels.
- Introducing 1 billion cubic feet per day of natural gas into the Long Island Sound region will provide a clean-burning substitute for oil and other more emission-intensive fossil fuels.
- This new supply of natural gas is critical to enable older oil and coal power generation facilities to "repower" – further reducing emissions.
- The location of the project in the middle of Long Island Sound ensures that there will be no near-shore or other coastal/wetlands disturbances during construction or operations.

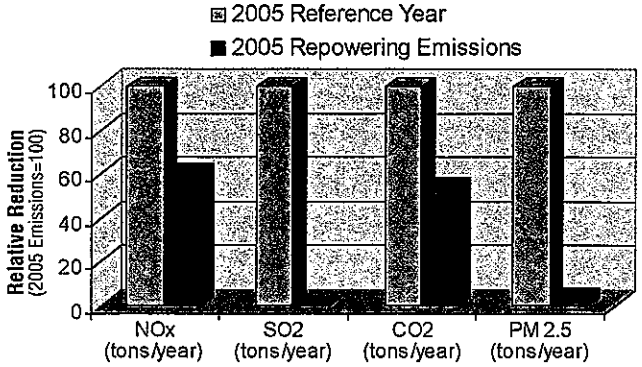
## Air Quality

The New York State Energy Research Development Authority (NYSERDA) has stated that by 2021, natural gas demand within New York is expected to increase by nearly 37% from current levels – with two-thirds of this increase due to natural gas demand for electric generation. The situation in Connecticut is similar – natural gas demand for electric generation will nearly double by 2008.

New natural gas supplies from Broadwater will provide a clean-burning alternative energy source that will place downward pressure on market prices as well as reducing air pollutants such as nitrogen oxides ($NO_X$), sulfur dioxide ($SO_2$), particulate matter and carbon dioxide. Cleaner power generation through the use of more efficient, cleaner-burning combined cycle turbines powered by natural gas will be feasible with new sources of gas supply, such as Broadwater.

Achieving regional environmental quality goals such as repowering, are, in part, contingent upon projects such as Broadwater being built. Repowering (modernizing or upgrading an existing facility in order to increase its capacity or efficiency) can result in a dramatic decrease in emissions. The graph below, which uses 2005 historical data, demonstrates the impact on emissions from repowering.

### Emissions Reductions Achievable Through Repowering*




*Assumes use of Combined Cycle Gas Turbine with 7.7 mmBtu/MWh heat rate
Assumes no change in total MWh generation and only gas burns

## Environmental Economic Benefits from Broadwater

Environmental economic benefits of **$31-51 million per year** are estimated based on fewer air pollutant emissions resulting from the greater use of natural gas over other fossil fuels (i.e. avoided environmental damage). An avoided environmental damage is a public benefit because it represents avoided regional public health costs, materials damages, and environmental damages caused by acid rain. The benefits are expressed in monetary terms so that they can be compared with other monetary costs and benefits.

## Water Quality and Marine Habitat

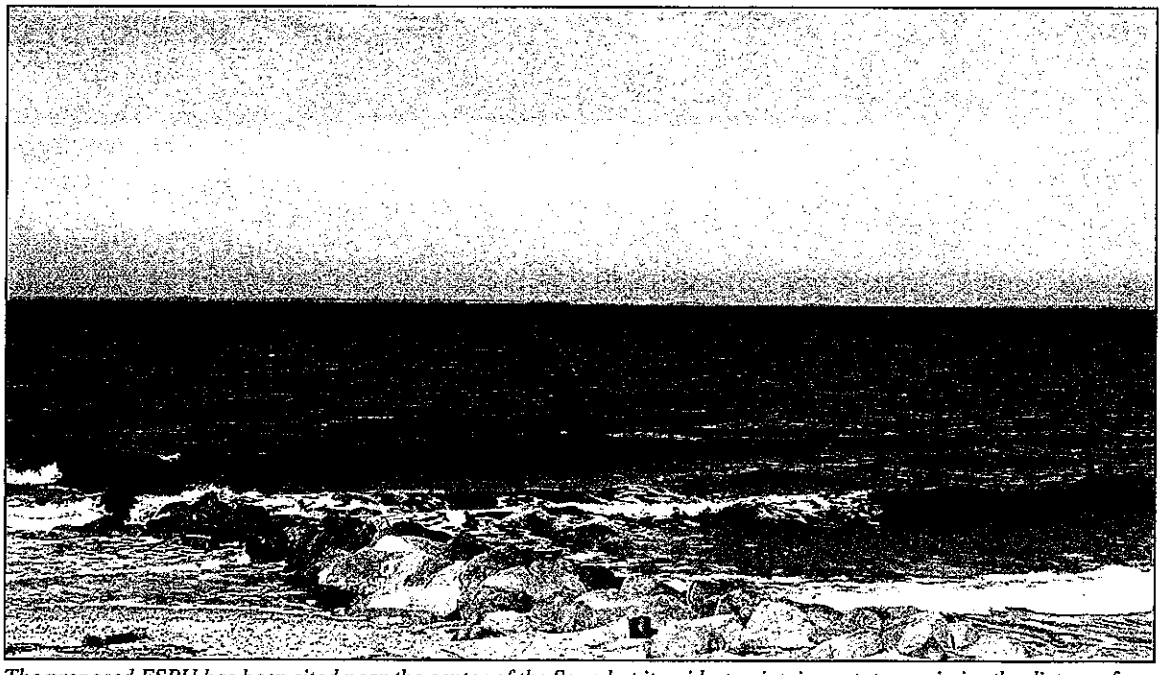
Broadwater intends to avoid or minimize any potential impact to the water quality or marine habitat in Long Island Sound. The project is entirely offshore in deep water in the middle of Long Island Sound, avoiding impacts to the shoreline, near-shore and associated wetlands, which serve as important nesting, feeding, resting, spawning and nursery areas for many species.

With careful preparation, planning and choice of technologies, impacts during construction of the offshore pipeline, which connects Broadwater to an existing offshore pipeline, will be minor, localized and short term. These impacts are primarily related to the temporary resuspension of bottom sediments as the pipeline trench is excavated.

During operations, The FSRU will contain a wastewater treatment facility designed to meet state and federal discharge standards. Wastewater that cannot meet these standards will be shipped to shore for treatment at an approved facility.

## Social Investment Plan

Broadwater's social investment plan will be dedicated to helping preserve and enhance the health and sustainability of the Long Island Sound environment. The plan is being developed through consultation with local and regional stakeholders. Broadwater will dedicate **$2-3 million per year** during the life of the project for this purpose.



*The proposed FSRU has been sited near the center of the Sound at its widest point, in part, to maximize the distance from any coastal vantage point and minimize potential visual impact on coastal resources. The photo shows what the FSRU would look like from the closest shoreline vantage point (Wading River, NY) on a clear day when the terminal is parallel to the shoreline.*

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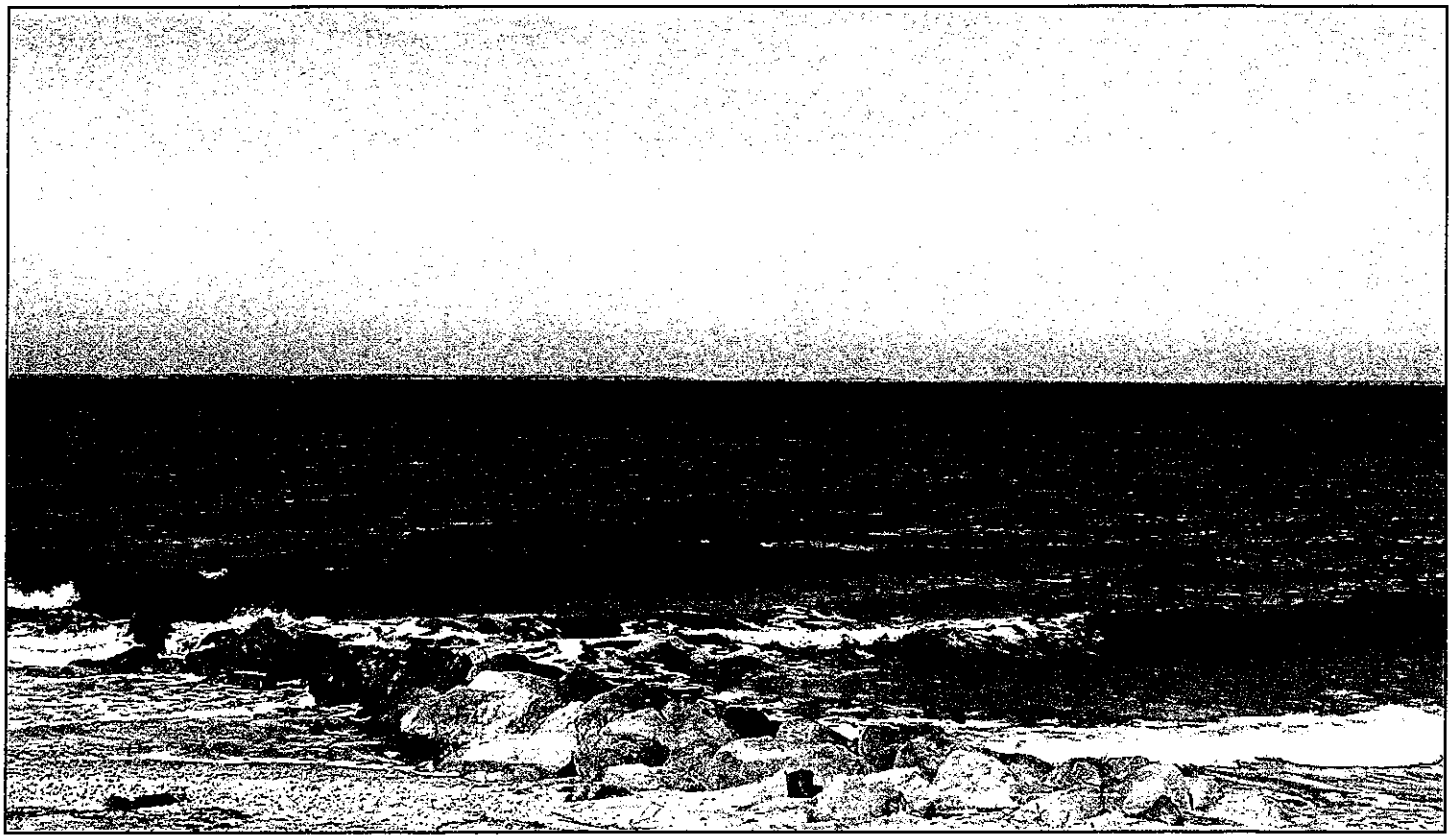
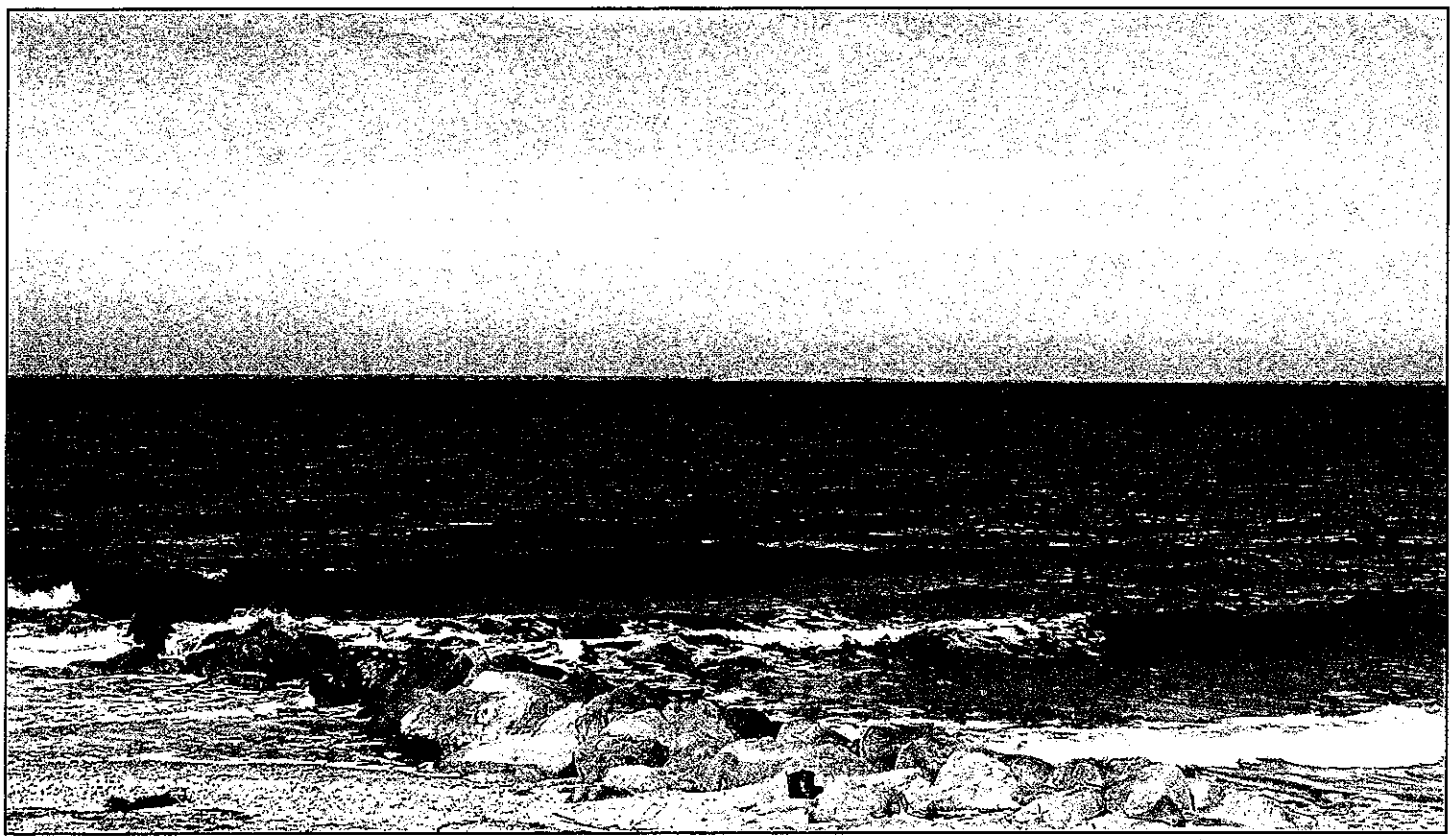
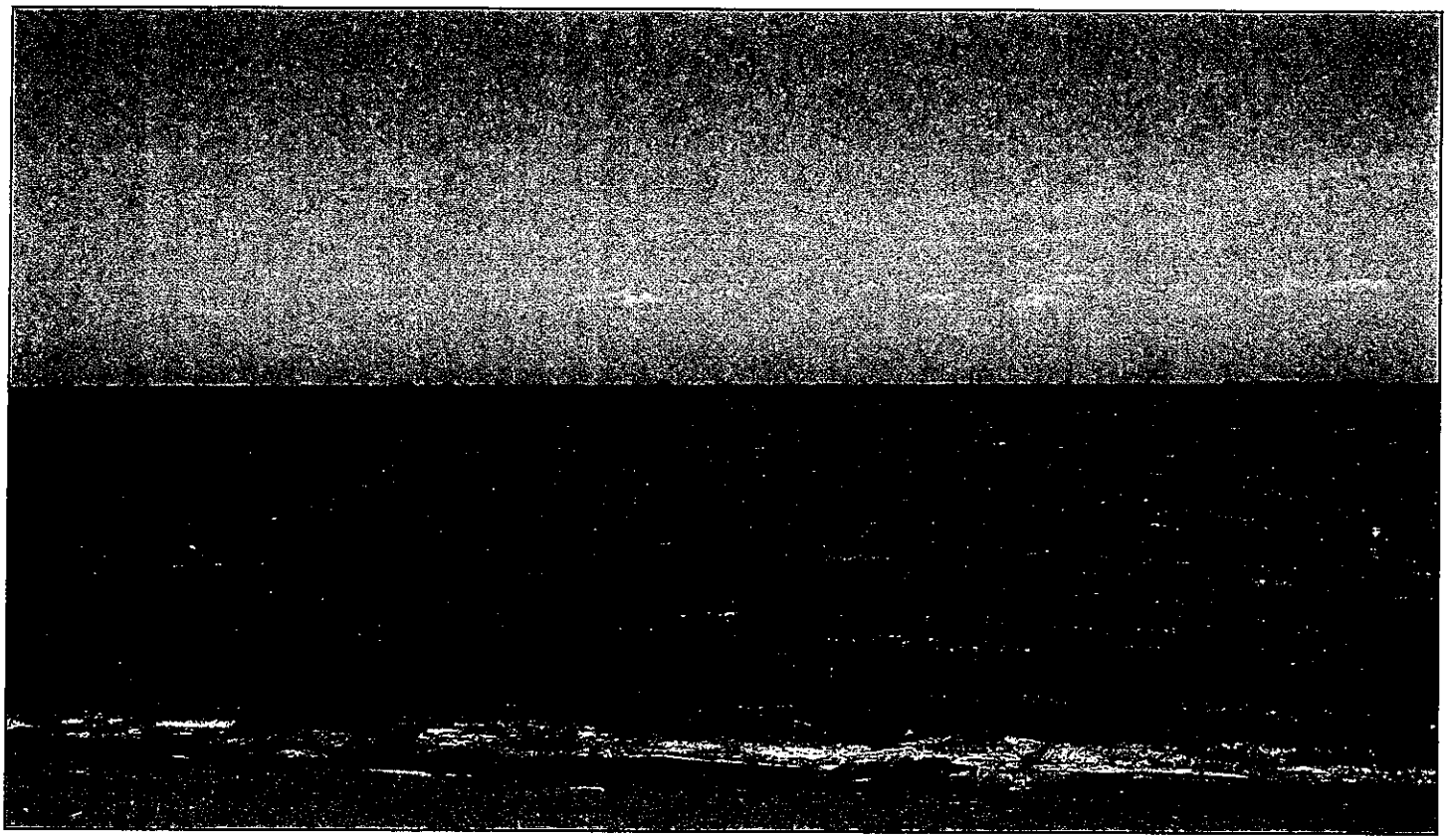


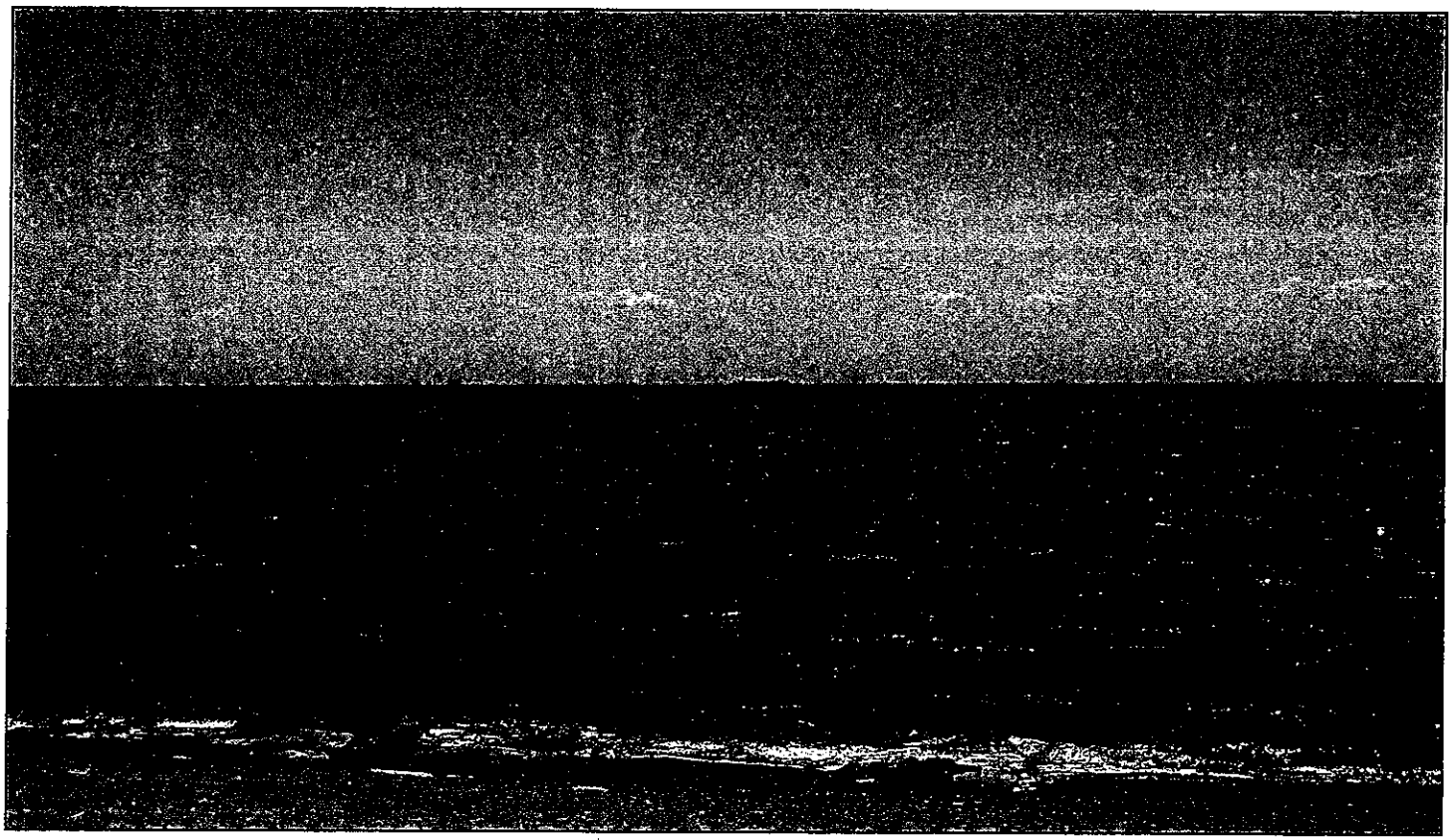
*Existing view, Wading River Beach, NY.*



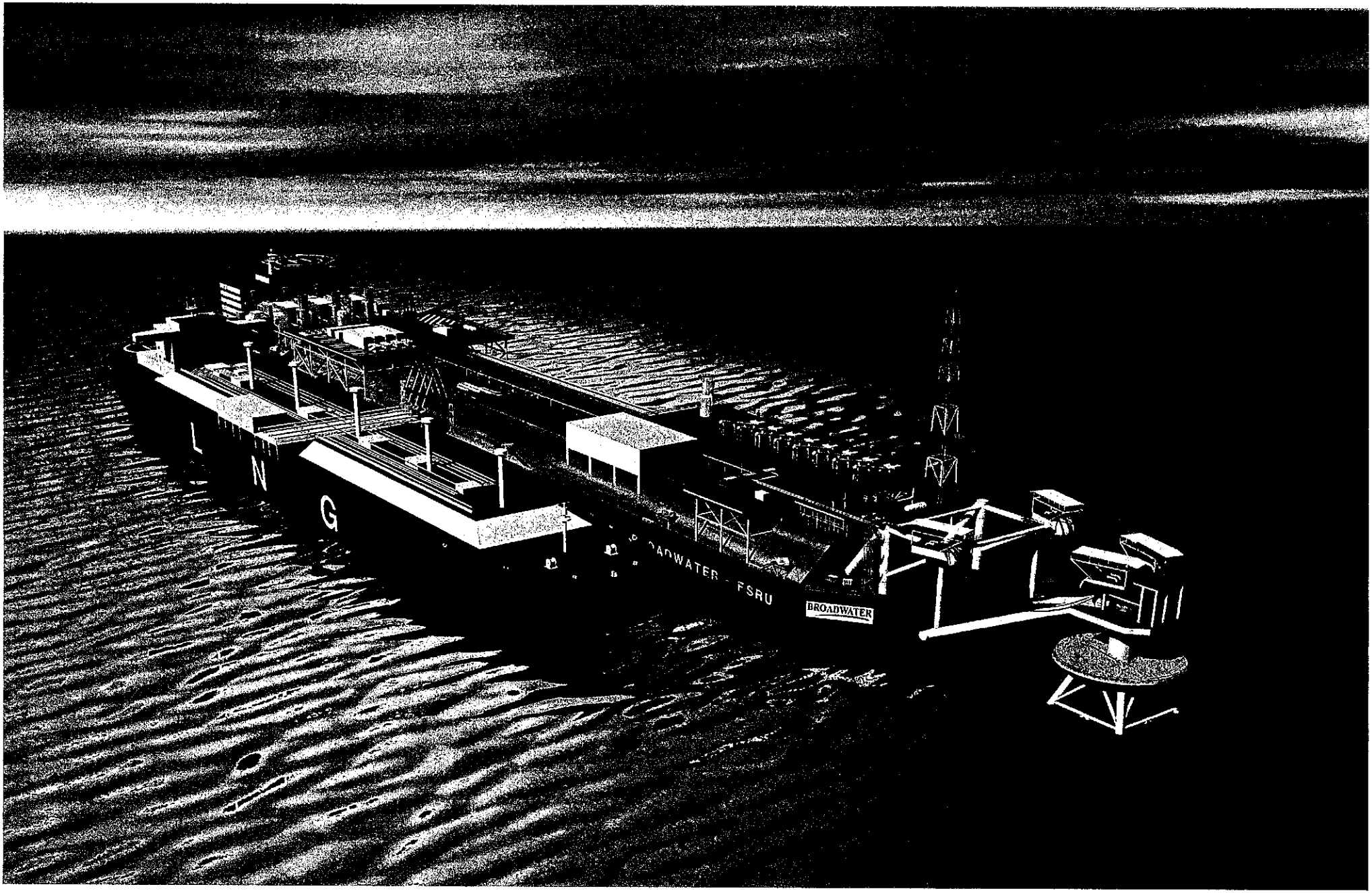
***View with Broadwater, 9.2 miles from Wading River Beach, NY.*** *The photo shows what the Broadwater facility would look like from the closest New York vantage point on a clear day when the terminal is parallel to the shoreline.*



*Existing view, East Haven Shoreline Park, CT.*



***View with Broadwater, 10 miles from East Haven Shoreline Park, CT.*** *The photo shows what the Broadwater facility would look like from the closest Connecticut vantage point on a clear day when the terminal is parallel to the shoreline.*




**Arial view of the proposed Broadwater Floating Storage and Regasification Unit (FSRU) and docked LNG carrier.**

**Underwater view of the FSRU and mooring system.**

U.S. Department of Homeland Security

United States Coast Guard

Commander
United States Coast Guard
Sector Long Island Sound

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New Haven, CT 06512
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16613
September 21, 2006

# Coast Guard Report on the Broadwater Energy LNG Proposal

The Coast Guard Captain of the Port for Long Island Sound has completed an assessment of the safety and security issues for the Broadwater Liquefied Natural Gas (LNG) facility proposed for Long Island Sound. The Coast Guard position is to neither support nor oppose this proposal but, rather, to provide an objective analysis of the navigational safety and maritime security issues associated with the Broadwater Energy LNG proposal. As the lead federal agency responsible for waterway safety and maritime security, the Coast Guard's recommendation is based solely on an objective assessment of whether the waterway is suitable with respect to navigation safety and maritime security for LNG marine traffic and the operation of the proposed facility. This assessment is based on the Coast Guard's statutory authority provided by the Ports and Waterways Safety Act (33 U.S.C. §§ 1221 *et seq.*) and the Maritime Transportation Security Act of 2002.

The Federal Energy Regulatory Commission (FERC) is the lead federal agency responsible for determining whether or not the Broadwater proposal will be licensed. As such, this Coast Guard assessment is not an approval or disapproval of the Broadwater proposal. There are many other issues beyond the scope of this assessment that FERC will address through the development of an Environmental Impact Statement (EIS), required under the National Environmental Policy Act (NEPA). FERC's review process and contact information are available at the FERC website, http://www.ferc.gov/for-citizens/for-citizens.asp.

The Coast Guard will provide this assessment (called the Waterway Suitability Report) to FERC for inclusion in the draft EIS. This report will also be posted on the Sector Long Island Sound public information web page at www.uscg.mil/d1/units/seclis/public.html. Certain portions of the report are restricted as Sensitive Security Information (SSI), governed under Title 49, Code of Federal Regulations (CFR) 1520.

This assessment and report took over a year to complete and is based on an analytic and objective assessment of potential risks to navigation safety and maritime security associated with the proposed Broadwater Energy project. The assessment included input from a Harbor Safety Working Group comprised of approximately 30 representatives of commercial, recreational and government waterway users as well as state and local agencies with responsibilities related to waterway safety. It also included input from a Sub Committee of the Long Island Sound Area Maritime Security Committee that included approximately 20 representatives of federal, state and local agencies with responsibilities related to maritime security. Extensive public input was also received through written comments that were submitted to the Coast Guard's docket for this project and during public scoping meetings that were held with FERC.

## Coast Guard Report on the Broadwater Energy LNG Proposal

Background, key points, and conclusions of the report are summarized in this letter. Detailed discussion and analysis is contained in the text of the full Waterway Suitability Report.

Background:

- Broadwater Energy is proposing to build a floating storage and regasification unit (FSRU) in Long Island Sound. The FSRU would measure approximately 1,215 feet in length, 200 feet in width, and would rise approximately 80 feet above the water line to the deck. The FSRU's draft would be approximately 40 feet. The entire cargo containment system of the FSRU is protected by a double hull.

- The FSRU itself would have 8 LNG tanks, each having an approximate volume of 44,850 $m^3$, for a total net storage capacity of 350,000 $m^3$. The LNG would be maintained at a temperature of minus 260° F and at a normal operating pressure of 1-3 pounds per square inch (psi), closely approximating atmospheric pressure. No mechanical means of refrigeration would be required.

- The FSRU would be secured via a Yoke Mooring System (YMS) attached to a stationary tower structure secured to the seabed, housing a sendout pipeline. The YMS is designed to allow the FSRU to pivot or weathervane around the tower. The FSRU would have a single berth on its starboard side to accommodate LNG tankers for off-loading LNG.

- As proposed, LNG would be delivered to the FSRU by 2 to 3 LNG tankers per week with cargo capacities ranging from 125,000 $m^3$ to 250,000 $m^3$.

- The location where Broadwater Energy has proposed to construct and operate the FSRU is in state waters. Therefore, the lead federal agency for this project is the Federal Energy and Regulatory Commission (FERC). As the lead federal agency, FERC is responsible for making the decision whether to license the project. In accordance with an interagency agreement, the Coast Guard is a cooperating agency and is responsible for providing input regarding navigation safety and maritime security to FERC as part of the environmental review process required by the National Environmental Policy Act (NEPA, *see* 42 U.S.C. §§ 4321 - 4370).

- The LNG carriers for the proposed project will transit waters under the jurisdiction of the state of New York, and in some cases may transit the waters under the jurisdiction of the states of Connecticut and Rhode Island.

Key Points:

- Long Island Sound is a mixed use waterway. Recreational, commercial, naval and fishing boats share this estuary of national significance.

- Typically 450 foreign flagged vessels per year call on ports in Long Island Sound. In addition, approximately 4000-7000 domestic commercial vessels transit Long Island Sound each year. The addition of the proposed LNG tankers transiting to the FSRU

would increase foreign flagged vessel traffic volume by 20-30%. The overall increase of commercial vessel traffic in Long Island Sound would be less than 1%.

- There are currently no known, credible threats against the proposed Broadwater Energy facility. However, it should be noted that the threat environment changes and that some threats may be unknown. If the project is approved by FERC, periodic threat assessments must be conducted to ensure the security measures in place are appropriate.
- Over the approximately 45 years since the shipment of LNG began, more the 33,000 LNG carrier voyages have taken place. Eight marine incidents worldwide have resulted in LNG spills. No cargo fires on LNG carriers have occurred.
- The proposed location of the FSRU (approximately 10.2 miles from Connecticut and 9.2 miles from New York) has a number of significant safety and security benefits, including reducing threat and public safety consequences since it would be remote from population centers, and protection from open ocean sea conditions. However, the remote location also creates some challenges since it would require that a law enforcement presence be projected to the center of the Long Island Sound.
- The principle characteristic of the consequences of a large open air release of LNG due to an accident or an attack is a fire, not an explosion. LNG fires are very intense and are of short duration, e.g., on the order of an hour. The analysis of consequences was based on the findings in the Sandia National Laboratories Report SAND 2004-6258: Guidance on Risk Analysis and Safety Implications of a Large Liquefied Natural Gas (LNG) Spill over water. The Sandia Report can be found at http://www.fossil.energy.gov/programs/oilgas/storage/lng/sandia_lng_1204.pdf#search=%22Sandia%20LNG%20Report%22.
- None of the hazard zones identified in the Sandia Report (Zone 1, Zone 2, or Zone 3) around the FSRU would impact any population centers due to their distance from land. Neither hazard Zone 1 nor Zone 2 for the next generation LNG tanker would impact land along the proposed transit route. Hazard Zone 3 (unignited vapor cloud) could impact land along limited portions of the proposed transit route.
- The purpose of a safety/security zone is two-fold: 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.
- The proposed safety/security zone around the FSRU is a circle centered on the mooring tower with a radius of 1210 yards (equal to an area of 1.48 square miles). Long Island Sound is approximately 1320 square miles (an area that is by comparison nearly the size of Long Island, which is 1379 square miles). The area covered by the proposed safety/security zone is approximately 0.12% of the total area of Long Island Sound.
- The proposed safety/security zone around the LNG tanker while in transit in Long Island Sound would extend 2 nautical miles in front of, 1 nautical mile behind, and 750 yards to either side of the LNG tanker. The safety/security zone would move with the LNG

tanker. At a typical LNG tanker speed of 12 knots, it would take the entire zone approximately 15 minutes to pass a given point.

- The Race is a critical waterway connecting Block Island Sound and Long Island Sound used for national defense, commerce, and recreation. The impacts on other waterway users of a moving safety and security zone, if implemented, around LNG tankers could be managed.
- Additional resources would be needed to mitigate safety and security risks associated with the Broadwater LNG project, if approved. The most probable security regime would consist of a mix of federal (including Coast Guard), state, and local law enforcement. If state and local law enforcement agencies are involved, they would also require additional resources. In the event that state and local law enforcement agencies are involved, these agencies and Broadwater Energy would be responsible for brokering a cost sharing agreement.
- Additional marine firefighting resources would be required to mitigate fire risks associated with the Broadwater LNG project, if approved. Existing marine firefighting capability in Long Island Sound is inadequate.

Conclusion of the Coast Guard Waterway Suitability Report:

Based on Coast Guard policy guidance, the Captain of the Port can generally make one of three conclusions regarding the suitability of a waterway to support LNG marine traffic. The first is that the waterway is suitable without the implementation of additional measures. The second is that the waterway is unsuitable. The third is that to make the waterway suitable, additional measures are necessary to responsibly manage risks to navigation safety or maritime security associated with LNG marine traffic and the operation of the FSRU.

Based on the results of this assessment of potential risks to navigation safety and maritime security associated with Broadwater Energy's proposal, the Coast Guard has determined that to make the waters of Block Island Sound and Long Island Sound suitable for LNG vessel traffic and the operation of the proposed FSRU, additional measures would be necessary to responsibly manage the safety and security risks associated with the proposed project.

The Waterway Suitability Report includes a series of risk management strategies that the Coast Guard has determined would be necessary as additional measures to responsibly manage risks to navigation safety and security risks associated with the proposed Broadwater LNG project. These management strategies include both measures designed to reduce risk by reducing the potential that an accident or terrorist attack may be attempted as well as measures designed to reduce the potential consequences if there was a large release of LNG from either the proposed FSRU or an LNG tanker.

Next Steps:

FERC will issue a draft Environmental Impact Statement (DEIS) that includes the Coast Guard's Waterway Suitability Report. FERC's DEIS will address the full spectrum of environmental impacts

associated with the proposed project. Following public comment, which may include a series of public meetings, FERC will issue a final EIS (FEIS). Based on the FEIS, FERC will make a licensing decision. Questions regarding these actions should be directed to FERC at 1-866-208-3372 or Email: customer@ferc.gov.

Following the issuance of the FEIS, the Coast Guard Captain of the Port (COTP) Long Island Sound will issue a Letter of Recommendation (LOR) in accordance with 33 C.F.R. § 127.009 to Broadwater Energy and the appropriate federal, state and local agencies. The LOR will be an official determination regarding the suitability or unsuitability of Long Island Sound with respect to navigation safety and security to support the proposed FSRU and associated LNG tanker traffic. The LOR, which will be based on this Waterway Suitability Report, will not be issued until after the NEPA process has been completed.

If the proposed project is licensed by FERC and constructed by Broadwater Energy, the Coast Guard will have continuing involvement in the project, including review and approval of security plans, active participation in the emergency response planning process required the Energy Policy Act (EPACT) of 2005, implementation and overall coordination of enforcement of safety/security zones, and oversight of appropriate navigation standards.

P.J. Boynton
Captain, US Coast Guard
Captain of the Port, Long Island Sound

CITIZENS CAMPAIGN FOR THE ENVIRONMENT

Protecting the environment and working for a healthy community.

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January 23, 2007

Ms. Magalie Salas
Federal Energy Regulatory Commission
888 First St., N.E., Room 1a
Washington, DC 20426

Re: **Comments of Draft Environmental Impact Statement for the Broadwater LNG Project.** Docket No: CP06-054-000, CP06-055-000, CP06-056-000

Dear Ms. Salas,

Citizens Campaign for the Environment (CCE) is an 80,000 member, not-for-profit, non-partisan advocacy organization working for the protection of public health and the natural environment on behalf of its members in New York and Connecticut. The protection of waterways, especially estuaries, is of the utmost importance to CCE. CCE has been working to protect water quality across New York State and throughout the Nation since its inception in 1985. Currently, CCE actively works on protecting many of New York's largest and often most impacted waterways including the Hudson River, the Long Island South Shore Estuary Reserve, the Great Lakes, the Finger Lakes, the Peconic River, and Long Island Sound. Additionally, CCE is an active member of the Long Island Sound Study Citizens Advisory Committee.

The immense value of the Long Island Sound cannot be overstated. The U.S. Environmental Protection Agency has estimated that the Sound generates $5.5 billion annually to the regional economy. Recreational activities, tourism, boating, fishing, shell fishing and commercial enterprises all affirm that it would be shortsighted to allow the long-term use of such a waterway to be utilized for a liquefied natural gas (LNG) floating storage and regasification unit (FSRU). This move would ultimately change the Sound from an open-water treasure to a closed private-interest waterway.

**CCE has reviewed the Draft Environmental Impact and believe there are several deficiencies in the document that need to be addressed.**

**Air Quality**

In the scoping process, CCE requested, both in writing and verbally at the public hearings, that FERC assess the potential impact on the increase of harmful air pollutants to the surrounding area. Unfortunately, this concern is inadequately addressed in the DEIS. CCE offers the following comments:

1. **The DEIS reaches no conclusion on impacts from increased air emissions to the surrounding region.**

It states (page 3-171), "At this time we do not have the necessary information to make a conformity determination." A general conformity analysis is required for pollutant emissions that would occur in a nonattainment area, or an area that does not meet Federal Air Quality standards.

Many counties surrounding the FSRU, in both New York and CT, do not meet several federal air quality standards, and are nonattainment areas for both ozone and fine particulate matter.[1] The General Conformity Rule was designed to require federal agencies, such as FERC, to ensure that proposed projects conform to the applicable State Implementation Plan—to ensure that projects were not worsening harmful air quality problems in nonattainment areas.

To correct this inconclusive portion of the DEIS (page 3-172), FERC recommends that "Broadwater provide a full air quality analysis identifying all mitigation requirements required to demonstrate conformity……." FERC goes on to request that Broadwater's analysis "provide a detailed explanation as to whether or not the project would meet each requirement."

**CCE is extremely concerned that Broadwater is asked to analyze the air emissions of Broadwater after the DEIS process has been completed.** The analysis NEEDS to be done by an independent party in order to carry validity and said analysis also needs to be subject to public review. CCE is requesting FERC to set up a process that would allow members of the public a chance to review the air analysis and offer comments on the document.

2. **The DEIS does not account for the combined air emissions of the FSRU and the LNG Carriers.**

As CCE stated at the scoping hearings and requested in writing during the public comment period, the project should be evaluated as a whole and not evaluated in sections, in a segmented fashion. The DEIS lists the pollutants of the FSRU and lists the pollutants of the LNG Carriers (only as they are offloading) and the support tugs, but

[1] http://www.epa.gov/air/data/nonat.html? Us~USA~United%20States

lacks a comprehensive review on what effect the combined air pollutants would have. The DEIS also does not evaluate the long-term/combined effects of the air pollutants.

According to the DEIS the combined yearly pollutants would be 288,000 pounds of Carbon Monoxide, 1.1 million pounds of Nitrogen Oxide, 74,000 pounds of Volatile Organic Compounds (VOCs), 1.1 million pounds of Sulfur Dioxide and 166,000 pounds of Fine Particulate Matter. Broadwater estimates the life of the project to be 20 years. In 20 years the facility will have emitted over 5 million pounds of Carbon Monoxide, 20 million pounds of Nitrogen Oxide, over 1 million pounds of VOCs, 20 million pounds of Sulfur Dioxide, and over 3 million pounds of Fine Particulate Matter.

**FERC needs to provide an analysis of how these accumulating pollutants will effect the air quality of the surrounding region, including the effect of increased Nitrogen in the water column of the Sound, which has not been evaluated in the DEIS. Air deposition is currently the second leading source of nitrogen contamination in the Sound.**

FERC has not done a comprehensive analysis on the effects of the harmful air pollutants that the Broadwater facility will emit. This section needs to be further expanded to be comprehensive, combining the FSRU and the LNG carrier emissions. CCE also believes that any analysis needs to be conducted by an independent entity and available for public review.

**Environmental Impacts**

1. **Geology, Sediments and Soils. The basic characteristics of the geological features of Long Island Sound used outdated and therefore, incorrect literature in the DEIS. A more thorough literature review for more recent and accurate information is needed to assess the potential impacts of the pipeline, the Yoke Mooring System (YMS), and other infrastructure from the Broadwater project.**

   For example, Twitchell et al. 1998 is frequently used to reference several Long Island Sound studies. Twitchell et al. 1998 is used as a secondary source for geological characteristics. Using a secondary source of information dilutes the DEIS's ability to evaluate relevant data that may have been acquired by reviewing the original research. Instead of reviewing individual studies for the glacial history of the Sound, which is very pertinent to the discussion of sediment composition, the DEIS relies heavily on Twitchell 1998 to compile this important information. CCE believes this has resulted in an overall poor literature review for ascertaining needed information for the geology, soils and sediments of the Long Island Sound.

   CCE finds that decisions based on recommendations such as "Since Broadwater has not yet done the geotechnical surveys necessary to determine the specific liquefaction potential of the site, we recommend that..." prior to construction these investigations and analyses are done (page 3-6) are not sufficient to make a final decision on the

potential environmental impacts of Broadwater for Long Island Sound. **Analyses should be completed prior to approval and prior to the FEIS being completed.** In regards to seismicity and faulting and soil liquefaction in particular, according to Dr. Ralph Lewis, the former CT State Geologist, the DEIS's understanding of seismicity is lacking and therefore a concern. He states that Broadwater can design for the earthquakes, but the DEIS needs to address the potential for Long Island Sound. Connecticut has averaged two earthquakes per year and therefore earthquakes should be assessed more thoroughly in the DEIS[2].

2. The DEIS recommends, "Prior to construction, Broadwater file with the Secretary…the estimated volumes associated with a worst-case spill scenario; an appropriate evaluation of the associated potential impacts to water resources and marine life…" This information is critical for an environmental impact assessment and should be included in the Environmental Impact Statement. The purpose of the DEIS is specifically to evaluate such scenarios and assess environmental and public health damage. **CCE asserts that waiting until after approval to gather this critical information is hazardous to safety and security and to the Sound's health. In addition, not assessing a worst case scenario is counter to the purpose and design of the NEPA law.**

3. The DEIS states on page 3-9 that both temporary and permanent onshore facilities would be required for a Broadwater-operated support office, warehouse, industrial dock, pipe storage, contractor headquarters, and docking area. These sites have not yet been determined. **The Onshore facility should be evaluated for both possible sites before approval of the project and impacts need to be addressed in detail.**

4. **Invasive Species**

The DEIS states on page 3-16 "during construction, a total of approximately 7.5 acres of seafloor would be converted from soft bottom sediments to hard substrate…While some of the areas of sediment conversion could naturally become covered with native substrate over time, we considered impacts from sediment conversion to be minor but permanent." This section does not assess the potential impacts from the conversion on invasive species, an already existing chronic and serious stress to the Sound ecosystem. Hard-bottom substrates are "hot spots" for invasive species, such as the compound sea squirt (*Didemnum sp.)*. Referred to as fouling organisms, the tunicates attach to rocks, docks, pilings and forms encrusting mats on seafloor, usurping benthic habitat.[3] Ecosystems which have reduced biodiversity or that are stressed by environmental degradation and climate change appear to be more vulnerable to invasions. The "permanent" conversion of the benthic communities from Broadwater would already degrade those directly affected areas, in addition invasive species would take over even larger areas.

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[2] Connecticut Department of Environmental Protection. http://dep.state.ct.us/earthday/edfunweather.htm.
[3] The National Undersea Research Center [5 January 2007]. "Space Invaders: Non-Native Ascidians in the Long Island Sound". http://www.nurc.uconn.edu/about/events/event0014/index.htm.

Also, it's thought that sea squirts originally arrived in our waters by Asian ship hulls. What other invasive species could potentially be introduced by Broadwater's foreign flagged vessel hulls? The DEIS needs to comprehensively evaluate all potential routes of invasive species due to Broadwater.

**5. Contaminated Sediments (pg. 3-17)**

There is a contradiction between analysis and map data in the contaminated sediment section. The DEIS states, "site-specific sediment analyses have found that contaminant concentrations in sediment along the pipeline route are below ER-Ls and TOGS standards. Therefore, any impact associated with contaminated sediments, if such sediments are present, would be insignificant and temporary." However, when reading the previous section it's stated that "copper, mercury, and lead were reported at concentrations between their ER-L and ER-M" in the vicinity of the project area… not below as stated on 3-17. The map data of Figure 3.1-2, 3, 4 represents contaminated sediment in mid-range. **While the presence isn't overwhelming, an analysis should be conducted of possible dispersion and impacts to the estuary before making a conclusion of "insignificant and temporary".**

**6. Water Quality**

Section 3.2.1.3. did not adequately address the impacts to water quality of Long Island Sound. The section is divided into water quality parameters: temperature, salinity, dissolved oxygen, and turbidity. When mentioning the anti-fouling paint impacts to these parameters and other biological parameters, the assessment relies on the applicant's report of "resulting copper concentration would be below EPA's ambient water quality criteria". **CCE asserts that an independent assessment needs to be completed for the anti-fouling paint impacts. Relying solely on the information from the applicant compromises the study and leaves much ambiguity in the environmental impacts.**

Also, the Executive Summary of the DEIS states, "Since some water discharges for the LNG carriers would be associated with cooling on-board machinery, water discharged from carriers berthed at the FSRU has been estimated to be an average of 3.6 degrees F warmer than ambient conditions….as a result, the impacts to water quality would be minor but would occur for the life of the Project." Later on in the assessment section the pipeline thermal impacts states "During periods of low gas flow, the temperature of the natural gas within the rise would decrease from 130 degrees F as it exits…to approximately 120 degrees F at the foot of the riser on the seafloor…the water temperature approximately three feet down-current of the exposed pipeline would be elevated to a maximum of three degrees F above ambient temperatures, regardless of season." It goes on to say, "No significant impact to ambient water temperatures in Long Island Sound is expected to be associated with this thermal exchange."

**No studies are cited in the DEIS to back this statement up for either case. In addition the DEIS gave no consideration for the widely known fact that thermal pollution typically decreases the level of dissolved oxygen in the water.** Low

dissolved oxygen is already a severe problem for LI Sound with numerous monitoring programs in place on both sides of the Sound, such as the LI Sound Water Quality Monitoring Program, to start remedying this problem. Broadwater may compound the problems associated with low dissolved oxygen and negate years of funding and research for mitigation efforts.

According to the Long Island Sound Study, which was not referenced in this section of the DEIS, low DO in Long Island Sound causes lethality in fishes, juvenile crustaceans, planktonic larvae of crustaceans and crabs, and growth reductions in lobsters and shrimp.[4]

### 7. Biological Resources

A diverse ecosystem thrives along the proposed pipeline route and in the general project vicinity. Organisms that inhabit these areas are a variety of bivalves, hydroid, amphipod, spider crab, whelk, shrimp, polychaete species, tunicates, burrowing anemones, lobsters, fish, and other invertebrates. The pipeline would directly disturb a total of 2,235.5 acres of seafloor. **CCE asserts that disturbance of key species of an already threatened estuary is not acceptable, even if impacts would be "short term" and "minor".**

The primary impacts to fish and other biological resources would be the impingement and entrainment of ichthyoplankton and the subsequent discharge of biocide. Both the FSRU and LNG carriers would annually kill millions of eggs and millions of larvae. The surveys conducted in the project vicinity demonstrate that the fishes most likely affected are: Weakfish/Scup (*Cynoscion regalis/Stenotomus chrysops)*, Fourbeard Rockling (*Enchelyopus cimbrius)*, Tautog (*Tautoga onitis)*, Sea Robin (*Chelidonicthys spinosus)*, Anchovy (*Anchoa mitchilli)*, Smallmouth Flounder (*Etropus microstomus)*, Sand Lance (*Ammodytes dubius),* and Butterfish (*Porontus triacanthus)*. Many of the previously listed are representatives of recreationally and commercially fished species of Long Island Sound. **The DEIS needs to evaluate the impacts in more detail to these species and also the impacts that will occur from not only FSRU water intake, but also the screening of water taken into the LNG carriers.**

### 8. Fisheries

The American lobster is a representative of a recreationally and commercially fished species of the Sound. There has been a dramatic decline of lobster populations since the Fall of 1999. There are many possible factors that could have contributed to declines on an ecosystem-wide basis. These environmental, physiological, and biological stresses include: water quality conditions including elevated temperature and changes in salinity, environmental conditions such as storm events, pollution, lobster crowding, disease-causing organisms, pesticides, and other anthropogenic causes. Broadwater would be yet again, another pressure on our dwindling lobster population and thus loss of our historical lobster industry.

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[4] Long Island Sound Study. http://www.longislandsoundstudy.net/ccmp/hypox.html.

The DEIS does not adequately assess the impacts to the American Lobster Industry. For instance, to quote Dr. Stephen Tettelbach of Long Island University, "the DEIS states, without any references, that juvenile or epibenthic phase lobsters are located in shallow water less than 30 feet deep and thus pipeline installation would have little if any effect on lobsters during these stages of their lives. However, Sclafani (2001) stated that more juvenile lobsters were expected to occur in deeper than shallower waters [in Long Island Sound]." The DEIS also concludes that installing the pipeline during winter would avoid impacts to a portion of the adult lobster population because they would have migrated offshore. Dr. Tettelbach reminds FERC that "It is well known that lobsters in LI Sound are essentially non-migratory and thus confining pipeline installation to winter months would not be expected to reduce mortality of adult lobsters because they would not have migrated out of the area." **Because much of the lobster impact assessment section is based on misconceptions, CCE asserts the lobster section needs to be re-evaluated with more accurate information.**

The operation of the FSRU is concluded in the DEIS to have "little or no impact on benthic resources...and no significant changes to plankton populations or lifestages are expected to occur in the areas of the FSRU". **CCE believes this conclusion can not be reached by the information provided in the DEIS, especially since impingement/entrainment of larval life stages of benthic species would be a reality with Broadwater.** Dr. Stephen Tettelbach of Long Island University (whose comments have already been submitted by CCE) stated, "Estimated impacts of impingement/entrainment of plankton, including fish larvae, by the Broadwater operation are probably grossly underestimated...Phytoplankton and zooplankton entrained in the Broadwater intake would not only be lost to the future recruitment of their respective populations, but they would also be lost to the food web which supports the valuable finfish and shellfish populations of the Sound." The DEIS even states that the estimates of FSRU operation are "likely conservative". **This analysis needs to be completed with a low-end estimate and a high-end estimate.**

The negative impacts to the Sound's planktonic populations not only affect the ecosystem, but also the foundation of the Sound fishing industry. Plankton populations are the beginnings of lobster and finfish industries and because of the already existent declines of these species in the Sound, Broadwater would intensify this situation further. **CCE believes the DEIS needs to re-evaluate the impacts on the Sound's benthic resources and fishing industry with the new information from independent scientists already submitted.**

Broadwater will not only impact biological species, but also will degrade the Sound's historical maritime culture and the economy. Financially compensating individual fisherman for the loss of prime lobster and fishing grounds may act as an adequate remedy for a few individual lobsterman however; compensating lobsterman and fisherman is not a remedy to preserving this maritime culture and use of the water body. Nor is it a remedy for the overall reduction in lobster numbers. **CCE believes this will contribute to the decline of our region's shellfishing and fin fishing economies that**

**annually significantly contribute to the $5.5 billion per year generated in the Long Island Sound.**

Section 3.3.3.2. states, "In general, the impacts to commercially and recreationally important species would be comparable to those described" for benthic communities and finfish and "impacts...would be minor but would continue throughout the life of the proposed project". Since it's already been established that the benthic community assessment and finfish assessment were based on questionable information and need to be re-evaluated with the new information about entrainment/impingement of plankton and eggs the fishery conclusion needs to be re-evaluated as well.

**9. Impacts to Federally-Listed Threatened and Endangered Species.**

The DEIS needs to evaluate the potential impact to the Federally-listed as threatened piping plover *(Charadrius melodus)* and the Federally-listed endangered roseate term *(Sterna dougalli)* from Broadwater's onshore facilities and offshore facilities respectively. **CCE agrees that coordination with the ESA and the National Marine Fisheries Service is required prior to construction.**

**10. Global Climate Change.**

Also, **the DEIS does not address how climate change fits into this environmental assessment.** Since Broadwater is a long-term project of between twenty and thirty years, climate change impacts are very real. Broadwater will increase the surrounding water temperature by 3.6 degrees F. This increase of water temperature is already stressful for the surrounding ecology; add to that the water temperature increase from climate change by just a couple of degrees and the effects would be overwhelming. Northeast sea surface temperatures have already increased, according to the 100- year record, almost two degrees since 1970 and are projected to continue increasing. According to Global Climate Models (GCMs) utilized in the U.S. National Assessment of the Potential Consequences of Climate Variability and Change project warming for the New York Metro Region will range from 1.7-3.5 degrees F in the 2020's and 2.6-6.5 degrees F in the 2050's.[5] The DEIS needs to analyze how projected temperature increases from climate change and sea level rise will compound with the impacts of Broadwater including increases in temperatures to surrounding waters, potential increase in invasive species, and others. The CT DEP Commissioner Gina McCarthy recently said, "probably the greatest threat to the ecology of the Sound is climate change." Climate Change is projected to make the Sound more susceptible to invasive species and Broadwater's sediment conversions and temperature increases do the same. The two effects together could have substantial impacts to the Sound ecosystem. Furthermore, the already warming LIS could be partly to blame for the decline in lobster populations and other cold-water species once found in abundance in Long Island Sound.[6] Increasing the occurrence of thermal pollution in Long Island Sound could impact these fisheries further. While Liquefied Natural Gas does emit less greenhouse gases than other fossil fuels; this project may exacerbate the impacts of

[5] Columbia Earth Institute Study. "Climate Change and a Global City". July 2001.
[6] Varekamp, John. "Warming Sound Has Lobsters in a Pinch". *The Advocate.* 9 April 2006.

climate change in the Long Island Sound. Relocating an LNG terminal out of this estuary of National Significance would be the healthier alternative. **CCE believes Climate Change is a factor when evaluating any long-term project for a water body, particularly and estuary and the DEIS needs to assess potential compounding impacts.**

**11. Cumulative Impacts.**

Throughout the environmental assessment portion of the DEIS the probable impacts are broken down into categories and subdivisions. In all sections the conclusions are either "minimal impacts to", "impacts would be minor", "impacts would be minor and temporary", "impacts would be minor and permanent". The cumulative impacts of all these "MINOR" impacts are not addressed adequately in section 3.11.5.

It's widely known that in an ecosystem, stress factors, whether minor or major, can change or dramatically alter an ecosystem. For instance, a minor change in temperature in a water body can cause phytoplankton population compositions to change. Broadwater will increase temperature and will also have a water intake system that will kill millions of planktonic species or perhaps billions when the analysis is redone with less conservative estimates. The cumulative effect is not evaluated and currently unknown. The Long Island Sound is a fragile ecosystem and these impacts should not so easily be dismissed.

In addition, the chemical synergy of the chlorine, sodium hypochlorite, anti-fouling paint, wastewater effluent, desalinization discharge, and other discharges from the FSRU and carriers should be evaluated. Individually they were found to have minor impacts, but together the impacts have the potential to be greater. Additionally, the impacts of sodium hypochlorite needs to be assessed for impacts to lobster and other aquatic organisms. The PAN Pesticides database lists the chemical as having negative growth effects on the American Lobster larvae at concentrations of 150ppb, with larval $LC_{50}$ of 2,500-16,300 ppb.[7] This information is not included in the DEIS for evaluation.

**The DEIS needs to address comprehensively how these hundreds of "MINOR" impacts will collectively affect Long Island Sound. The DEIS should have looked at the impacts to this water body more holistically, instead of by examining the individual parts. Synergy, the interaction of two or more agents so that their combined effect is greater than the sum of their individual effects, is a crucial element when assessing any new stress to a marine environment especially.**

**Alternatives**

The DEIS does not adequately address the alternatives to the Broadwater project. CCE is not opposed to LNG and is not opposed to LNG facilities. CCE opposes Broadwater based primarily on the siting of Broadwater in Long Island Sound, an Estuary of National

[7] Pesticide Action Network (PAN) Pesticide Database (2006). http://www.pesticideinfo.org/List_AquireAll.jsp?Rec_Id=PC34390.

In 2005 FERC stated that 8-10 LNG terminals would satisfy energy demand in the Nation. Currently 16 out of 17 projects have been approved by FERC. There are currently an additional 40 projects pending review and approval.

In the Northeast region there are projects that have already been approved that will supply an additional 3.2 bcfd. There are another 5 proposed projects (excluding Broadwater) that would supply an additional 5.2 bcfd. There are also 9 planned projects that would provide 8.3 bcf. CCE questions the need for 16.7 bcfd of natural gas to the Northeast region. FERC rules out all of these approved, proposed, and planned projects because they are located to far away from NY/CT markets. It is unclear why FERC would object and outright dismiss the potential for utilizing pipeline infrastructure when FERC, in the past, has always approved such infrastructure. Currently, NY/CT currently receive natural gas and electricity from many of the approved, proposed, and planned location areas.

The approved Bear Head facility in Canada, which would supply 1.5 bcfd, has been permanently halted because they could not secure LNG sources. In general, the United States used less LNG in 2006 than in 2005 because the demand was so high in other countries and they were willing to pay more for it. Much of the Broadwater LNG supply will come from hostile countries in the Middle East and Russia, making the US more dependent on foreign sources for energy. Today, most of the U.S. natural gas comes from Canada and the Gulf of Mexico.

CCE believes that the DEIS needs to realistically evaluate the alternatives to the Broadwater project.

### 3. The DEIS needs to further evaluate a true offshore location

Broadwater is proposed in a two-shore location, between NY and CT. It is proposed in an Estuary of National Significance, a federally designated Essential Fish Habitat area, a commercial trawl lane, a prime lobster ground.....yet, the DEIS claims a location in the Atlantic ocean would have greater environmental impacts because the pipeline would have to be longer. This is simply NOT correct.

CCE believes that the DEIS did not adequately evaluate this important alternative. **This project needs to be seriously evaluated outside of the Long Island Sound estuary.**

CCE believes that this option was handily rejected in the DEIS because it would increase the cost to the applicant. FERC, as well as New York State's review, needs to consider the cost of Broadwater to the many and real negative impacts to the estuary's ecosystem, public use and commercial and recreational value and not just infrastructure cost to the applicant.

In addition, the DEIS states that the Atlantic Sea Island Group has proposed an offshore Island that would be capable of storing and re-gasifying LNG. The Island would be 13.5 miles off of New York, in the Atlantic Ocean. The Island would serve the same markets

as Broadwater and be capable of sending out 2 bcfd, twice the capacity of Broadwater. The DEIS identifies the Atlantic Sea Island as a project that will serve the samé market as Broadwater and then side steps this as a potential alternative with erroneous information. The DEIS identifies the pipeline connection for the Atlantic Sea Island as being problematic because of the distance that would be needed for the pipeline to travel to shore. However, when CCE representatives met with Howard Bovers, Chairman of the Atlantic Sea Island Group, he conveyed that the necessary pipeline connection would 14 miles from the island to the existing Transco Pipeline. This is 8 miles LESS that what is needed for the Broadwater connection. It is curious why the DEIS identifies the Atlantic Sea Island pipeline connection as problematic while identifying Broadwater's pipeline, which is a longer pipeline and in an estuary, as having only minimal impacts.

In addition, the DEIS sites concerns that the Atlantic Sea Island maybe to close to shipping lanes. This same fact for Broadwater was addressed by declaring that the ships, commercial and recreational boaters will just have to navigate around the structure. Also, according to representatives of the Atlantic Sea Island the location is between shipping lanes as opposed to Broadwater which is directly in the middle of a heavily trafficked shipping lane.

The Atlantic Sea Island proposal should be assessed as a real alternative to Broadwater. This alternative may prevent damage to lobster populations and avoid public access concerns in the estuary and in the Race. CCE believes that this is an inadequate assessment and believes that FERC should further analyze this alternative.

**4. The DEIS needs to further evaluate a SRV open-ocean facility**

The SRV is a pipeline that rises up and accepts re-gasified LNG from incoming tankers and then lowers down. Massachusetts recently approved The Bay State Plan, which is 2 offshore SRV's. This plan came out AFTER a FSRU was proposed to the Massachusetts area. It was determined that the SRV, located in the open ocean would have less environmental impacts and require less security by the US Coast Guard, while still being able to supply 1 bcfd to the region. This option is not adequately evaluated in the DEIS.

It is important that energy projects are evaluated on REAL energy needs and REAL energy alternatives and options. The DEIS fails to do this. CCE is requesting FERC do a comprehensive analysis of the alternatives and not ignore the public's opposition and REAL concerns.

CCE believes a Final Environmental Impact Statement (FEIS) on the Broadwater project must be a comprehensive, complete analysis of the proposed project. The FEIS must address the above comments.

Thank you for this opportunity to comment.

Sincerely,

Maureen Dolan Murphy
Program Coordinator

Kasey Jacobs
Program Coordinator

CC: Senator Hillary Clinton
Senator Chuck Schumer
Congressman Tim Bishop
Congressman Steve Israel
Congressman Peter King
Congresswoman Carolyn McCarthy
Congressman Gary Ackerman
Congresswoman Nita Lowey
Governor Eliot Spitzer
Secretary of State Lorraine Cortes-Vazquez
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Protecting the environment and working for a healthy community.

January 23, 2007

Mr. Steven Resler
New York State Department of State
Consistency Review Department
41 State Street
Albany, NY

**RE: Broadwater Energy**

Dear Mr. Ressler,

Please accept Citizens Campaign for the Environment's (CCE) comments on the Broadwater Energy application to locate a Liquid Natural Gas (LNG) facility 9 miles off the coast of Long Island in the middle of the Long Island Sound. CCE is opposed to the siting of the Broadwater project in the Long Island Sound and is requesting that the New York State Department of State considering the following in your review process:

1. **Unprecedented Public Input and Opposition to Broadwater. New York State should value and weigh the broad and extensive public opposition to Broadwater.** Broad and extensive public participation has occurred in this application process. It is CCE's estimate that approximately 800 members of the public attended the hearing in Smithtown on January 10, 2007 and approximately 1,000 members of the public attended the hearing in Shoreham on January 11, 2007. The vast majority of those testifying (97% in the case of the Shoreham meeting) spoke in opposition to the project. In addition, 55,000 people have already signed petitions in opposition and these names are on record with FERC. **If it is New York State's goal to require broad public participation in planning and decision making processes regarding protection of our water bodies, then it should also be the goal that the public's input is heavily weighed and meaningful in these important decisions. When tens of thousands of members of the public are attending hearings, writing letters, signing petitions and attending rallies in opposition to a proposed project then it is incumbent upon the State to weigh and value that public input.**

The public has been citing the extensive cultural, historical, economic, recreational and aesthetic value they place on the Sound as reasons for their opposition. The public

process has demonstrated the intensely **high value** the public places on the Long Island Sound for our quality of life.
As we move ahead to plan our future, quality of life issues should hold a high degree of importance. Quality of life is what attracts skilled work forces, preserve community character and fuels a thriving local economy. Communities that protect their quality of life enhance their economic well being. Long Island Sound generates $5.5 billion into our regional economy each year. We should preserve our distinctive assets such as our maritime culture, commercial and recreational fishing and boating and the beauty of our natural surroundings – rather than giving all this away to multinational corporations who are here solely for profit.

Growth and opportunity doesn't have to mean changing and giving up what we love about where we live. ***Change is inevitable, but it doesn't have to come at the expense of what citizens and communities value.*** With proper planning we believe that New York State and the northeast region can develop an energy plan that preserves our maritime heritage and maintains our waterways for all the public to share. We look to the state to ensure that energy infrastructure does not exploit our estuaries and waterways but rather offers necessary safeguards to these natural and irreplaceable resources.

New York and Connecticut residents have lost much in the way of quality of life. Rising taxes, the lack of affordable homes, stressful traffic and overdevelopment are just of the few stress factors in our daily lives. Increasingly, we are seeking to preserve the last vestiges of what makes our communities desirable. We must ensure that growth and economic development do not come at the expense of degrading our unique identity and natural resources. A few will reap big profits from this industrial facility; however, other long time residents and users of the Sound will suffer. There will be economic impacts to fish, shellfish and wildlife habitat, historic maritime cultural preservation and impairment of recreational opportunities

It has become clear that FERC does not intend to safeguard what the resident's value; it has become solely the job of New York State to protect what resident's treasure.

2. **The project creates a permanent no public access zone and an additional moving no access zone.** A "no public access zone" of 1.5 square miles will surround the LNG terminal. This means that for the first time in the Sound's history, a section of the open water body will be given over to a private corporation. Gunned security vessels would patrol the no access zone 24/7. **No fishing, boating, canoeing, swimming or sailing will be allowed.** The Coast Guard report mandates an additional moving "no public access zone" around the incoming LNG tankers that would be 2 miles in front, 1 mile in back and 750 yards on each side. Armed escort boats would surround the tankers as they transverse the Sound, marking the moving zone and requiring all vessels to get out of the way. In addition, LNG tankers will create problems and disruptions in "The Race". "The Race", named for its strong currents and navigational challenges, is the main passageway into the Sound. There would be 2-3 LNG tankers that enter The Race each week. The Coast Guard report identified that The Race as having a heavy concentration of recreational fisherman throughout the boating season. ***These security zones would***

***disrupt and conflict with traditional uses including commercial and recreational fishing, boating activities, fishing, shell fishing, sailing and even enjoyment of our beaches.*** The creation of a permanent security zone will establish a statewide precedent for all water bodies. This will allow water bodies to be used in a manor that restricts public access, allows for non-water dependent uses to take precedence over water dependent uses and allows for large sections of public resources to be turned over to private corporations.

3. **The project is inconsistent with the *Long Island Sound Comprehensive Conservation Management Plan* (CCMP).**

CCE believes that Broadwater conflicts with the stated goals of the CCMP including:

- Ensure that opportunities for water-dependent recreational activities are maximized without conflict with ecosystem management.
- Preserve and enhance the physical, chemical, and biological integrity of the Sound and the interdependence of its ecosystems.
- Ensure the social and economic benefits associated with the use of the Sound are realized to the fullest extent possible, consistent with social and economic costs.
- Establish a water quality policy that supports both the health and habitats of the living resources of the Sound and the active and passive recreational and commercial activities of people.

New York State and Connecticut signed the LI Sound Comprehensive Management Plan and are obligated to implement this meaningful strategy. Broadwater blatantly conflicts with each of the above policy objectives.

4. **The project is inconsistent with the *Long Island Sound Coastal Policies Plan***

**Policy 1** of the Coastal Policy Plan states this policy "shall foster a pattern of development in the Long Island Sound coastal area that enhances community character, preserves open space, makes efficient use of infrastructure..."

Policy one identifies the critical need to avoid disturbances of the shorelines and waters in open space areas. CCE believes that the open waters of the Long Island Sound should be considered as open space and afforded similar protections

**Section 1.2** states, "Reserve coastal waters for water-dependent uses and activities....Do not displace or interfere with water-dependent uses..."

**Policy 2** states, "Preserve historic resources of the Long Island Sound coastal areas."

**Policy 3** states, Enhance visual quality and protect scenic resources throughout Long Island Sound.

**Policy 5** states, "Protect and improve water quality and supply in the Long Island Sound coastal area."

**Policy 6** states, "Protect and restore the quality and function of the Long Island Sound ecosystem."

**Policy 9** states the plan will "Provide for public assess to, and recreational use of coastal waters, public lands and public resources of the LIS coastal area."

**Policy 10** states, "Protect LI Sound's water-dependent uses and promote siting of new water dependent uses in suitable locations. "

**Policy 11** states, "Promote sustainable use of living marine resources in Long Island Sound."

5. **The project is inconsistent in the recently signed North Shore Heritage Management Plan**. In December 2006, NY State approved the first management plan for the north shore of Long Island to collectively showcase the North Shore's treasures and provide stewardship over these resources. This area was designated as a natural heritage area in 1998 and a special commission worked for over 7 years to develop this important plan. Siting a natural gas terminal in the middle of the sound does not lend itself to the important goals of increasing tourism and preserving the natural beauty of the north shore character.

6. **Broadwater violates the federal 2006 Long Island Stewardship Act.**
The Long Island Sound Stewardship Act was signed into law October 2006. The law's principle goal is to preserve LIS for "ecological, educational, open space, public access, or recreational use. The critical goal of this important new legislation is to protect the water quality of the Sound and make the water body more usable and accessible to the public. Broadwater conflicts with this federal policy.

7. **Broadwater is inconsistent with the 1972 federal Coastal Zone Management Act (CZMA).**
This significant state policy has been used to guide water protection policy for 35 years through out New York State and our Nation. Broadwater conflicts with both the stated purposes of this policy and the intended goals in multiple areas. Conflicts include but are not limited to;

- The CZMA seeks to avoid the expansion of infrastructure and services which would promote conversion of open space, natural areas or agricultural lands to developed use.
- The CZMA seeks to preserve open space and rural character as well as enhance community character.
- The CZMA seeks to evaluate cumulative impacts likely to lead to destruction or significant impairment of natural resources,
- Preserving traditional uses which define the character of the area and maintaining appropriate scales.

- Maximize preservation and historical character of the resource by protecting historical features.
- Protect aesthetic quality of Scenic Areas of Statewide significance.
- Minimize the loss of public trust land including public access.
- Protect and Restore the quality and function of NYS's ecosystems, including the Long Island Sound.
- Protect the marketability of aquatic and fishery resources.
- Protect aquatic resources so as to provide a recreational resource experience and viable business opportunities for commercial and recreational fisheries.
- Maintain the navigability of waterways. Broadwater will have pervasive and continuous impacts on navigable waters.

8. **Broadwater is inconsistent with *The New York Ocean and Great Lakes Ecosystem Conservation Act signed in 2006.*** The traditional "first-come, first-served" approach to the use of New York's estuaries threatens their protection, conservation and sustainable use. This legislation was crafted to manage estuaries in a more protection fashion. The stated goal of this legislation is to "conserve, maintain and restore coastal ecosystems so that they are healthy, productive and resilient and able to deliver the resources people want and need." CCE attended 3 out of the 4 public hearings sponsored by FERC, US Coast Guard, Army Corp of Engineers and the NYS Department of State regarding the Broadwater DEIS. The public was overwhelming clear in their collective message that what people **want** is for the Long Island Sound to be preserved for the benefit of the public and traditional water-dependent uses. In addition, this legislation was designed to specifically apply to massive projects such as Broadwater which need to be evaluated and reviewed in a more comprehensive manor for their potential impact to the estuarine system rather than a segmented picture as provided by FERC's DEIS.

9. **Alternative Analysis** – New York State needs to review all reasonable alternatives including but not limited to alternative sites, designs and technologies.

The FERC Broadwater DEIS does not adequately address the alternatives to the Broadwater project. CCE is not opposed to LNG and is not opposed to LNG facilities. CCE opposes Broadwater based primarily on the siting of Broadwater in Long Island Sound, an Estuary of National Significance and a national, regional, and local treasure. CCE believes that there are viable alternatives that the DEIS glosses over. CCE does not believe the answer to any given need is in one silver bullet project, rather there several real solutions that will not close off portions of the open waters of LIS to multi-national, multi-billion dollar corporations. CCE offers the following comments regarding alternatives:

**A. The DEIS bases its alternatives on the assumption that an additional 1bcf a day is needed to the region, without a comprehensive analysis of whether or not that is a REAL need.**

Nowhere in the DEIS is there a substantiated calculated analysis of what the future need will be. The DEIS points to LIPA's Energy Plan for 2004-2013 as evidence of

increasing demand for energy. The DEIS then recognized that the LIPA Energy Plan lays out a comprehensive plan to meet the increasing energy need, which includes a variety of projects. The LIPA plan does not indicate nor discuss the need for a LNG project. It is unclear how the DEIS translates facts such as these into a demonstrated need for an additional 1 bcf a day.

In the alternatives section of the DEIS, many proposed and currently under construction projects appear to only be evaluated at the standard of 1bcf/per day. The projects are not looked at holistically; rather each project is looked at and then eliminated due to the fact that the project will not produce 1 bcf of natural gas per day.

For example the DEIS looks at expanding additional pipelines such as the Algonquin Pipeline that serves the Northeast region. The document reads (page 4-7), "To supply an additional 1.0 bcf per day of natural gas to the region, the Algonquin system would require significant modification and expansion."

The DEIS needs to look at permitted pipeline expansion projects, such as Millennium Pipeline, the expansion of the Iroquois Pipeline (called Market Expansion), and Islander East, in conjunction with renewable projects, such as the Long Island Offshore Wind Project. In addition, the potential for Long Island to re-power old, antiquated power plants, which is estimated to increase energy efficiency by 50-90%, should be factored in. CCE believes that this comprehensive assessment provides for a more a complete picture and understanding of our true energy need and any alleged lack of supply or proposed infrastructure. In addition, Islander East representatives have informed CCE that if Islander East were approved they would be able to bring NEW sources of natural gas to Long Island from both the approved LNG facility in Canada and the two newly approved sub-sea LNG pipelines to be located 14 miles offshore of Massachusetts. These two pipelines will be providing 1 bcf of gas to the northeast market.

***From a public perspective smaller projects that are less intrusive, less damaging, less dangerous are preferable over one large massive project.***

**B. CCE is concerned with the abundance of permitted, proposed, and planned LNG projects in the Nation, particularly in the Northeast region. CCE believes that the FERC DEIS does not adequately, nor objectively evaluate these viable alternatives.**

In 2005 FERC stated that 8-10 LNG terminals would satisfy energy demand in the Nation. Currently 16 out of 17 projects have been approved by FERC. There are currently an additional 40 projects pending review and approval.

In the Northeast region there are projects that have already been approved that will supply an additional 3.2 bcfd. There are another 5 proposed projects (excluding Broadwater) that would supply an additional 5.2 bcfd. There are also 9 planned

projects that would provide 8.3 bcf. CCE questions the need for 16.7 bcfd of natural gas to the Northeast region. FERC rules out all of these approved, proposed, and planned projects because they are located to far away from NY/CT markets. It is unclear why FERC would object and outright dismiss the potential for utilizing pipeline infrastructure when FERC, in the past, has always approved such infrastructure. Currently, NY/CT currently receives natural gas and electricity from many of the approved, proposed, and planned location areas.

One approved facility in Canada, the Bear Head project, which would supply 1.5 bcfd, has been permanently halted because they could not secure LNG sources. In general, the United States used less LNG in 2006 than in 2005 because the demand was so high in other countries and those countries were willing to pay more for it. This resulted in nations diverting LNG resources away from the US toward other nations. Much of the Broadwater LNG supply will come from hostile countries in the Middle East and Russia, making the US more dependent on foreign sources for energy. Today, most of the U.S. natural gas comes from Canada and the Gulf of Mexico.

CCE believes that the DEIS needs to realistically evaluate the alternatives to the Broadwater project.

**C. The DEIS needs to further evaluate a true offshore location**

Broadwater is proposed in a two-shore location, between NY and CT. It is proposed in an Estuary of National Significance, a federally designated Essential Fish Habitat area, a commercial trawl lane, a prime lobster ground.....yet, the DEIS claims a location in the Atlantic ocean would have greater environmental impacts because the pipeline would have to be longer. This is simply NOT correct.

CCE believes that the DEIS did not adequately evaluate this important alternative. **This project needs to be seriously evaluated outside of the Long Island Sound estuary.**

CCE believes that this option was handily rejected in the DEIS because it would increase the cost to the applicant. FERC, as well as New York State's review needs to consider the cost of Broadwater to the many and real negative impacts to the estuary's ecosystem, public use and commercial and recreational value and not just infrastructure cost to the applicant.

For instance, the **DEIS and NYS DOS needs to further evaluate a SRV open-ocean facility.** The SRV is a pipeline that rises up and accepts re-gasified LNG from incoming tankers and then lowers down. Massachusetts recently approved The Bay State Plan, which are 2 offshore SRV's, the Northeast Gateway and the Neptune Project. This compromise plan came out AFTER a FSRU was proposed to the Massachusetts area. It was determined that the SRV, located in the open ocean would have less environmental impacts and require less security by the US Coast

Guard, while still being able to supply 1 bcfd to the region. This was a compromise plan created after massive opposition to an LNG barge called Weavers Cove. This option is not adequately evaluated in the DEIS.

In addition, the DEIS states that the Atlantic Sea Island Group has proposed an offshore Island that would be capable of storing and re-gasifying LNG. The Island would be 13.5 miles off of New York, in the Atlantic Ocean. The Island would serve the same markets as Broadwater and be capable of sending out 2 bcfd, twice the capacity of Broadwater. The DEIS identifies the Atlantic Sea Island as a project that will serve the same market as Broadwater and then side steps this as a potential alternative with erroneous information. The DEIS identifies the pipeline connection for the Atlantic Sea Island as being problematic because of the distance that would be needed for the pipeline to travel to shore. However, when CCE representatives met with Howard Bovers, Chairman of the Atlantic Sea Island Group, he conveyed that the necessary pipeline connection would 14 miles from the proposed island to the existing Transco Pipeline. This is 8 miles ***LESS*** that what is needed for the Broadwater connection. It is curious why the DEIS identifies the Atlantic Sea Island pipeline connection as problematic while identifying Broadwater's pipeline, which is a longer pipeline and in an estuary, as having only minimal impacts.

In addition, the DEIS cites concerns that the Atlantic Sea Island maybe to close to shipping lanes. This same fact for Broadwater was addressed by declaring that the ships, commercial and recreational boaters will just have to navigate around the structure. Also, according to representatives of the Atlantic Sea Island the location is between shipping lanes as opposed to Broadwater which is directly in the middle of a heavily trafficked shipping lane.

The Atlantic Sea Island proposal should be assessed as a real alternative to Broadwater. This alternative may prevent damage to lobster populations and avoid public access concerns in the estuary and in the Race. CCE believes that this is an inadequate assessment and believes that FERC and NYDOS should further analyze this alternative.

10. **Broadwater is NOT a water dependent use.** Water dependent use means an activity which can ONLY be conducted in, on, over or adjacent to a water body because such activity requires direct access to the water body, and which involves an integral part of such activity, the use of water. CCE believes that while Broadwater may prefer to be located in the middle of Long Island Sound, their activity is not ***dependent*** on such a location. There are currently 200 water-dependent uses documented for the Long Island Sound. Multiple state policies specifically express New York State's desire to avoid actions which would displace, adversely impact or interfere with existing water dependent uses. Broadwater displaces, interferes and adversely impacts traditional water dependent uses including lobstering, recreational and commercial fishing, recreational boating and general use of the main exit and entranceway of the Sound known as "The Race."

11. **Protection of Bottomlands. - Broadwater conflicts with the policies and regulations of New York State to protect bottomlands.**
NYS Office of General Services must consider the "size, character and effects of the project," as well as, "the potential for interference with navigational, public use of waterway and riparian/littoral rights" and "consistency with the public interest for purposes of fishing, bathing and access to navigable waters." At the time the public lands law was enacted, no one envisioned that easements would be sought for the vast scope and type of project Broadwater is proposing. The Law never intended to permit the transfer of bottomlands to a private corporation for the exclusive right to use this expansive amount of acreage..

In conclusion, CCE is asking the New York State Department of State to find that Broadwater is inconsistent with multiple state laws as well as the federal Coastal Zone Management Act. It is our contention that this project will serve to undermine the multiple local, state and federal efforts that have been working to preserve and restore the Long Island Sound. We have made progress in the last ten years. We need to continue along this pathway and continue to revitalize and advance protection of this estuary. Thank you for your consideration of this important matter.

Sincerely,

Adrienne Esposito
Executive Director

Cc: Senator Clinton,
Senator Schumer
Congressman Tim Bishop
Congressman Steve Israel
Congressman Peter King
Congresswoman Carolyn McCarthy
Congressman Gary Ackerman
Congresswoman Nita Lowery
Governor Spitzer
Secretary of State Lorraine Cortes-Vazsquez
Steve County Executive Steve Levy