



BROADWATER PROJECT DESCRIPTION



BROADWATER

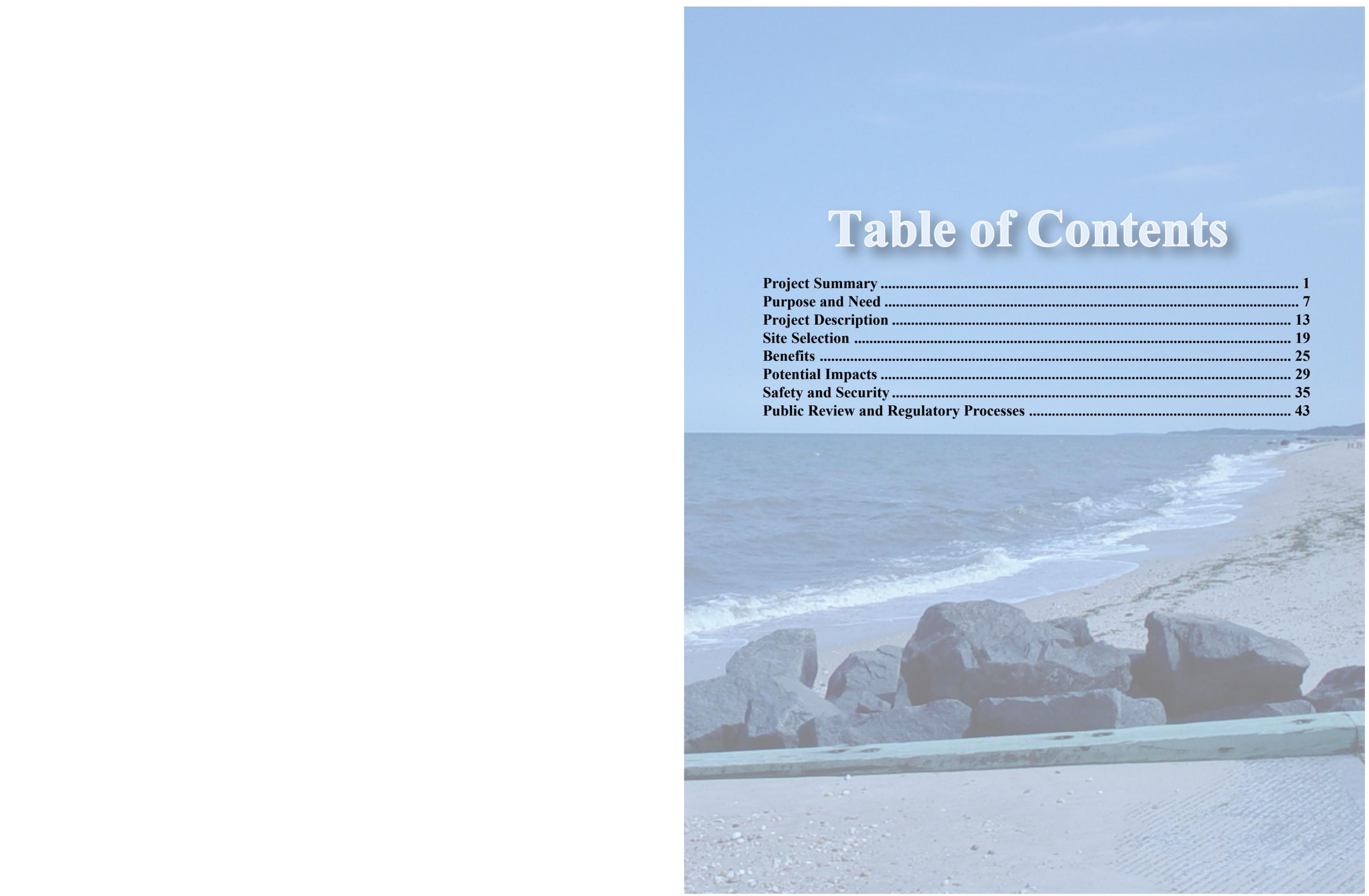
The background of the page is a photograph of a beach. In the foreground, there are several large, dark, angular rocks scattered across the sand. A concrete curb runs horizontally across the lower part of the image. The ocean is in the middle ground, with white-capped waves breaking onto the shore. The sky is a clear, pale blue. The overall scene is a coastal landscape.

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Project Summary

Broadwater Project Summary

New Energy Supplies are Needed in New York and Connecticut

As the cleanest burning fossil fuel, natural gas is increasingly chosen for electricity generation, residential heating and commercial and industrial applications. However, New York and Connecticut do not have sufficient local supply and, therefore, have relied historically on natural gas from distant production areas thousands of miles away in the United States and Canada. Unfortunately, these traditional sources are not keeping pace with demand. This situation becomes worse during peak consumption periods, particularly during cold winters and hot summers when demand for natural gas for heating and cooling increases.

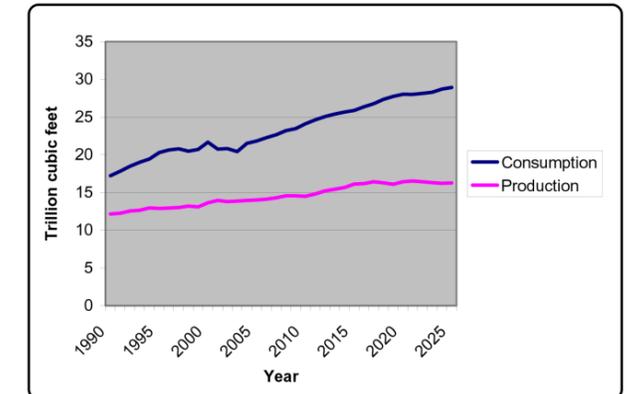
This imbalance between natural gas demand and available supply in the region has led to escalating and unstable natural gas prices and the risk of future energy shortages.

Part of the solution is to increase the variety and availability of energy sources to meet energy needs. Alternative energy sources such as wind power, solar power, and, one day, hydrogen fuel cells will play a role. Also needed are continued improvements in energy efficiency. However, it will take time to economically develop sufficient supplies from alternative energy sources and further enhance energy efficiency in a region that has already made significant gains in these areas. To close the gap between energy demand and supply, and begin to stabilize energy prices while advancing air quality and economic goals, the region must look to diversify sources of natural gas. A solution is to import liquefied natural gas - LNG.

LNG is simply natural gas that has been cooled to -260 degrees Fahrenheit. In liquid form, natural gas takes up 600 times less space than as a gas. It is like shrinking the volume of a 13-inch beach ball down to the volume of a ping-pong ball. In its liquid form, natural gas is more efficiently stored and becomes

economic to transport by sea over great distances to import terminals in consuming regions.

Domestic supplies of natural gas are not keeping pace with the U.S. demand.



Source: Department of Energy, Energy Information Agency's "Annual Energy Outlook 2004"

Broadwater's Solution

Following two years of research and analysis, Broadwater has developed plans to import LNG to a terminal at a proposed location about nine miles off the coast of Riverhead, New York (about 11 miles from the nearest Connecticut shoreline). The terminal would connect with the existing subsea Iroquois Gas Transmission System (Iroquois) pipeline via an underwater connecting pipeline that would be about 25 miles long.

LNG carriers would dock at the proposed Floating Storage and Regasification Unit (FSRU) and offload the LNG as depicted in this artist's rendering.



LNG is a familiar energy source to many communities throughout the U.S. and the world. In fact, there are more than 240 LNG facilities worldwide. Among these are storage facilities; export terminals used for liquefying natural gas into LNG; and import terminals to regasify the LNG. In the U.S., there are more than 113 LNG facilities, including four import terminals and one export terminal (Alaska). The remainder are storage facilities, including two in Connecticut and three in New York.

Physically, Broadwater would consist of a ship-like vessel moored in Long Island Sound. The vessel, known as a Floating Storage Regasification Unit, or FSRU, would be about 1,200 feet long and 180 feet wide—about the size of the Queen Mary II cruise ship. It would rise about 75 to 100 feet above the water.

The FSRU would be built in a shipyard, towed to a location in the Sound and attached to a mooring system. Every two to three days, the FSRU would receive LNG shipments from ocean-going carriers that would enter the Sound and offload their cargo as many ships do today in the region.

Once offloaded, the LNG would be stored in tanks in the hull of the FSRU. The LNG would be warmed back into a gas (regasified) before it is sent into the New York and Connecticut markets through the existing Iroquois pipeline.

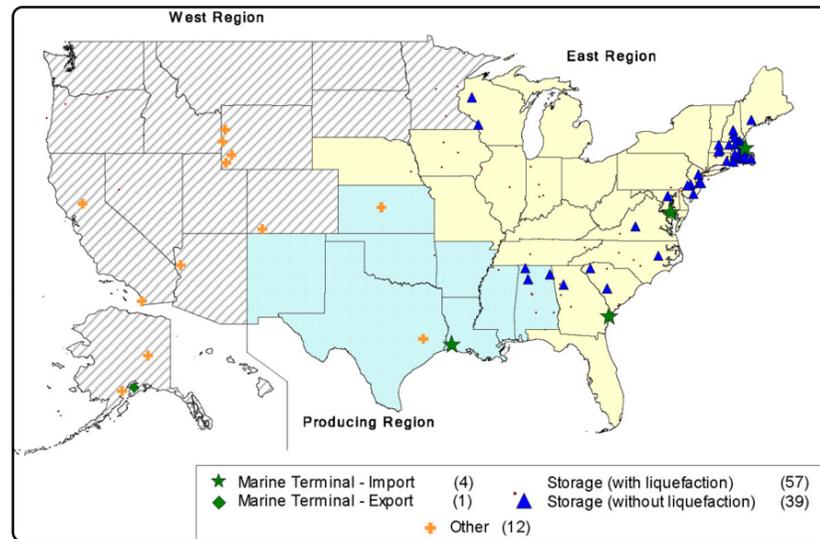
Broadwater is designed to have an onboard LNG storage capacity equivalent to approximately 8 billion cubic feet (Bcf) of natural gas, and would send out approximately 1 Bcf of natural gas daily to New York and Connecticut. To put this number in perspective, the Connecticut and New York region consumes between 3 and 4 billion cubic feet per day - an amount that continues to grow and can be significantly higher on the coldest winter days.

Our current schedule forecasts that the first delivery of LNG would occur in 2010.

Where Could Broadwater be Located?

Confirming a suitable site for this project is one of the most important steps we will undertake with stakeholders. The

LNG is already used and stored in many areas throughout the U.S.



Source: U.S. LNG Markets and Uses: June 2004 Update, Energy Information Administration.

process includes an analysis of many different criteria in consultation with stakeholders such as fishermen, boaters, residents, community groups, energy suppliers, and federal, state and local agencies.

We initiated a site selection process in 2002 by analyzing alternatives to increase natural gas supply to the region. Based on this initial analysis, we determined that given declining traditional North American supplies of natural gas, LNG imports represent the most reliable and effective way to diversify and increase natural gas supplies in the region.

Our next step was to evaluate various onshore and offshore locations as potential sites for an LNG regasification terminal. Considering the density of activity and population around existing ports onshore, as well as potential environmental impacts and safety and technical requirements, we determined that an offshore location in Long Island Sound offered significant benefits over an onshore site.

To narrow the list of possible offshore locations, we evaluated potential sites against a broad range of criteria, including safety and reliability, environmental impact, consistency with existing recreational and commercial activities, and engineering requirements.

Based on this analysis, we arrived at our proposed site in the broadest part of Long Island Sound in New York State waters (about 9 miles from the closest New York shoreline and about 11 miles from the closest Connecticut

The proposed area is within New York waters about nine miles from the closest New York shoreline.



shoreline). In approximately 90 feet of water, the proposed site is about 25 miles from the subsea connection with the existing Iroquois pipeline.

The next step in the Broadwater site selection process is to present our proposed site and concept to stakeholders. We are seeking feedback on our conclusions to date.

Broadwater's Benefits to the Region

Broadwater would be only one part of the energy supply picture in the region. However, it would be an important step to improve supply reliability and diversity, stabilize prices, avert future energy shortages and advance environmental goals while continuing to grow the regional economy.

The following are some of the ways that Broadwater would benefit the New York and Connecticut region:

1) Meet the Region's Natural Gas Demands and Enhance Energy Reliability and Security

Federal and State studies, including the Connecticut and New York State Energy Plans, recognize that new supplies of natural gas are crucial to meet the growing needs of residential, commercial and industrial consumers. Consumers must have access to a reliable and secure source of natural gas. By adding another source of natural gas to the current supply mix, the region will no longer depend solely on North American supplies that are struggling today to keep pace with demand. Nor will the region be dependent on natural gas supplies that must travel by lengthy pipelines. No longer will either state be at the "end of the pipeline" in terms of today's sources.

2) Help New York and Connecticut Achieve Air Quality Goals

Natural gas is the cleanest burning fossil fuel — far more so than coal or oil. Numerous federal and state studies, including the New York and Connecticut State Energy Plans, and the Northeast States' Regional Greenhouse Gas Initiative, identify the importance of natural gas in helping to achieve the region's air quality goals due to its low emissions of SO_x, NO_x and particulates.

3) Create a Bridge to a Renewable Energy Future

Natural gas plays a vital role in providing a bridge from traditional fossil fuels to a renewable energy future. An abundant and reliable source of natural

gas gives electricity providers the option to convert existing power plants to natural gas power generation while alternative, even cleaner technologies evolve. Natural gas is also a feedstock for hydrogen, which is seen by many as an important future energy source that will lead to efficient and clean fuel for use by utilities and in transportation systems.

4) Minimize Onshore Development

By locating offshore, Broadwater uses the existing Iroquois natural gas pipeline in the Sound and avoids onshore development. Connecting underwater to the Iroquois pipeline eliminates the need for a pipeline shore crossing.

5) Provide Economic Benefits for the Region

Broadwater estimates that it will directly contribute approximately half a billion dollars to local communities over the 30+ year life of the project. This money would come from taxes, salaries, operational expenses, and a social investment program. Economic benefits would also come from a reduction in natural gas price spikes.

Broadwater's Potential Impacts

We recognize that we have proposed to site Broadwater in an area that is of aesthetic, environmental and economic value to many people. We believe that Broadwater can be designed, constructed and operated in a way that is consistent with these values and achieves the energy reliability and security this region desperately needs while advancing important clean air quality and economic goals.

In addition to Broadwater's technical specialists, we have assembled a team of experienced environmental and engineering experts to assist us with a detailed project design and impact analysis of the project.



A key Broadwater objective is to avoid or minimize adverse environmental impacts, including the disruption of current commercial and recreational activities.

The life cycle of the proposed FSRU and associated pipeline consists of three phases: construction, operation, and, at the end of its effective purpose, vessel removal.

Throughout all these phases, our commitment is to involve concerned individuals and local users of the Sound. As we continue with the design of this project, the input of stakeholders is essential in identifying possible impacts and the best solutions for dealing with them.

In addition, we plan to establish a social investment program to support social and environmental projects in the Long Island Sound region. The amount invested in the program, as well as the mechanism for disbursements, would be determined through consultation with stakeholders. Stakeholder engagement also will help us to identify and designate appropriate stewards for the program. The stewards would manage the program and identify suitable projects to benefit the Long Island Sound and its environment and communities.

Designing a Safe and Secure Project

The events of September 11, 2001 have refocused attention to the potential safety and security risks of critical national infrastructure, including LNG facilities. This heightened level of attention has improved public understanding and led to many of these facilities becoming more secure than ever. Safety of LNG facilities and LNG shipping is achieved through sound design engineering and construction, advanced technology, personnel training and strict compliance with operational procedures, together with government oversight. LNG shipping has an excellent safety record reflecting 40 years of experience comprised of more than 35,000 carrier voyages.

The safe operation of the facility, including the marine activities, is based upon the principles of multiple levels of protection. These include the inherent structural integrity associated with high-quality design and construction processes, the advanced understanding of cryogenic systems, the use of modern monitoring and control systems, and the establishment of safety zones.

In addition, we are working with Giuliani Group, a firm with expertise in security and public safety led by former

New York City mayor Rudy Giuliani. Giuliani Group is leading the development of a comprehensive Security Vulnerability Assessment and security plans to help ensure safe and secure operation of the facility.

Safety and security are among the most vital elements of our entire project. An unsafe facility is not a viable project for us or the residents of the region.

Public Input is Essential

An open, participatory process, in which the public joins with regulatory bodies, energy developers, business leaders, academics and other stakeholders, is among the most important first steps in any major energy project. The two to three-year process to obtain a permit to construct and operate the project involves a thorough discussion of:

- o Benefits and impacts of potential solutions and
- o How impacts can be avoided or reduced to protect the region's environment and character.

In addition to our own community consultations, we will use the Federal Energy Regulatory Commission (FERC) National Environmental Policy Act (NEPA) Pre-File Process to engage with stakeholders and prepare an application to construct the FSRU and pipeline. (The FERC under the authority of the Natural Gas Act, has primary regulatory authority over the design, construction, and operation of this LNG project.) FERC developed the NEPA Pre-File Process as a way to identify and resolve issues with regional, state and local agencies and the public prior to filing an application with FERC for a project permit. It is important to note that FERC is not the only authority to influence or control the Broadwater design or operations. The U.S. Coast Guard will ensure the safety and security of Broadwater's marine operations.

Before we can proceed to construction, there are numerous land use, water, air, fisheries and other environmental resource permits, licenses and approvals that we must obtain from other federal authorities such as the National Oceanic and Atmospheric Administration, the United States Army Corps of Engineers, U.S. Fish and Wildlife Service, the Environmental Protection Agency and from state government agencies such as the New York State Department of Environmental Conservation and the New York Department of State.

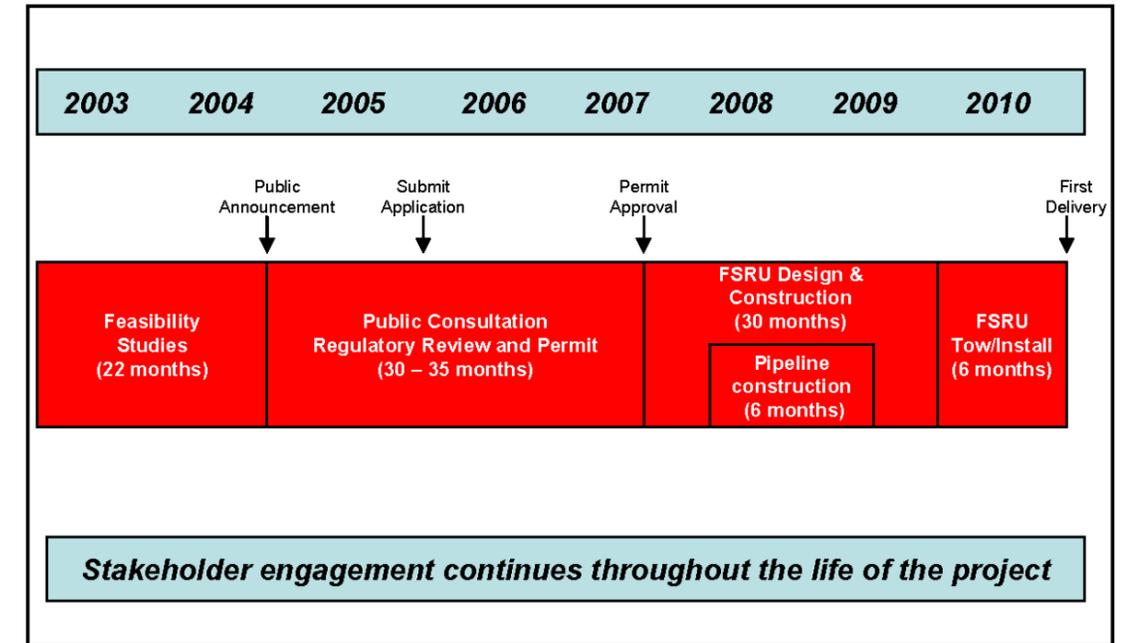
Our goal is to have an open dialogue to validate our analysis and conclusions and to create a project that is an acceptable



solution to stakeholders. We are committed to listening to, learning from, and responding to stakeholder questions and concerns. For further information on Broadwater and how to get involved please go to www.broadwaterenergy.com or call 1-800-798-6379. We will hold a number of community meetings to provide stakeholders opportunities

to learn more about our proposed project for meeting the region's energy needs. The time, dates and locations of these meetings will be announced publicly and on www.broadwaterenergy.com.

Should the project be permitted, Broadwater would begin receiving LNG shipments in 2010.



Project Sponsors

TransCanada
 TransCanada is a leading North American energy company focused on natural gas transmission and power services. Our network of approximately 24,200 miles of pipeline transports the majority of western Canada's natural gas production to markets in Canada and the United States. TransCanada also owns, controls or is constructing more than 4,700 megawatts of power - enough to meet the needs of about 4.7 million average households. As a transporter of natural gas for more than half a century, TransCanada recognizes the importance of supply reliability and ensuring gas supplies are delivered where they are needed.

Shell
 For more than 40 years, Shell has been a leader in producing natural gas, converting it to Liquefied Natural Gas (LNG) — its highly compact liquid form — and transporting it to markets beyond the reach of pipelines. Today, Shell is the world's largest private producer of LNG and a leader in supplying it to the world. As pioneers of the industry, we have set the pace in developing LNG technology and establishing the safety of LNG operations and shipping standards used throughout the industry.

As a global energy provider, Shell's continuing goal is to help meet the energy needs of society in ways that are economically, socially and environmentally responsible. That goal includes a strong commitment to use energy resources wisely, and to work toward a world in which renewable sources of energy, cleaner fuels and conservation-based technologies play an even greater role.



Purpose and Need

A Critical Need for New Energy Supplies in the Northeast

The United States, in general, and the New York and Connecticut region, in particular, face a critical period over the next 10 to 15 years in meeting the energy needs of consumers. The natural gas price spikes experienced in the winter of 2003/4 are symptomatic of a growing imbalance between energy demands and the available supply.

As the cleanest burning fossil fuel, natural gas is increasingly chosen for electricity generation, residential heating, and commercial and industrial applications. This region has limited local supplies of natural gas, and currently must rely on production from other parts of the U.S. and Canada. However, these traditional sources are not keeping pace with demand.

This problem is compounded by the fact that the pipelines from these traditional natural gas sources to the New York and Connecticut region are almost filled to capacity. Picture the Long Island Expressway or I-95 on a Friday night in July and it's understandable how capacity constraints can prevent natural gas from getting to its destination to meet demand.

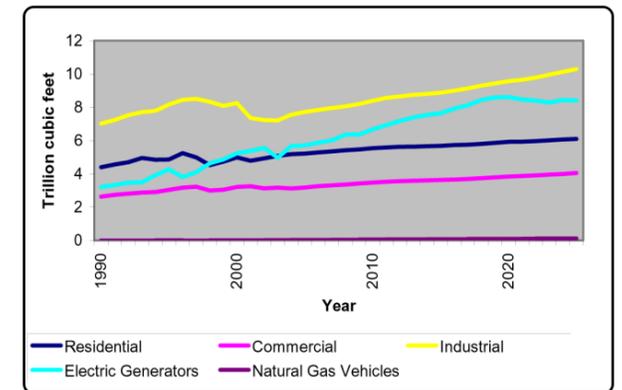
While continued development of alternative energy sources such as renewables and investment in energy efficiency programs will help, the region needs a growing supply of natural gas to heat and cool homes, grow the economy, feed industries, and avoid power shortages until these new energy sources can provide sufficient supply to meet demands.

Supply and Demand

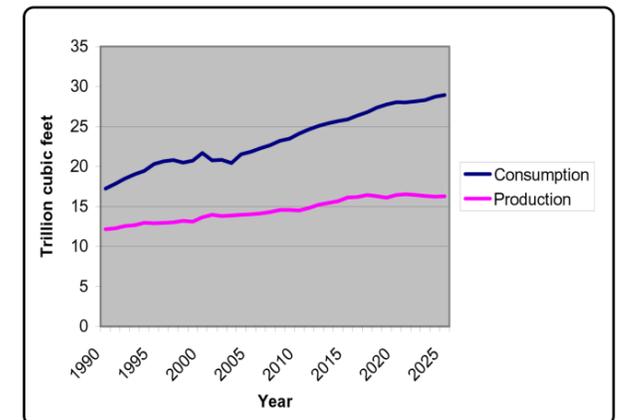
According to the U.S. Energy Information Administration's 2004 Annual Energy Outlook, natural gas consumption in the U.S. is currently about 23 trillion cubic feet (Tcf) per year and by 2025 is expected to increase to about 30 Tcf per year. Traditional natural gas supplies from the Gulf Coast and Western Canada will only meet 75% of this demand, making supplies from the Arctic as well as from other parts of the world in the form of LNG a necessity.



Natural gas consumption is increasing among all types of consumers



Domestic supplies of natural gas are not keeping pace with the U.S. demand



Source for Both Graphs: Department of Energy, Energy Information Agency's "Annual Energy Outlook 2004"

Natural Gas and Electricity Generation

The electric power generation industry is the primary driver behind the growing demand for natural gas. This growth is driven by the attractiveness of natural gas from an environmental perspective – it has lower carbon dioxide, sulfur dioxide and particulate emissions than coal and oil. Also, new natural gas turbines are efficient and burn less fuel in the generation of electricity than older equipment.

According to the New York State Energy Plan, natural gas demand in the state is expected to grow nearly 38% by 2020 from 2002 levels. This growth will be driven largely by electricity generation, which is itself forecasted to grow approximately 23% by 2020. Similar to the rest of the country, environmental initiatives, including the Governor's Acid Deposition Reduction Program (to reduce emissions that contribute to acid rain and smog), have contributed to

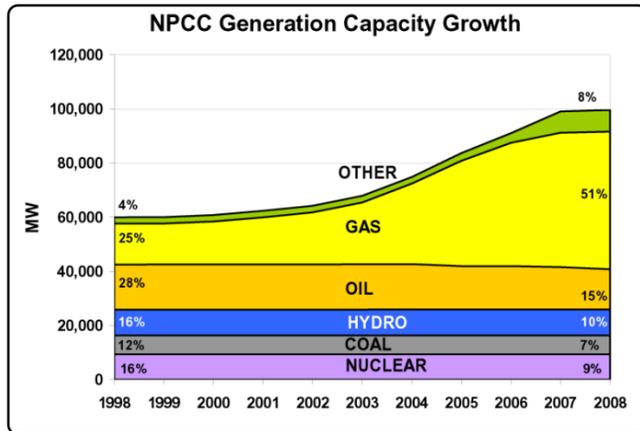


the preference for natural gas-fired generation to meet new electricity needs.

This trend is similar in Connecticut where almost all new generation capacity installed or under construction since 1999 is natural gas-fired. And this trend will continue. The Connecticut State Energy Plan forecasts that natural gas for electric generation will nearly double from 24% in 2002 to 47% in the next six years.

The chart below demonstrates the growth in natural gas-fired electricity generation using data collected from the Northeast Power Coordinating Council (NPCC), which is responsible for overseeing the reliability and efficiency of the bulk power system in the Northeast.

By 2008, natural generation in the Northeast is forecasted to double from 1998 levels. The additions of new gas-fired power plants are replacing aging oil-fired plants.



Source: Federal Energy Regulatory Commission conference, New York, June 2004.

This growth in natural gas-fired generation allows the region to meet future electricity demands while advancing air quality goals. However, the growing imbalance between regional natural gas demand and available supply means risks of future shortages and inability to meet electricity needs in an affordable and more environmentally friendly way.

Natural Gas and the Environment

Why is natural gas in such demand as a power plant fuel? There are several reasons. For one, natural gas turbines used to generate electricity are very efficient, which means they produce more electricity per unit of fuel consumed. Natural gas power plants also are smaller and therefore easier to site in areas where available space is a concern. Natural

gas has the lowest emissions of all fossil fuels, limiting emissions that are attributed to climate change (carbon dioxide), acid rain (sulfur dioxide) and smog (nitrogen oxide), as well as particulate matter. Increased use of natural gas now will provide a cleaner transition to a renewable energy future that includes a diverse set of power generation sources from renewables such as wind and solar.

Natural Gas and the Region's Economy

Increasing natural gas demand across the country, the inability of traditional supply sources to keep pace with this demand, and constrained pipeline capacity from these supply sources to consuming markets are all factors that contribute to the increasingly volatile and escalating natural gas prices.

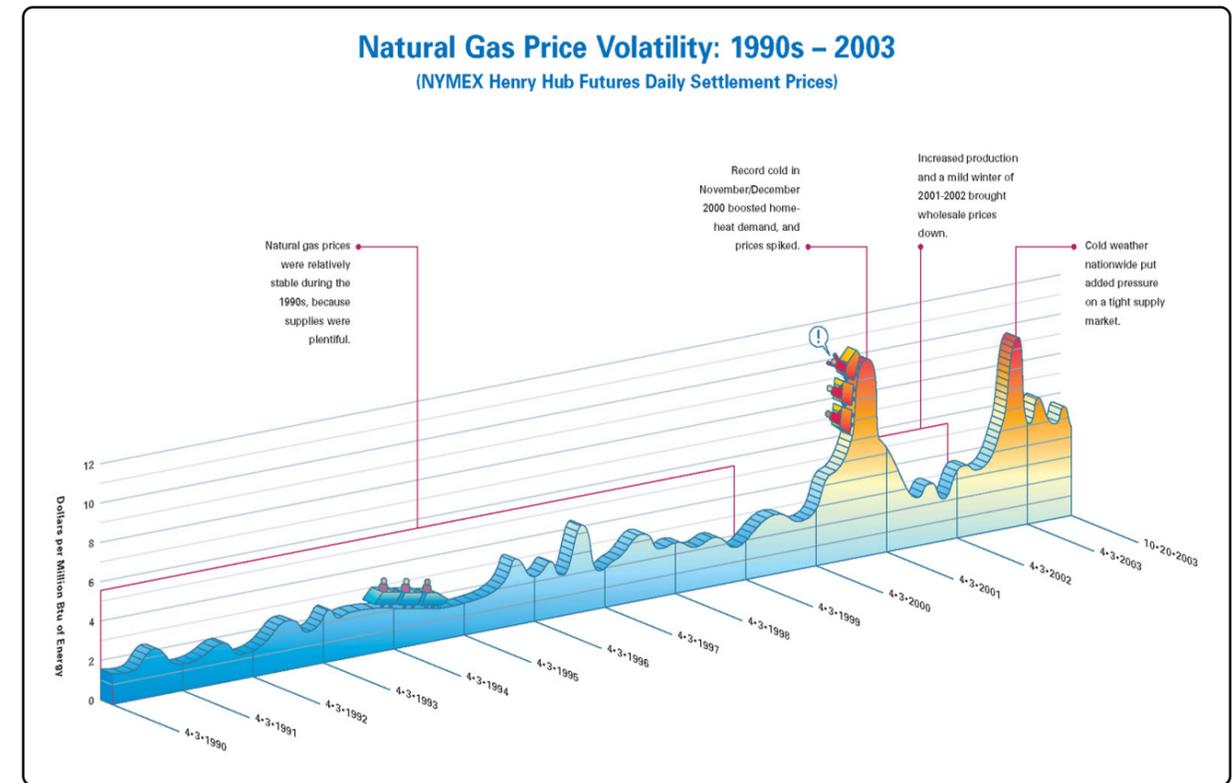
Higher energy prices act like a tax on business and consumers. Dollars that otherwise could be spent by businesses to create jobs or by consumers in enjoying day-to-day life are spent on energy.

From a business perspective, the New York State Energy Plan's own economic analysis demonstrates the importance of energy cost reductions. It showed that permanent energy price reductions of \$100 million per year would stimulate, over a 10-year period, the development of approximately 1,600 jobs in New York, increase the state's gross output of goods and services by about \$119 million, and increase personal income by about \$105 million.

It is clear that something must be done to address regional energy prices to encourage future economic opportunities and sustain quality of life. In a region becoming more dependent on natural gas for its energy supply, solutions that address the underlying causes of natural gas prices must be considered. As supply from traditional production areas in the U.S. and Canada are not keeping pace with growing demand, a solution that brings new supplies of natural gas directly into the region should be given serious consideration.

A direct supply of natural gas in the region will also increase supply security and diversity. As a region with the benefit of port access, instead of being at the "end of the pipeline" the region would receive a reliable gas supply delivered directly in the market. Further, LNG offers a world market of natural gas supply options.

Natural gas prices have become increasingly volatile in recent years, resulting in noticeable price spikes.



Source: American Gas Association.

New Supplies of Natural Gas

Today, the majority of the natural gas used in the U.S. is produced domestically. Imports account for 15%, mostly from Canada, with a growing amount of LNG from overseas. Projections on natural gas use indicate that over the next two decades, the U.S. will need to import approximately 25% of its natural gas.

However, imports from Canada are expected to decrease over the next 20 years due to both declining reserves and increasing local demand. Further, even if there were more gas available, pipeline capacity constraints make it more difficult to get the supply to market.

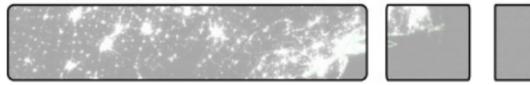
This shift points to the need to increase LNG imports. As the graph on the following page shows, pipeline imports will decrease over time—even with the addition of gas from Alaska—and LNG imports from overseas will be needed to make up this shortfall.

According to a recent report by the Center for Management Analysis (CMA) at the C.W. Post Campus of Long Island

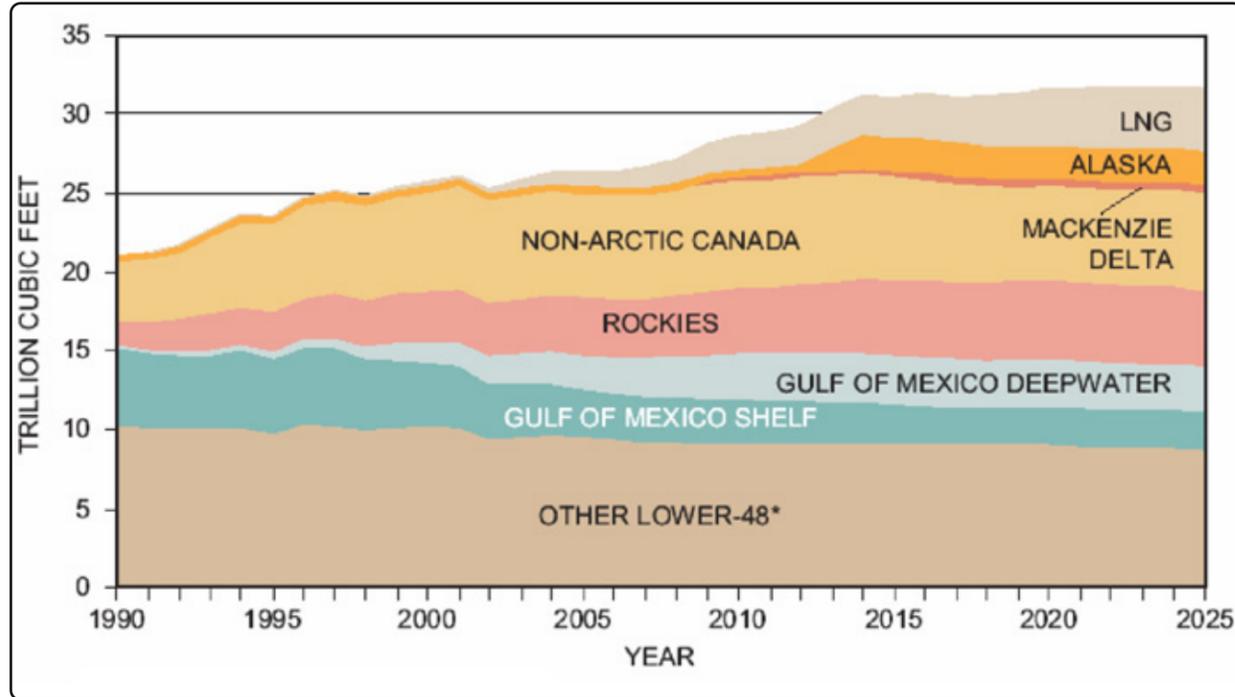
University, "Over the long term, the City [New York] and State should study jointly the viability of either establishing LNG terminals within the State or pursuing other alternatives to gain access to an emerging LNG market."

"Today's tight natural gas markets have been a long time in coming, and future prices suggest that we are not apt to return to earlier periods of relative abundance and low prices anytime soon . . . If North American natural gas markets are to function with the flexibility exhibited by oil, unlimited access to the vast world reserves of gas is required. Markets need to be able to effectively adjust to unexpected shortfalls in domestic supply. Access to world natural gas supplies will require a major expansion of LNG terminal import capacity. Without the flexibility such facilities will impart, imbalances in supply and demand must inevitably engender price volatility."

- Federal Reserve Board Chairman Alan Greenspan, June 10, 2003, testimony before the U.S. House of Representatives' Committee on Energy and Commerce



LNG imports are expected to play an increasing role in meeting the U.S. energy needs.



Source: National Petroleum Council Report 2003 "Balancing Natural Gas Policy - Fueling the Demands of a Growing Economy."

Between 1985 and 1994, New York State lost 324,634 of its manufacturing jobs (26% of the total). This has been partially offset by an increase in other private sector jobs, but the cost of energy "remains an obstacle to overcome in New York's efforts to retain, expand and attract businesses."

- *New York State Energy Plan 2002*

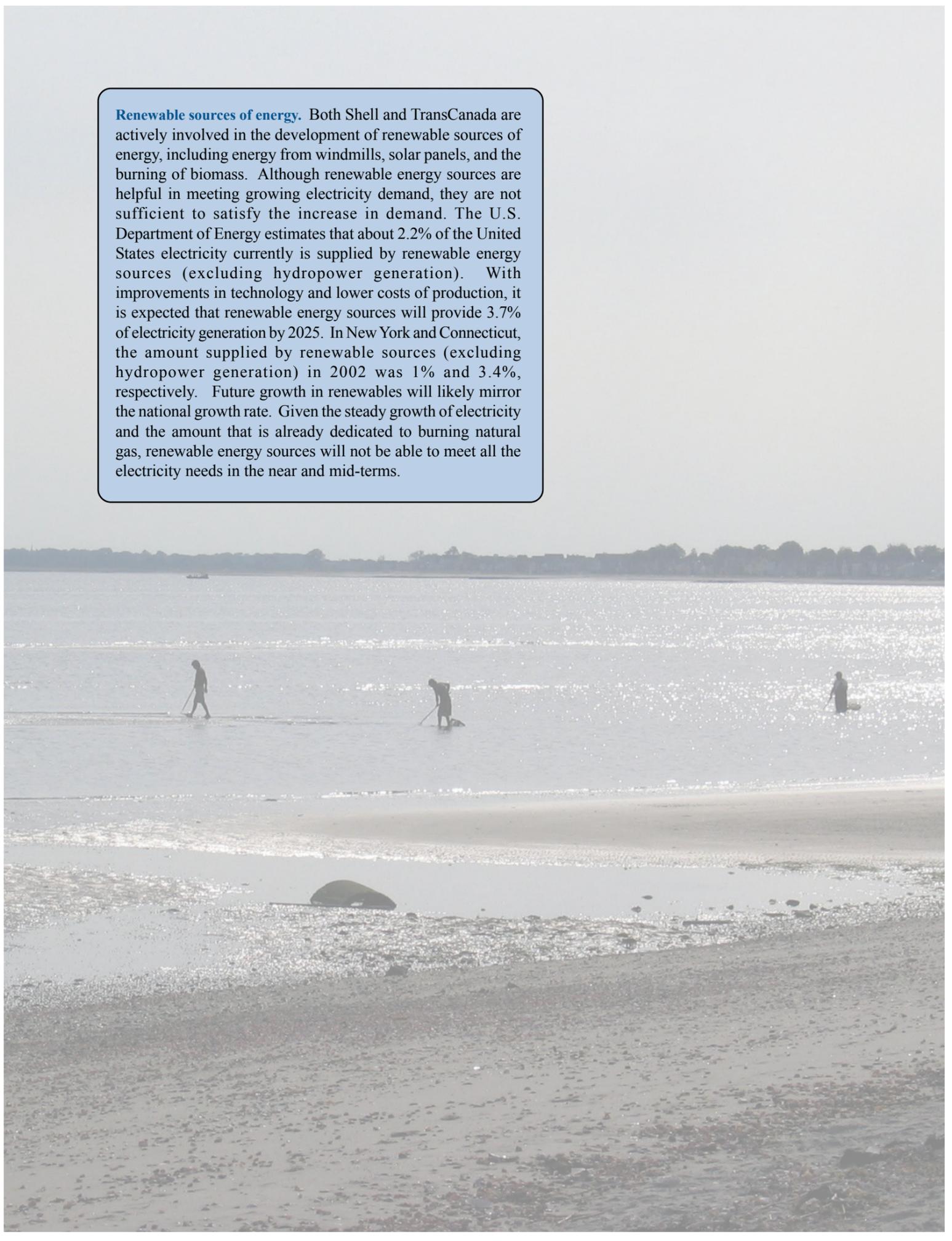
Connecticut's economy is strongly affected by energy prices, these need to be brought in line with other states to compete more effectively for economic opportunities and to ensure that Connecticut is able to attract, retain and expand business. Competitive energy costs will have a substantial effect on improving the profitability of the state's business and on promoting job growth in the state.

- *Connecticut State Energy Plan 2004*

To maintain its position as the financial, corporate and communications capital of the world, New York City must have a dependable source of electricity. Electricity makes much of the City's daily functioning possible - from the vast underground transit system and the commuter rail network to the elevators that serve our high rise buildings. Assuring reliable, affordable, and clean electricity is essential to the continued attraction and retention of City business and residents.

- *New York City Energy Policy: An Electricity Resource Roadmap 2004*

Renewable sources of energy. Both Shell and TransCanada are actively involved in the development of renewable sources of energy, including energy from windmills, solar panels, and the burning of biomass. Although renewable energy sources are helpful in meeting growing electricity demand, they are not sufficient to satisfy the increase in demand. The U.S. Department of Energy estimates that about 2.2% of the United States electricity currently is supplied by renewable energy sources (excluding hydropower generation). With improvements in technology and lower costs of production, it is expected that renewable energy sources will provide 3.7% of electricity generation by 2025. In New York and Connecticut, the amount supplied by renewable sources (excluding hydropower generation) in 2002 was 1% and 3.4%, respectively. Future growth in renewables will likely mirror the national growth rate. Given the steady growth of electricity and the amount that is already dedicated to burning natural gas, renewable energy sources will not be able to meet all the electricity needs in the near and mid-terms.



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Project Description

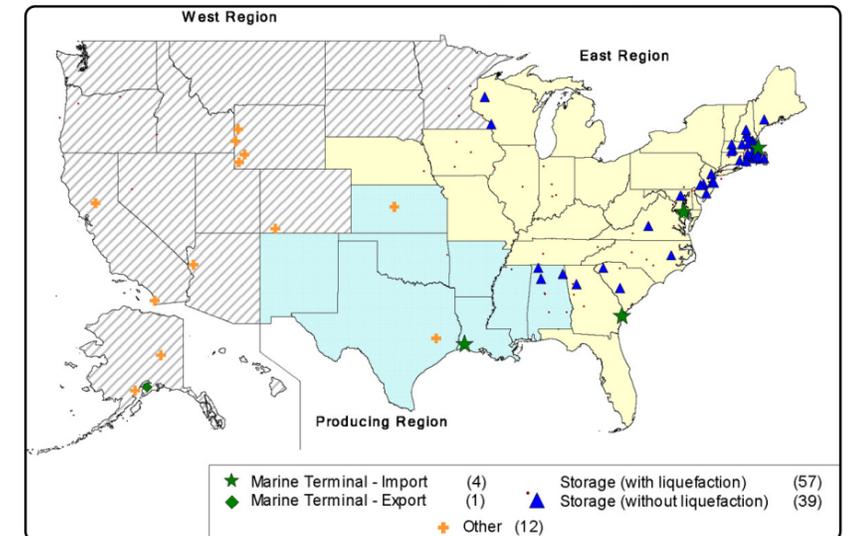
What is Broadwater Proposing?

We are proposing to build an offshore LNG terminal that would connect with the existing subsea natural gas pipeline in Long Island Sound and provide the region's consumers with a much-needed, clean, reliable and secure energy source.

LNG is a familiar source of energy to many communities throughout the U.S. and the world. In fact there are more than 240 LNG facilities worldwide. Among these facilities are peakshavers and satellite terminals (smaller storage facilities used to keep a supply of natural gas close to consumers); export terminals used for liquefying and transporting LNG from production regions; and import terminals, such as we are proposing, that are used for storing and regasifying natural gas and delivering it to consumers through natural gas pipelines. In the continental U.S., there are more than 113 LNG facilities, including four import terminals and one export terminal (Alaska). The remainder are peakshavers and satellite facilities, including three in New York and two in Connecticut.

LNG stands for Liquefied Natural Gas. It is a clear, odorless, non-toxic and non-corrosive liquid. It is natural gas cooled to a very low temperature (roughly - 260° F). In its liquid state, natural gas occupies 600 times less volume than non-liquefied natural gas. That's like shrinking the volume of a 13-inch beach ball down to the size of a ping-pong ball.

LNG is already used and stored in many areas throughout the U.S.

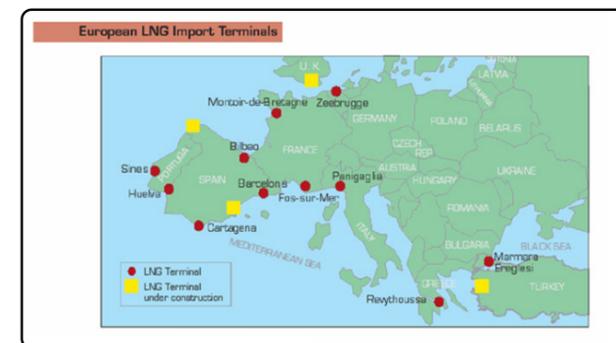


Source: U.S. LNG Markets and Uses: June 2004 Update, Energy Information Administration

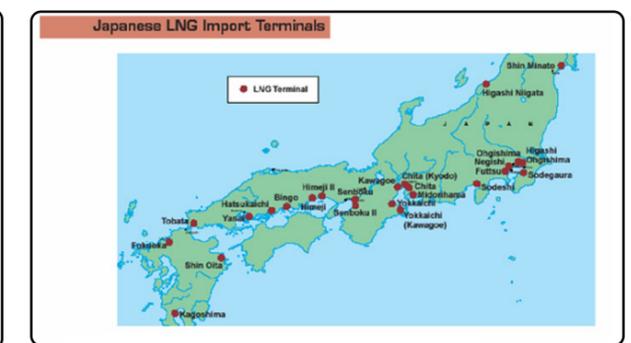
LNG is lighter than water and will evaporate on contact with surrounding warmer water. An LNG spill, unlike oil, requires no cleanup.

Physically, the Broadwater terminal would consist of a ship-like vessel moored in the deep waters of Long Island Sound. We have identified a proposed site for the vessel, known as a Floating Storage Regasification Unit, or FSRU, near the center of the broadest (north-south) portion of the Sound, about 9 miles offshore from Long Island and 11 miles offshore from Connecticut. The FSRU would receive LNG shipments from ocean-going carriers that would enter and offload their cargo as many ships do today at ports and lightering facilities in the region. Once offloaded into the FSRU's storage tanks, the LNG would be warmed back into a gas (regasified) before it is sent to the New York and Connecticut markets via the existing Iroquois pipeline, which crosses Long Island Sound from Milford, Connecticut to Northport, New York.

LNG is a familiar source of energy to many communities throughout the world.



Source: Energy Information Administration



Source: Energy Information Administration

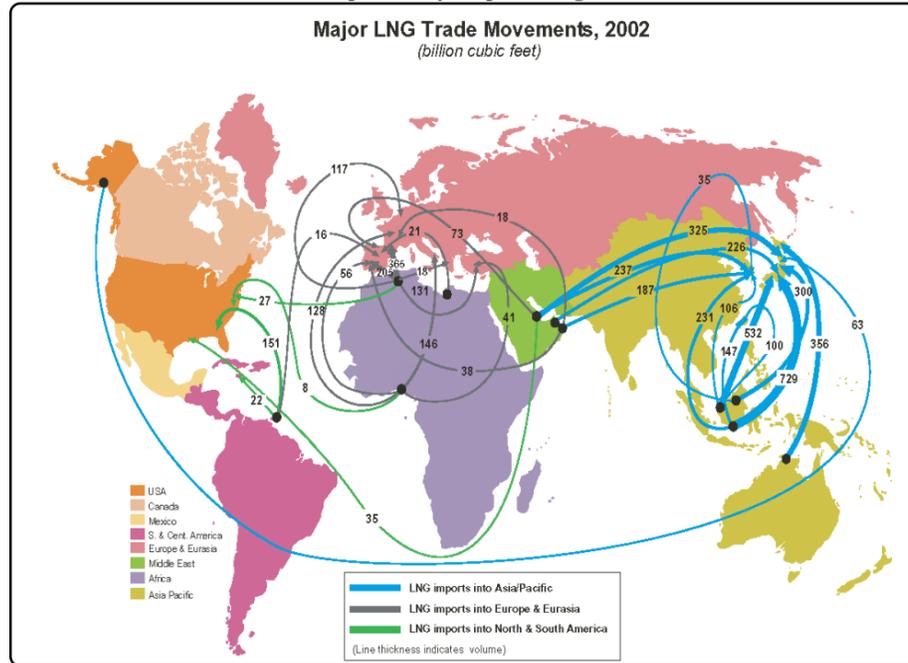
A 30-inch diameter pipeline that would be about 25 miles long is proposed to connect the FSRU to the existing Iroquois pipeline system via a subsea interconnect, avoiding any shore impacts. We have chosen to pursue an offshore terminal instead of an onshore terminal for two principle reasons. First, we believe there are no onshore sites in the region that allow us to maximize the use of existing infrastructure to directly deliver natural gas to consumers, while minimizing interference with existing local priorities, including land use, commercial and recreational interests and environmental protection. Second, we believe that an offshore terminal, located at least nine miles from shore would not only protect the views of those who overlook the Sound, but also provide an additional safety buffer that potential onshore sites could not easily provide.

Brief History of LNG

Natural gas liquefaction dates back to the 19th century when the first practical compression and refrigeration machine was built in Munich, Germany, in 1873. Although the first LNG plant began operation in 1917, in West Virginia, significant commercialization did not get underway before 1941, when the first commercial liquefaction plant was built in Cleveland, Ohio. Then in January 1959, the world's first LNG tanker, a converted World War II liberty freighter, carried an LNG cargo from Lake Charles, Louisiana to Canvey Island, United Kingdom. This event demonstrated that large quantities of liquefied natural gas could be transported safely across the ocean.

After LNG began to gain a foothold in the U.K., new import terminals were constructed throughout the Pacific and Atlantic Basins and the U.S. to take advantage of the world's abundant natural gas reserves. Between 1970 and 1980, four import terminals were built in the U.S. Since the late 1970s, the desire to access worldwide reserves of natural gas and the continued demand for natural gas in consuming regions without domestic reserves continued to drive LNG growth throughout the world. In 2002, 12 exporting countries shipped approximately 5.4 Tcf of natural gas to

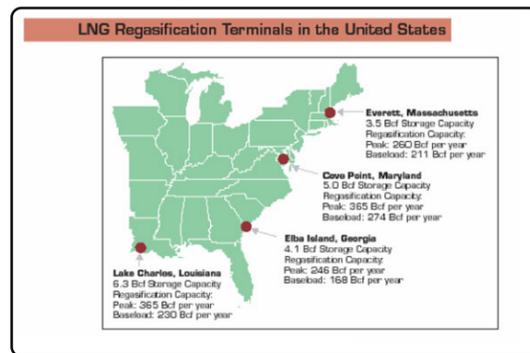
LNG is transported by ships throughout the world.



Notes: The map includes flows greater than 5 Bcf for imports into the United States, and flows greater than 15 Bcf for imports all other Countries.

Source: **Imports to the United States and imports to Japan and Mexico from the United States:** Energy Information Administration. *Natural Gas Monthly* [2003]. **All Other Countries:** Organization for Economic Cooperation and Development, International Energy Agency, Natural Gas Information 2003 [with 2002 data].

Four LNG import facilities are currently in operation in the U.S.



Source: Energy Information Administration

12 importing countries. This growth was initially slow in the U.S. due to the availability of affordable and accessible domestic supplies. Today, however, declining domestic gas supplies, higher natural gas prices and lower LNG production costs have resulted in a renewed U.S. interest in importing LNG.

Bringing LNG into Broadwater

LNG carriers would transport LNG from export terminals around the world to the Broadwater FSRU. Carriers would

LNG carriers would dock at the proposed Floating Storage and Regasification Unit (FSRU) and offload the LNG as depicted in this artist's rendering.



offload their cargo into the FSRU about two to three times per week.

During the voyage, the incoming LNG carrier would keep authorities advised of arrival time to ensure all parties involved are fully prepared. Prior to entering the Long Island Sound, a local ship pilot would board the carrier. After obtaining U.S. Coast Guard permission to proceed, the LNG carrier would enter the Sound from the east, through an area known as "The Race." From The Race to the Broadwater location, the LNG carrier would follow the typical track taken by other large commercial traffic. Tugs would be secured to assist with the berthing operation and remain in attendance while the LNG carrier is berthed.

The U.S. Coast Guard will designate a safety zone around the LNG carriers and the FSRU for the safety of other vessel traffic. The U.S. Coast Guard will determine this safety zone after careful studies of potential risks related to commercial shipping and recreational boating in the Sound. Based on the safety zone established for the LNG terminal at Cove Point in Maryland, we expect that the Broadwater safety zone would potentially extend 500 yards from the FSRU and the LNG carrier on all sides.

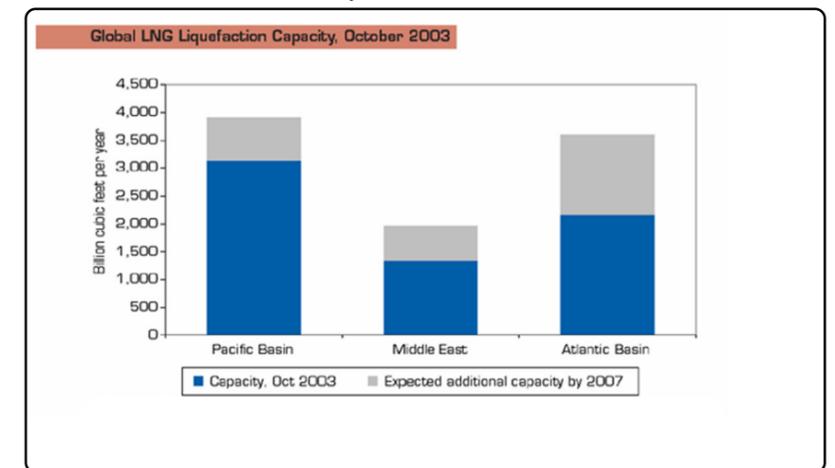
The total area covered by the safety zone around the FSRU is expected to be roughly one square mile.

Once moored to the FSRU, the cargo would be transferred through cryogenic loading arms which operate in a similar manner to those seen at conventional oil docks but are also equipped with automatic shutdown systems and emergency release capability to prevent the spillage of LNG. The transfer of cargo would take place only after extensive safety checks have been completed by the FSRU and LNG carrier, including verification of the correct operation of cargo systems and monitoring and shutdown equipment. It would take approximately 12 to 15 hours to transfer the LNG from the carrier to the FSRU's

storage tanks. Following the transfer, the LNG carrier would depart with tug assistance, in a manner similar to its arrival. During both arrival and departure, constant radio communication would be maintained between the FSRU, the LNG carrier, the tug boats and the U.S. Coast Guard.

The regasification of the natural gas would be under the control of the Broadwater operations manager. All processes would be fully automated, monitored, and controlled, and the regasification from LNG to natural gas in its gaseous form would be performed on a continuous basis.

LNG is widely traded around the world.



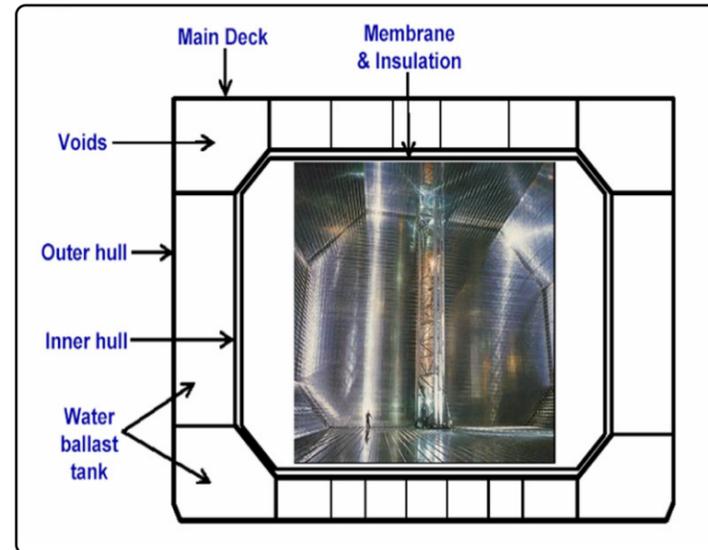
Data from IEA 2003 *Natural Gas Information*, and updated based on trade press reports as assembled by the Gas Technology Institute.

Storage and Regasification Onboard the FSRU

The Broadwater FSRU is designed to have an onboard LNG storage capacity of up to 350,000 cubic meters. That equates to approximately 8 billion cubic feet of natural gas. The project would send out approximately 1 billion cubic feet of natural gas each day into the existing pipeline network. To understand this volume of natural gas, Connecticut and New York consumed close to 1,400 Bcf in 2000. This works out to an average of 3.8 Bcf per day – an amount that continues to grow and does not reflect peak demands during particularly hot or cold weather days.

The LNG would be stored onboard the double-hulled FSRU in specially designed storage tanks using membrane technology. These tanks are supported by the FSRU's inner hull and built with special alloy materials and laminates. These materials are designed to withstand the extreme cold temperatures of the LNG.

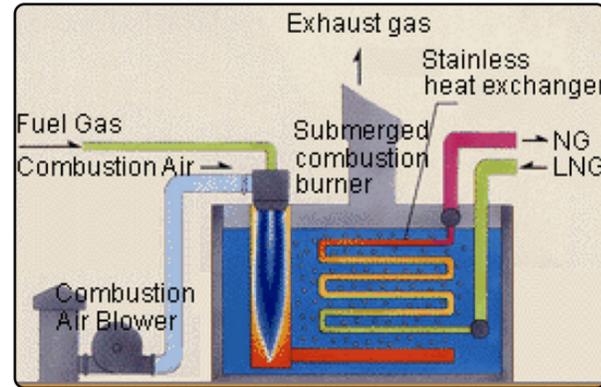
The LNG would be stored within a double-hulled containment system.



LNG is warmed allowing it to vaporize back into gaseous form (regasification). There are a variety of methods to regasify LNG. For Broadwater, we have chosen Submerged Combustion Vaporization (SCV). In this process, the LNG is passed in tubes through a water bath that is heated by burning natural gas. This water is contained in a closed loop system. (The primary alternative to SCVs would be the intake and discharge of large volumes of seawater to warm the LNG. Due to the relatively cool water

temperature in the Sound, this is not a viable option.) Once the LNG has been converted back into gaseous form, it would be sent out into the existing Iroquois pipeline through the proposed connecting pipeline.

Broadwater proposes to use a Submerged Combustion Vaporization System, which is depicted in this schematic.



Constructing the FSRU: Building on Proven Technology

The FSRU is an expanded application for floating production vessels, which have been used in the oil industry since the 1970s. A floating offshore facility similar to the FSRU is the floating production, storage, and offloading (FPSO) unit, which is used to produce, process and store hydrocarbon products offshore. FPSOs are employed around the world and have a proven track record of operation for more than 25 years. Currently, there are approximately 50 FPSOs in operation throughout the world, some of which operate continuously in even the most severe weather conditions.

The FSRU would be approximately 1,200 feet long and 180 feet wide, with a deck that would rise between 75 and 100 feet above the water line.

The FSRU would be about the same length and width as the Queen Mary II cruise ship but would not be as tall.

The proposed Broadwater FSRU would be constructed at a shipyard, towed to a site in the Sound and attached to a yoke mooring system, which would be supported by a tower structure. The mooring system base on the seafloor would cover an area of about 7,000-square feet, slightly larger than the size of a basketball court. The FSRU would

pivot around the mooring tower. The yoke mooring system would be designed to safely accommodate both the FSRU and an LNG carrier, even under severe weather conditions.

Broadwater proposes to use a yoke mooring system, such as this one, to secure the terminal in the Sound.



Pipeline Construction

As mentioned earlier, regasified natural gas would be piped from the FSRU to the existing Iroquois pipeline through a connecting pipeline that would be approximately 25 miles long. The concrete-coated, 30-inch-diameter Broadwater pipeline would be installed beneath the seabed using a trenching operation optimized for the location and type of seafloor soils encountered along the route. The pipeline would be welded and inspected before being placed on the seabed by a

The Broadwater pipeline would be installed beneath the seabed using a trenching operation optimized for the location and type of seafloor soils encountered.



laybarge. Depending on the trenching method used, the pipe would be either laid directly into a trench (pre-lay trenching) or would be placed on the seabed and then lowered below it (post-lay trenching). After the pipe is lowered, the trench would be either backfilled mechanically with the original materials displaced during trenching or allowed to backfill through natural sedimentation. In some locations along the Broadwater pipeline, for example near the FSRU mooring tower, additional protection may be placed over the pipeline such as concrete matting or armour stone.

Physical surveys would be conducted before, during and after construction. Initial surveys would map the project area in Long Island Sound and ensure that the pipeline route avoids obstructions such as shipwrecks, rock outcrops and large boulders. The surveys also would locate existing subsea utilities to be crossed by the pipeline and obtain technical information about the seabed soils and environment

required for detailed design of the facilities. Surveys conducted during and after construction would ensure that the pipeline is installed in accordance with the specified design and would provide data on the final location of the pipeline for as-built records and final mapping.

Operations at the End of the FSRU's Life

When we build a project, we are mindful of what will happen at the end of the project's useful life. The economic lifespan of a facility such as Broadwater is at least 30 years.

FSRU technology, thanks to its inherent mobility, helps make the vessel removal process easier and environmentally safer. At the end of its effective purpose, the FSRU would be detached from its mooring and towed to a recycling yard where it would be dismantled. The mooring itself could be removed from the seafloor or, alternatively, it could be left in place and converted to an aid to navigation (e.g. a fixed marker).

The connecting pipeline would most likely be left in place so the seabed is not disturbed, and then cleaned, purged and capped.



Site Selection

3

Site Selection: A Multi-Phased, Collaborative Process

Confirming a suitable site for this project is one of the most important steps we will undertake with stakeholders. The process includes a detailed analysis of many different criteria as well as significant consultation with commercial and recreational fishermen and lobstermen, boaters, residents, community groups, energy suppliers and federal, state and local agencies.

We have conducted significant engineering and environmental analyses that form the basis of our proposed site and evaluation process. The next step is to gather additional information from stakeholders to confirm the final location.

Visual Impact

One reason to locate Broadwater offshore is the desire to avoid visual impacts associated with an energy facility. Factors that contribute to the overall visual impact of the proposed facility are its size, its proximity to viewers, and the number of people that see the facility.

The Broadwater FSRU would be about 1,200 feet long and 180 feet wide, with a basic hull design similar to a large ocean-going ship. The FSRU is roughly as long as the cruise ship Queen Mary II, which is 1,132 feet long, or an aircraft carrier like the USS Enterprise, which is 1,101 feet long. The Figure to the right shows how the facility might appear to someone looking north across the Sound from the shore of Long Island, at a distance of approximately 9 miles. This image represents the view on a clear day. On hazy or rainy days, the facility would be difficult or impossible to see from this point.

Site Selection – The Process to Date

The site selection process was initiated by recognizing the vital need for additional natural gas supplies to meet the growing demands in the New York and Connecticut areas. To meet this need, we looked at ways to bring additional gas supplies to the region, such as traditional pipelines and LNG carriers that could offload supplies directly through an LNG terminal.

Based on this initial analysis, we determined that given increasingly limited pipeline capacity and the inability of traditional North American supplies of natural gas to keep pace with growing demand, LNG imports represent the most reliable and effective way to diversify the region’s natural gas supplies. The LNG could be offloaded at an LNG import terminal and fed directly into the existing Iroquois pipeline that runs under the Long Island Sound and connects to both Connecticut and New York.

Our next step was to evaluate various onshore and offshore locations as potential sites for an LNG import terminal. Considering the density of activity and population around existing ports onshore as well as potential environmental impacts and safety requirements, we determined that an offshore location, while a more expensive option, offered significant benefits over an onshore site.

Simulated photo depicting the FSRU about nine miles from the nearest New York shoreline.





After concluding that offshore was a better choice, we evaluated different types of offshore LNG terminals. Among the alternatives, the Floating Storage and Regasification Unit (FSRU) was chosen as the most appropriate. As compared to the other types of terminals described below, the FSRU minimizes impact on the floor of the Sound, ensures a reliable and secure supply of natural gas through abundant storage capacity, and can be efficiently removed at the end of its effective purpose.

Another compelling reason to locate Broadwater offshore is a potential concern of stakeholders over energy facilities built adjacent to their properties. With our location, 9 to 11 miles offshore, the Broadwater FSRU would appear very small from either coastline, and would tend to blend into the sea, sky, and surroundings on all but the clearest days.

At night, the lights of the Broadwater FSRU would be kept at the minimum levels required for safe operation of both the FSRU and any boats that may be in the area. The lighting also would be directed generally towards working areas. For these reasons, and because the facility is so far off shore, we believe that Broadwater would not degrade the nighttime seascape or star-scape of the Sound.

Defining a Preferred Zone

At this point, our analysis had led us to the following conclusions:

1. Forecasted demand for additional natural gas supplies and the ability to meet this demand in the region has reached a critical level;
2. LNG is the best way to diversify supply and meet this need;
3. An offshore terminal is preferable to an onshore terminal to serve New York and Connecticut; and
4. The FSRU technology is the most suitable option based on the unique physical characteristics of this region.

With these conclusions in mind, we began the process of narrowing down the areas where an FSRU could be sited offshore in the region. We began by examining a large area, including the Block Island Sound, the Atlantic Ocean and Long Island Sound.

To narrow the list of locations, we evaluated potential sites against a broad range of criteria, including reliability and safety, environmental impact, consistency with existing recreational and commercial activities, and engineering requirements, such as pipeline length and water depth.

Reliability and Safety

The areas of Block Island Sound and the open Atlantic Ocean were eliminated because water and weather conditions preclude the ability to consistently berth LNG carriers. Existing technologies require LNG carriers to berth in a conventional side-by-side manner to offload their cargo. Weather conditions in Block Island Sound and the open Atlantic Ocean can result in significant periods, during which side-by-side docking could be impossible, resulting in an unreliable gas supply. (Additional criteria that eliminated consideration of these areas are described under the environmental criterion below.)

An important safety consideration is distance from populated areas. By locating the terminal far from shore, we have enhanced the safety buffer of the proposed facility in the region.

Environmental Impact

Along with safety, potential environmental impacts of the facility were carefully considered. At first it might seem that an offshore location would have more environmental impacts than an onshore site; however, we believe this is not the case in Long Island Sound. An onshore terminal would require significant land disturbance, including a lengthy jetty across coastal areas as well as dredging in some cases.

That being said, a key consideration of the project is impact on the marine resources and organisms living on the bottom of Long Island Sound. The FSRU mooring tower would have a small seafloor footprint – about the size of a basketball court.

The length of the connecting pipeline to the existing Iroquois pipeline is another factor. While impacts from pipeline installation are temporary, we still think it is important to minimize, as much as possible, the length of the pipeline from the terminal to the existing Iroquois pipeline.

If the length of the Broadwater pipeline were to exceed 40 miles, the ability to efficiently deliver natural gas to market would be impaired and would require the addition of an intermediate offshore platform along the route of the pipeline (to house a compressor station to boost the pressure in the pipe). For this reason (i.e. to avoid additional facilities in Long Island Sound), we concluded that the terminal should not be more than about 40 miles from a connection with the Iroquois pipeline and that sites



Choosing Among Offshore Technologies

In the LNG business, three primary options are available for offshore import facilities: a Floating Storage Regasification Unit or FSRU, a “gravity based structure” or GBS, and a “shuttle regasification vessel” or SRV.

Floating Storage Regasification Unit

The FSRU technology is based on Floating Production, Storage and Offloading (FPSO) units, which are used around the world to produce, treat and store hydrocarbon products. The FSRU represents a modification of this type of facility. An FSRU consists of a floating vessel that is secured offshore. The vessel has full storage and re-gasification capabilities. FSRUs are largely based on existing LNG carrier designs and are roughly the same size.

Gravity Based Structure

The GBS approach is to build a large concrete structure that contains storage tanks. The structure is usually in 60 feet of water or less and extends several hundred yards lengthwise and in width. The GBS would be constructed in one or two sections at a graving yard, floated out to the site where ballast is added to land the structure on the seabed. For Broadwater, this type of facility was not chosen because it would have to be closer to shore, and the large concrete structure would have a far greater footprint on the seabed.

Shuttle Regasification Vessel

The SRV approach is to use specially designed LNG vessels that are part LNG tanker and part FSRU. The SRV approaches the specified area and instead of docking with an FSRU or GBS, it transfers its cargo directly into the natural gas pipeline system. For this to work, the regasification equipment is built into each LNG vessel. SRV’s transport less LNG per trip and do not provide for storage. Each ship offloads—ideally while another ship is waiting behind it—and leaves so that the next can offload. This continuous operation is important; otherwise, there will be large fluctuations in the amount of gas entering the pipeline network. This approach was not selected for several reasons:

- The SRV approach would require more ships and more frequent offloading, which is not the best solution to meet the region’s natural gas needs while minimizing adverse impacts on current shipping activities.
- Adequate water depth is not available in the Sound for this technology. In order to serve the New York and Connecticut region, it would have to be sited in the Atlantic, where there is too much potential for downtime in the winter.

The FSRU technology was chosen because it offers the following benefits:

- The FSRU requires significantly less bottom area for mooring purposes than the GBS.
- The GBS structure would have a building-like appearance with a greater visual impact. The FSRU provides a ship-like appearance that is more consistent with the current visual canvass within Long Island Sound.
- FSRUs ensure a continuous supply of natural gas to the region versus a more intermittent supply from SRVs.
- SRVs have limited processing capacity to ensure gas quality. The FSRU has greater processing capacity and storage capability to blend shipments, if necessary, to ensure that the gas is at the appropriate heating value before going into the Iroquois pipeline.
- The SRV system requires the continued presence of an LNG carrier for storage. The lack of LNG storage is, in our view, incompatible with the need to ensure supply reliability for the region.



closer to the connection would be preferable from an environmental and operational perspective. This further supported our conclusion to eliminate the Block Island Sound and the Atlantic Ocean from consideration given distance to a connection with the Iroquois pipeline.

Another environmental consideration is impact on shellfish and finfish in the Sound. By locating at least nine miles from the coastlines of the Sound, the project avoids impacts to coastal shellfish populations.

Consistency with Recreational and Commercial Activities

The Sound is home to many different types of users. Our objective is to minimize the disruption of marine activities. To understand potential disruptions to existing commercial and recreational fishermen, we evaluated available trawl and biomass data during the FSRU siting process. While empirical data is limited, we also considered the volume of recreational boat traffic as well as ferry traffic that transit the Sound throughout the year, in order to exclude areas where the project could come into conflict with these activities.

As far as shipping activities are concerned, we determined where major shipping lanes existed and established a one-half nautical mile buffer from these lanes. This is consistent with our expectations of the area the U.S. Coast Guard will require around the facility as a safety precaution.

Technical and Commercial Considerations

Natural gas will flow from the terminal through the Iroquois pipeline to both New York and Connecticut

users. However, we expect that over the life of the project more gas will flow south to the New York side of the Sound. This will allow more natural gas supplies flowing from New England to stay in Connecticut and more of the LNG supply to reach markets in New York - a balanced approach to serving the market. As a result, there arise some commercial and technical reasons for locating the FSRU and the connecting pipeline on the southern side of the Sound.

Another technical consideration is water depth. Engineering specifications require that the depth of water be at least 66 feet to moor the FSRU. As a result, areas that were shallower than 66 feet were eliminated from further consideration.

Based on the analysis described in this section, we have identified a suitable location for the Broadwater FSRU near the center of the Sound, in New York State waters, about 9 miles from the New York shore and 11 miles from the Connecticut shore. In approximately 90 feet of water, this proposed site is approximately 25 miles from the existing Iroquois pipeline, which currently brings natural gas from northern New York, through Connecticut, to the New York City region.

The next step in the Broadwater site selection process is to present our proposed site and concept to stakeholders. We are seeking information and feedback from you regarding our process and conclusions. We want to ensure that all factors have been considered and that the proposed site is, in fact, the most suitable location within the Sound for this project. Your feedback will be important for the more detailed Environmental Impact Statement (EIS) that is a key requirement of the regulatory process.

The proposed area is within New York waters about nine miles from the closest New York shoreline.



Visual Study: New York and Connecticut

The photographs below compare the 'before' and 'after' views from the New York and Connecticut shorelines. Computer-generated images of the FSRU with an LNG carrier docked alongside have been inserted into the photos on the right, at the approximate location of the proposed site. Additional images are available to view on the Broadwater website at www.broadwaterenergy.com.

View toward Connecticut from the Long Island shoreline at Roanoke Beach.



Before



After

View toward Long Island from the Connecticut shoreline at Sachem Head.



Before



After

4

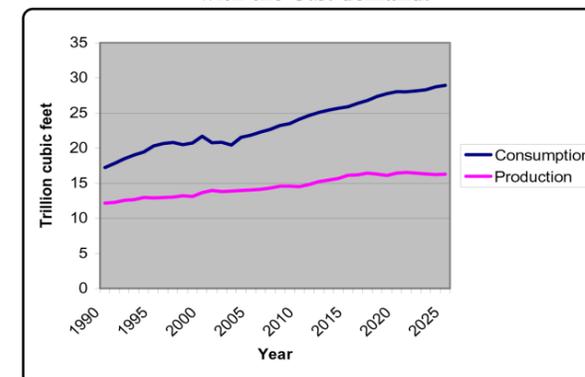
Benefits

Benefits of Broadwater

Broadwater is only a part of the long-term solution to meet regional energy needs. It is, however, an important step to improve supply reliability and diversity, stabilize prices, and advance environmental goals while continuing to grow the economy. Following are some specific ways we believe Broadwater could benefit the region.

Meet the Region's Natural Gas Demands and Enhance Energy Reliability and Security. Federal and state studies recognize that new supplies of natural gas are vital to meet the growing needs of residential, commercial and industrial consumers, to avoid future shortages and to allow the economy to grow. In order to meet these goals, consumers must have access to a reliable and secure source of natural gas. By adding another source of natural gas to the current supply mix, the region will diversify its supply to meet forecasted demand. The region also will be less dependent on natural gas supplies that must travel thousands of miles across multiple consuming regions through pipelines that are already filled almost to capacity.

Domestic supplies of natural gas are not keeping pace with the U.S. demand.



Source: Department of Energy, Energy Information Agency's "Annual Energy Outlook 2004"

As the New England Independent System Operator (ISO) noted in its January 2004 Interim Cold Snap Report, all major pipelines in New England were at or over design capability during the month of January when the weather became particularly cold. It also noted that additional demand without increased supply at strategic load points will increase the probability that markets will go unserved.

The same conclusions apply to New York.

Broadwater would provide much needed supply where it is needed most, thereby increasing the reliability of the region's natural gas supply and better ensuring the demands of consumers are met.

"There are economic and environmental advantages for allowing the construction of new LNG facilities as well as the intrastate transportation of LNG over new routes. Allowing LNG to compete for markets with other energy resources can have positive economic and environmental consequences for New York constituencies."
 - New York State Energy Planning Board, November 1998

Help New York and Connecticut Achieve Air Quality Goals. Natural gas is the cleanest burning fossil fuel. Natural gas emissions of sulfur dioxide (SO₂), a key precursor of acid rain, are almost zero. Similarly, emissions of particulates and nitrogen oxides (NO_x), a key precursor of smog, are significantly lower than those of coal or fuel oil.

Natural gas combustion significantly reduces pollutants compared to other common fossil fuels

	Particulates	SO ₂	NO _x
Coal	2,744	2,591	457
Oil	84	1,122	448
Natural Gas	7	1	92

Note: These estimated emissions are based on total emissions divided by total electrical power production for that fuel source, based on data obtained from EIA's Annual Energy Review. Numbers in pounds per billion Btu of energy produced.

The New York and Connecticut State Energy Plans and the Northeast States' Regional Greenhouse Gas Initiative recognize the importance of natural gas in a diverse set of energy sources to help achieve clean air and greenhouse gas emission reduction goals.

Governor Pataki's Acid Rain Deposition Program specifically targets emissions of sulfur dioxide (SO₂) and nitrogen oxides (NO_x), which have been identified as primary contributors to the formation of acid rain. The regulations would require electric generators in New York State to reduce SO₂ emissions an additional 50 percent below levels allowed under the federal Clean Air Act's Acid Rain Program requirements. A more reliable and abundant supply of natural gas would help facilitate the fuel conversion needed to achieve emission reductions.



Create a Bridge to a Renewable Energy Future.

Natural gas also plays a vital role in providing a bridge from less efficient and less clean fuels to a more diverse energy future that includes greater use of renewable energy and, one day, hydrogen fuel cells. An abundant and reliable source of natural gas provides an opportunity for electricity providers to build new or convert to natural gas power generation. It also minimizes the necessity to use less clean fuels in plants that have the capacity to burn more than one type of fuel (dual-fueled). Natural gas also has the potential to produce the large amounts of hydrogen needed to move toward the “hydrogen economy.” Hydrogen fuel cells are seen by many as the energy carrier of the future, providing an important fuel for power, heat and transportation.

Minimize Onshore Development. By locating offshore, Broadwater connects to the existing Iroquois natural gas pipeline in the Sound, avoids onshore development and does not require a pipeline shore crossing. Broadwater’s solution avoids sensitive areas found in coastal habitats and beaches as well as construction activities in populated areas. Recognizing the lack of open space on both shorelines and the need to be consistent with Coastal Zone Management Plans and state energy and environmental policies in both New York and Connecticut, Broadwater proposes an area and a facility it believes is consistent with these priorities.

Provide Economic Benefits for the Region. Broadwater has estimated that it would directly contribute approximately half a billion dollars to local communities over the 30+ years of the project’s life. This money would come from taxes, salaries, operational expenses, and a social investment program.

Taxation

Property taxes in particular would benefit the host jurisdictions directly. The host jurisdictions would include those towns whose jurisdictional boundaries encompass the waters in which the Broadwater pipeline and FSRU would operate. These host jurisdictions would gain additional revenue, but the project would

generate little demand for town services. Thus, projected tax payments could go directly toward upgrading local services such as schools, roads, and other services to benefit town residents.

Job-Related Benefits

The Broadwater FSRU would be built in a shipyard with experience constructing these types of facilities, and then towed to its secured mooring point in the Sound. U.S.-based shipyards would be invited to bid on the construction of the FSRU, as would other qualified shipyards around the world.

During operation, Broadwater would create 30 to 60 new, permanent jobs for skilled workers. We also anticipate new indirect job creation within the businesses that would support the development and operation of the facility. These include planning and consulting, construction and connection of the mooring points, boat and tug piloting, hospitality and food, and other local business services.

Price Stability

Both New York and Connecticut suffer some of the highest and most volatile natural gas prices in the country. As mentioned earlier, this is due in part to capacity constraints bringing the gas to consumers and the demand for natural gas, which is growing faster than traditional supplies can match. The supply from Broadwater would help meet forecasted natural gas demand growth, diversify the available supply, and help ease natural gas price spikes.

“Energy price volatility and supply disruptions have the potential to undermine economic growth, erode public confidence, and negatively affect the quality of life of all Americans.”
-The New York State Energy Resource and Development Authority, 2004 Three Year Outlook



5

Potential Impacts



Potential Project Impacts

We recognize that we have proposed to locate the Broadwater project in an area of aesthetic, environmental and economic value to many people. Broadwater can be designed, constructed and operated in a way that is consistent with these values and achieves energy reliability and security while advancing the region's environmental and economic goals.

A key Broadwater objective is to avoid or minimize adverse environmental impacts. Through the regulatory process and through our consultation with stakeholders, we will find solutions to ensure that adverse impacts are avoided or minimized and that appropriate mitigation measures are in place throughout the project's life.

After permitting, the life cycle of the proposed FSRU and associated pipeline consists of three phases: construction, operation, and, at the end of its 30+ year effective purpose, vessel removal. Below, we provide a preliminary list of impacts during each of these phases, and describe some of the approaches that could be taken to avoid, minimize or mitigate these impacts.

Potential Impacts During Construction

Because the FSRU would be towed to its mooring point within the Sound from the shipyard where it would be constructed, the primary construction-related impacts from the FSRU itself in Long Island Sound would be temporary and would come from the installation of the mooring system on the seafloor and the connecting pipeline.

Potential Impacts During Operation

During the operational phase, the greatest potential for impacts shifts from the pipeline to operation of the FSRU. The pipeline would be buried beneath the seafloor and the FSRU would be floating near the middle of the Sound, continuously storing and warming LNG to natural gas before sending it through the pipeline to consumers throughout the region. A thorough inventory and analysis of potential impacts is currently being completed by specialized consultants. Broadwater stakeholder input will be essential to completing this analysis and determining the most appropriate actions to avoid or reduce impacts.

Potential Impacts During Vessel Removal

Compared to onshore LNG terminals and offshore terminals that have a larger and more permanent footprint on the seafloor, the FSRU design enables relative ease of removal. When Broadwater reaches the end of its useful life, which is expected to last at least 30 years, the FSRU can be detached from its mooring, towed to a recycling yard, and dismantled. The mooring itself could be removed from the seafloor or, alternatively, it could be left in place and converted to an aid to navigation (e.g., a fixed marker).

Throughout all phases, our commitment is to involve concerned individuals and local users of the Sound to avoid and minimize impacts and disruptions through the careful selection of appropriate construction, operational and vessel removal techniques and procedures. As we continue with the design of this project, the input and active involvement of stakeholders is essential to identify possible impacts and the best solutions for avoidance or minimization.

Social Investment Program

Our goal is to ensure that the Long Island Sound region is healthier and safer as a result of Broadwater's operations. One of the ways we plan to meet this goal is by establishing a social investment program that would be used to support Long Island Sound habitat enhancement.

The amount to be contributed, as well as the mechanism for disbursements, would be determined through consultation with stakeholders. Stakeholder engagement will also help us to identify and designate appropriate stewards for the program. The stewards would manage the program and identify suitable projects to benefit the Long Island Sound and its environment and communities.

The projects will be selected in consultation with stakeholders to ensure the maximum benefit for the Long Island Sound. Projects could include:

- Marine habitat research
- Habitat restoration initiatives
- Educational programs





Potential Impact	Background/description of Activity or Impact	Possible Actions to Avoid/Reduce/Mitigate Impacts
Marine sediments brought into suspension while installing FSRU mooring system	The mooring system, which would secure the FSRU in place, would occupy a space on the seabed roughly the size of a basketball court. Sediment suspension will be temporary and localized and should not result in sediment disturbance outside the siting area.	Additional actions are not expected to be necessary, but will be considered in the Environmental Report.
Sediment resuspension/redeposition during pipeline installation	The Broadwater pipeline would extend westward from the FSRU to the existing Iroquois pipeline. From the present proposed mooring location, Broadwater would require an approximately 25-mile pipeline to connect the FSRU with the Iroquois pipeline. This would result in temporary local impacts to the bottom of the Sound as well as to some local activities as the pipeline is installed. Offshore pipeline installation involves fabrication, placement, lowering, and backfilling (either naturally or mechanically) of the installed pipeline.	<ul style="list-style-type: none"> - Jetting or plowing, or a combination of the two techniques may be used for pipeline installation. The technique(s) ultimately employed will be determined based on the results of field investigations and discussions with regulatory agencies. - Environmental and seafloor data as well as discussions with agencies will determine whether the pipeline should be allowed to backfill naturally or be mechanically backfilled with the original seafloor material displaced during the lowering operation. - The pipeline will be installed so that it does not create a barrier across the seafloor.
Process water discharges from hydrostatic testing	Hydrostatic testing is a process to ensure that the pipe is resistant to leaks under pressure, prior to the pipeline being put into service.	To avoid impacts to water quality, we anticipate using water from the Sound for the testing, adding a biocide to reduce algal growth if required. After hydrostatic testing is complete the water will be tested and, if required, treated before discharging back into the Sound.
Disturbance to marine species during pipeline installation	From May through November each year, the Sound may be home to threatened or endangered marine species. Marine mammals also spend time in the Sound during the year.	To minimize impacts on these species, as well as the marine ecosystem in general, construction windows for the various construction activities will be established based on discussion with regulatory agencies. As required, trained marine species monitors will be available during construction to identify the presence of identified species of concern. Should a sighting occur, the appropriate actions will be used to minimize potential impacts.
Disturbance of Essential Fish Habitat (EFH) during pipeline installation	Potential impacts may include: <ul style="list-style-type: none"> - Temporary disturbance and displacement of fish species - Disturbance of the seabed and associated benthic communities - Short-term loss of food items to some EFH-managed species - Sediment transport and re-deposition - Injury and/or mortality to some EFH-managed species' eggs and larvae 	Broadwater's goal is to ensure EFH is as healthy after construction as it is before. Broadwater has been designed to avoid shore crossings so that nearshore habitats and shellfish beds are not affected. EFH areas and best ways to minimize adverse impacts to these areas will be identified during preparation of the Environmental Report.
Interruption to recreational and commercial fishing activities during installation	Installation of the FSRU mooring system and the project pipeline may affect some commercial and recreational fishing activities. Recognizing the shared use of the Sound among commercial and recreational interests, we are carefully evaluating survey and construction procedures to minimize disruption to existing activities.	<ul style="list-style-type: none"> - Before surveys or construction, local fishing groups will be notified of the boundaries of the proposed activity, the size of the vessels, and the schedule. Local commercial fishermen will be invited to assist the project to ensure that activities do not damage equipment found in the area. - Surveys and construction activities will be completed during specified timing windows designated by authorities, to avoid or minimize impacts to the Sound fisheries and habitat.
Noise	Tugboats, cranes and various other pieces of equipment used in the installation and construction of the FSRU mooring system and the pipeline will generate noise. The primary sources of noise during terminal operations will come from the terminal's gas turbines and the use of tugboats when an LNG carrier is present.	Due to its distance from shore, Broadwater's construction noise should be consistent with existing noise levels that result from normal boating operations currently in the Sound. As with noise from the many boats that use the Sound, this noise should be almost indistinguishable from normal seashore noise outside the project location.

Potential Impact	Background/description of Activity or Impact	Possible Actions to Avoid/Reduce/Mitigate Impacts
Disturbance of cultural resources	Culturally significant sites may be located within the Long Island Sound.	An underwater archaeological study will be conducted in all areas affected by construction (e.g., FSRU anchoring supports, the pipeline trench line, and anchor-spread areas). Should any sites of historical significance be found within the proposed project area, we will assess alternate pipeline or mooring locations to avoid these sites.
Water quality impacts	Process water discharges, including grey and black water discharges, can impact water quality due to contaminants that may be present in the discharged water.	To minimize the potential for water quality impacts during operation, Broadwater will: <ul style="list-style-type: none"> - Prepare and use storm water control, sewage disposal, spill prevention, and emergency response plans - Comply with all international shipping water quality requirements
Impacts to marine life from LNG spill	If an LNG spill occurred, there would be a negligible impact on wildlife and fisheries because the LNG would evaporate quickly. However, the LNG is extremely cold, so brief localized freezing of seawater could occur near the immediate area of the spill.	The project is being designed with many levels of spill prevention in place to ensure that an LNG spill does not occur. Because LNG evaporates, no clean up would be necessary.
Introduction of non-native species from LNG carriers	Because the FSRU is essentially a ship, it will require ballast water for its voyage to the proposed siting area.	<ul style="list-style-type: none"> - The FSRU will depart from the building yard with clean ballast. During the trip and prior to arrival at the final site, it will change out ballast by overflow. In deep water, just prior to arrival in Long Island Sound, the FSRU will undergo a final ballast change out to reduce the potential for transfer of non-native organisms. - During the operational phase, the FSRU will be localized in the Sound; exchange of ballast water should not introduce non-native species. - LNG carriers will not discharge ballast water in the Sound but will take in ballast water while unloading LNG to compensate for the decreased weight and to maintain stability.
Impacts to marine life from ballast water intake	Fish may become caught in the intake water as the FSRU and carrier take on ballast water.	Consistent with existing shipping practices in the Sound, the intake system will use screens to control ingress of debris and fish in the ballast system. The FSRU will ballast at a gradual rate and the intake will be designed to minimize ingress of fish
Visual and lighting impacts	Factors that contribute to the overall visual impact of the proposed facility are its size, its proximity to viewers, and the number of people who can see the facility from vantage points along the shoreline. Significant lighting can create light pollution, particularly at night. Additionally, light emissions could affect fish and some marine birds, which could be attracted by the light. Research conducted in the North Sea, off the coast of Scotland, assessed the effects of noise and light on migrating birds. The research concluded that noise does not affect sea birds or migrating songbirds offshore. However, deck lights may attract some birds, depending on species and migratory patterns. Other local marine birds may be attracted to some extent by the presence of an offshore facility.	Broadwater's offshore location helps to preserve the views of the Sound from the Long Island and Connecticut shorelines. At its proposed location nine to eleven miles from shore, the FSRU and carriers would be hardly visible, even on clear days, and would resemble a conventional ship or freighter from a distance. The visual profile of the FSRU will vary as it pivots around the mooring tower. Based on our current understanding of migratory bird patterns in the area, deck lighting should not have a significant impact because these birds need to land where there is abundant food available to nourish the birds during their migration. To ensure that impacts to people and birds are minimized, the lights of the FSRU will be kept at minimum levels required for safe operation of both the FSRU and any other vessel traffic that may be in the area. Cut off or directional lighting can be used to focus and direct light generally towards working areas. (See figure on following page)



Potential Impact	Background/description of Activity or Impact	Possible Actions to Avoid/Reduce/Mitigate Impacts
Air emissions	While Broadwater has the potential to help the region to reduce overall air emissions, the FSRU itself will generate some air emissions during operation in order to provide power for use on board the FSRU. Also, FSRU will burn natural gas to regasify the LNG and other auxiliary equipment. The amount of emissions produced will be subject to state and federal air regulations based on air quality standards.	During the design and consultation phases, Broadwater will identify emissions offsets to mitigate the impact resulting from operation of the FSRU. A detailed analysis and discussion of air quality emissions and offsets will be included in our application to the FERC.
Disruption to commercial and recreational fishermen and boaters	The FSRU and the LNG carriers could divert some activities in the Sound. A safety zone will be established by the U.S. Coast Guard around the FSRU and around the LNG carriers as they approach the terminal. Restrictions to marine traffic should be no more than 1 to 2 hours at any particular point in the Sound, two to three days per week. The safety zone around the FSRU will be permanent with the potential to impact commercial or recreational activities in an area occupying 1 square mile.	Broadwater will engage with marine users to fully understand their concerns and ensure that any disruption to activities is avoided or minimized. Impacts to commercial activities will be assessed on a case by case basis with those directly impacted in order to establish fair compensation.
Cumulative impacts	Cumulative impacts result when the effects of an action, such as construction and operation of Broadwater, are added to, or interact with other effects, such as the hypoxic (lack of dissolved oxygen) conditions in some areas of the Sound.	Broadwater will ensure consistency with the objectives of the Long Island Sound Study (LISS) and state coastal zone management programs.

Dimming night-time lights, such as this offshore platform in the North Sea has done, reduces impacts on birds.



Long Island Sound Study

The EPA and states of New York and Connecticut formed the Long Island Sound Study (LISS) in 1985 in response to concerns regarding the health of the Sound's ecosystem.

The LISS completed a Comprehensive Conservation and Management Plan (CCMP) in 1994 that identified six issues requiring special attention:

- Low dissolved oxygen (hypoxia)
- Toxic contamination
- Pathogen contamination
- Floatable debris
- Living resources and habitat
- Land use and development

The CCMP describes ongoing programs and lists commitments and recommendations for actions that specifically address the Sound's priority problems. The EPA, New York, and Connecticut recently signed the 2003 Long Island Sound Agreement. The Agreement builds on the goals of the 1994 CCMP by adding 30 new goals and targets to restore the Sound. A comparison of Broadwater's current design with the six CCMP issues follows.

Broadwater is committed to furthering the goals of the CCMP through a project design that, where possible, promotes the LISS objectives, and at a minimum, does not conflict with these objectives.

Hypoxia. Excessive discharges of wastewater with high nitrogen content such as treated sewage is a primary cause of hypoxia in the Sound. Broadwater would not discharge sewage into the Sound.

Toxic Substances. Based on studies conducted by the LISS, the primary sources of toxic substances entering the Sound come from industrial complexes along the major tributaries (Connecticut, Housatonic, Quinnipiac, and Thames Rivers), sewage treatment facilities, and urban runoff. Implementation of storm water management controls and spill prevention and countermeasure procedures would minimize the potential release of fuels or other lubricants into the Sound. Should an accidental release of LNG occur, there would be no water quality impacts since LNG does not dissolve in water, but

rather floats and would instead immediately return to its gaseous state when exposed to ambient temperatures.

Pathogens. Pathogens enter the Sound from untreated or inadequately treated human sewage and wild and domestic animal waste. Vessel sewage discharge has been identified as one of four pathogen sources warranting primary management actions under the CCMP. As part of the 2003 Long Island Sound Agreement, efforts are being made to designate all Sound embayments in New York as no-discharge areas for all vessels. This and other pathogen release management actions are focused in near shore areas where the introduction of pathogens has the greatest potential to adversely affect aquatic life and public health. Based on its offshore location, operation of the LNG terminal would have no effect on current or planned pathogen management activities. In addition, all vessels berthing at Broadwater will comply with the requirements of the International Convention on the Prevention of Pollution from Ships in order to prevent pollution by sewage discharge.

Floatable Debris. All waste generated at Broadwater would be properly disposed in accordance with state and Federal regulations, thereby preventing the release of floatable debris into the Sound. There would be no solid waste discharge into LIS from the FSRU or its vessels.

Living Resources and Habitat Management. Besides water pollution, destruction and degradation of habitat as well as over-harvesting from fishing are identified as the primary threats to living resources and their habitat in the Sound. The LISS's management activities to preserve and enhance living resources are focused in near shore areas and include protection and restoration of tidal wetlands, intertidal sand and mud flats, and submerged aquatic vegetation. Broadwater would not affect the living resources and habitat management activities, given the offshore placement of the terminal and pipeline.

Land Use and Development. The New York and Connecticut Coastal Management Programs are the primary tools for managing land use and development in and along the Sound. Broadwater's offshore location ensures that the project would not impact the coastline and would not compete for limited land along the Connecticut and Long Island shorelines.



6

Safety and Security

Safety and Security: Our First, and Most Important, Priority

The events of September 11, 2001 have refocused attention to the potential safety and security risks of all national infrastructure. Military installations, government establishments, and energy facilities including LNG terminals have come under greater focus than ever before. This increased attention does not mean these facilities are less safe. On the contrary, many of these facilities are more secure than ever.

LNG facilities are carefully regulated by multiple layers of state and federal oversight. This combined with good design, construction and operational procedures further reduce the risk of a potential incident. Consequently, LNG shipping and import terminals have achieved a high standard of safety performance throughout the world. LNG shipping has an excellent record reflecting 40 years of experience comprising more than 35,000 carrier voyages.

At the Broadwater facility, multiple safety systems would be in place to prevent any problems from escalating beyond the immediate area of the incident. Additionally, the facility's proposed location at least nine miles from the nearest shoreline, together with the protection of the U.S. Coast Guard and other emergency response resources, would ensure the safety of Long Island Sound communities.

Safety and security are among the most vital elements of our entire project. An unsafe facility is not a viable project for us or the region's residents. We will work with communities, as well as the federal, state and regional safety and security agencies, to plan, build and maintain a safe and secure source of energy in this region.

Potential Hazards of LNG

A significant amount of research has gone into understanding the chemistry and behavior of LNG and how to minimize safety risks. This understanding has led to the development of comprehensive safety and security codes and standards that regulate LNG facilities and carriers.

It is important to recall that LNG is natural gas in liquid form. Natural gas is the fuel widely used to heat homes

and cook food. LNG is not stored under pressure, but it is contained in closed systems, which are designed to prevent the introduction of oxygen from air, thereby preventing the development of hazardous gas/air mixtures. In fact the entire process of natural gas production, liquefaction, storage, transport, regasification and transport to consumers operates under the principle of excluding oxygen to prevent the development of flammable gases. Only at the consumer end point, such as a gas stove or boiler, is air mixed with the natural gas to support combustion.

Giuliani Group

Giuliani Group will undertake a year-long, in-depth analysis to identify vulnerabilities and risk mitigation measures that will help to ensure the safety and security of the FSRU and its environs.

The Giuliani Group team will include Chairman & CEO and former Mayor Rudolph W. Giuliani, as well as New York City's former Police Commissioner Bernard B. Kerik, former Commissioner of the Office of Emergency Management Richard Sheirer, and former Fire Commissioner Thomas Von Essen. In addition, Giuliani Group has retained SeaSecure LLC, one of the world's premier maritime security and risk assessment firms, to provide technical services.

Commenting on the engagement, Rudolph W. Giuliani said, "We have been retained to provide advice with regard to the security for Broadwater's proposed LNG facility. Additionally, we will make recommendations on the measures necessary to achieve state of the art security. This facility will provide an important additional energy supply to the region, with an emphasis on security."

All hydrocarbons are flammable and therefore hazardous if mishandled. Specific LNG hazards are described below.

Pool fires—Spilled LNG will vaporize quickly, and those portions of the generated cloud of natural gas could burn if mixed with the correct proportion of air and ignited by a spark, flame, or sufficiently hot surface. (Similar to other fuels, LNG itself does not burn.) The vapor will only burn if the concentration of gas-in-air is greater than 5% and less



than 15%. For mixtures less than 5% gas there is not enough fuel to support combustion; with a mixture of greater than 15%, there is not enough oxygen to support combustion.

When LNG is spilled it will spread and at the same time absorb heat from the surrounding and vaporize. The radiant heat effects from an ignited pool of LNG depend on the amount of flammable material and the supply of air to the fire. Small pool fires burn with a relatively clear flame. In the case of large pool fires, there is an inadequate amount of air to support complete combustion, resulting in soot and smoke generation. Therefore, smaller pool fires may give off more heat, relative to their size, than larger pool fires.

Flammable vapor clouds—If there is no spark or fire to ignite the gaseous natural gas, a vapor cloud will form. The clouds also can drift away from the source under the influence of the wind. Initially, because the gas is denser than air, the vapor clouds tend to hug the surface and move progressively downwind. As the cloud warms, the vapor becomes lighter than air, rising into the atmosphere and dispersing. The cloud would continuously dissipate as the natural gas is diluted with the surrounding air, but if the cloud were ignited by a spark or flame, portions of the cloud with a concentration of gas in air at 5% to 15% would burn. Due to the slow flame speed associated with combusting natural gas, in unconfined surroundings, an explosion would not occur and the fire would burn back to the source.

Rapid-phase transition— A rapid-phase transition could occur when LNG spills on water and vaporizes so quickly that the energy of the expanding gas cannot dissipate fast enough. Rapid-phase transitions vary between small “pops” to blasts large enough to damage lightweight structures. In the 1980s, Shell conducted experiments to understand the effects of rapid-phase transitions. A U.S. Department of Energy laboratory, and others, reviewed these experiments and concluded that the hazard zones of rapid-phase transitions would be local in nature and not nearly as large as with pool fires or flammable vapor clouds.

Safety Codes and Oversight

The codes and standards that form the basis of today’s safety and security regulations for LNG facilities and carriers are well established. Many of these codes and standards are based on the best practices and recommendations of expert associations in every aspect of LNG operations, including marine transport, facility design, construction and maintenance. For example, for LNG facility design,

standards apply to the steel used in construction, for valves, pumps, tanks, compressors, refrigeration piping, tank insulation, and fire fighting equipment. For LNG carriers, standards guide hull and cargo containment design, safety equipment, machinery systems, mooring equipment, LNG handling and ship/shore emergency shutdown systems. The key organizations involved in developing these standards include the Society of International Gas Tanker and Terminal Operations (SIGGTO), the International Maritime Organization, Class Societies, the National Fire Protection Association, the Gas Processors Association, the American Gas Association, the American National Standards Institute, the American Petroleum Institute, the American Society of Civil Engineers, the American Society of Mechanical Engineers, and the Gas Research Institute.

For Broadwater, federal and state regulatory agencies will be responsible for ensuring these standards are adhered to through the permitting process, during construction and installation as well as during the operational phase of the project. The Federal Energy Regulatory Commission (FERC) will be the lead agency responsible for coordinating the permitting process and ensuring the overall safety of Broadwater. The U.S. Coast Guard, which is specifically responsible for the safety of LNG vessel operations in U.S. waters, will oversee the safety of the FSRU and LNG carriers. The Transportation Security Administration within the Department of Homeland Security and the Office of Pipeline Safety within the U.S. Department of Transportation will oversee the security and safety of the pipeline.

Once the facility is built, the safety and security of day-to-day operations will be overseen by Broadwater-trained personnel as well as FERC and the U.S. Coast Guard. The U.S. Coast Guard will delineate a safety zone around the FSRU and will ensure procedures are in place to control the entry and movement of the LNG vessels within Long Island Sound to avoid interference with local ferry or other vessel traffic. The U.S. Coast Guard also will conduct clearance checks of all crewmembers and establish safety zones around the transiting carrier to protect other commercial or recreational boaters.



Safety History of LNG Carriers and Facilities

Commercial LNG shipments over the past 40 years (about 35,000 voyages) have been without any serious spill incidents. Our view of industry and insurance sources shows that there have been 30 LNG carrier safety incidents between 1959 and 2002. In all of these incidents, which included groundings and collisions, the cargo tanks did not rupture or leak. Of the 30 incidents, 12 involved small LNG spills that did not ignite, and two incidents involved small LNG spills that did ignite, causing small fires that were quickly extinguished. In the other 16 incidents there were no spills.

LNG facilities also have achieved decades of safe operations—many close to densely populated areas in Europe, Asia, and the United States. Accidents that have occurred at U.S. LNG plants have been attributed either to inadequately designed materials, or to circumstances that did not involve LNG. Nevertheless, the lessons learned from each accident resulted in additional safety measures that are applied across the industry to ensure that similar accidents are not repeated.

Some of the accidents, their causes and resulting safety actions are described below.

1944 Cleveland, Ohio – At the Cleveland peak-shaving plant, an improperly designed tank cracked and spilled its contents into the street and sewer system. The confined fumes ignited and the resulting explosion and fire killed 128 people. The tank was built with a steel alloy that had a low-nickel content, which made the alloy brittle when exposed to the extreme cold of LNG. Safety regulations since imposed ensure that metallurgy and designs meet safety standards that would prevent such a tank failure. There have been no similar tank failures in the past 60 years.

1973 Staten Island, New York – While repairing the mylar lining of an empty LNG storage tank, the lining ignited. The resulting fire and increase in pressure inside the tank caused the concrete dome on the tank to lift, dislodge and collapse killing 37 construction workers inside. After a full investigation, the NY City Fire Department concluded that this was a construction accident and not an LNG incident. While re-evaluating this incident in 1998, the New York State Planning Board concluded that current government regulations and industry operating practices would prevent this type of accident from happening again because the combustible construction materials are now prohibited.

1979 Cove Point, Maryland – LNG leaked through an inadequately tightened LNG pump electrical penetration seal, vaporized, passed through 200 feet of underground electrical conduit and entered a substation. A circuit breaker in the

substation ignited the mixture of gas and air, causing an explosion that killed one plant employee and seriously injured another. Although the Cove Point Terminal was designed and constructed in conformance with all appropriate regulations and codes, three major code changes were made as a result of this incident. Today, these changes are applicable industry-wide.

2004 Skikda, Algeria – A more recent accident took place at an LNG liquefaction plant (where gas is cooled into liquid prior to transportation). This accident resulted in a large fire that caused 27 deaths at the facility. A board of inquiry determined that a gas leak was the primary cause of the accident. A nearby boiler was the source of ignition which ignited the resultant vapor cloud in a confined space causing an explosion and fire. LNG import terminals do not require steam boilers. The only components common to both LNG liquefaction plants and import terminals are storage tanks and marine facilities supporting LNG carrier loading or unloading (e.g, pumps and piping). The investigation is still ongoing to determine the type of gas leak.

Multiple Levels of Safety

The Broadwater facility will have a proven LNG storage containment system, protectively located within the hull of the FSRU, as well as established operational procedures and many other safeguards to ensure safe and secure shipping, storage, and regasification.

The first level of safety for an LNG vessel or an FSRU is to protect the structural integrity of the vessel. To avoid collisions, sophisticated radar and positioning systems alert the crew to other traffic and hazards around the vessel. Distress systems and beacons automatically send out signals if the vessel security or safety is in jeopardy. Local ship pilots and tugs will control the ships to prevent groundings and ensure safe docking.

The second level of safety on-board LNG vessels, as well as the FSRU, is aimed at LNG containment. The storage tanks on membrane type LNG ships including the FSRU consist of primary and secondary barriers. The primary barrier is typically constructed of a special, high nickel-alloy stainless steel capable of withstanding the very low temperatures associated with LNG. The secondary barrier will contain any LNG which may leak past the primary membrane. LNG is transported in double-hulled vessels that typically carry between 125,000 cubic meters and



LNG and Pipeline Facilities in the U.S. are Highly Regulated

The following regulations from the U.S Code of Federal Regulations provide guidelines for the design, construction and operation of LNG facilities. These CFR's can be found at: <http://www.gpoaccess.gov/cfr/>

- 49CFR Part 193 Liquefied Natural Gas Facilities: Federal Safety Standards- This section covers siting requirements, design, construction, equipment, operations, maintenance, personnel qualifications and training, fire protection, and security.
- 33CFR Part 127 Waterfront Facilities Handling Liquefied Natural Gas and Liquefied Hazardous Gas - This federal regulation governs import and export LNG facilities or other waterfront facilities handling LNG. Its jurisdiction runs from the unloading arms to the first valve outside the LNG tank.
- NFPA 59A Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG) – This is an industry standard issued by the National Fire Protection Association (NFPA). 41 NFPA 59A covers general LNG facility considerations, process systems, stationary LNG storage containers, vaporization facilities, piping systems and components, instrumentation and electrical services, transfers of natural gas and refrigerants, fire protection, safety and security. It also mandates alternative requirements for vehicle fueling for industrial and commercial facilities using American Society of Mechanical Engineers (ASME) pressure vessel containers. This standard includes requirements for LNG facilities to withstand substantial earthquakes.

Regulations applicable to LNG ships include:

- 33 CFR 160.101 Ports and Waterways Safety: Control of Vessel and Facility Operations. This U.S. federal government regulation describes the authority exercised by District Commanders and Captains of the Ports to ensure the safety of vessels and waterfront facilities, and the protection of the navigable waters and the resources therein. The controls described in this subpart are directed to specific situations and hazards.
- 33 CFR 165.20 Regulated Navigation Areas and Limited Access Areas: Safety zones. A safety zone is a water area, shore area, or water and shore area to which, for safety or environmental purposes, access is limited to authorized persons, vehicles, or vessels. It may be stationary and described by fixed limits, or described as a zone around a vessel in motion. It is commonly used for ships carrying flammable or toxic cargoes, fireworks barges, long tows by tugs, or events like high speed races.
- 33 CFR 165.30 Regulated Navigation Areas and Limited Access Area: Security Zones. This section defines a security zone as an area of land, water, or land and water that is so designated by the Captain of the Port or District Commander for such time as is necessary to prevent damage or injury to any vessel or waterfront facility, to safeguard ports, harbors, territories, or waters of the United States or to secure the observance of the rights and obligations of the United States. It also determines the purpose of a security zone — to safeguard vessels, harbors, ports, and waterfront facilities from destruction, loss, or injury from sabotage or other subversive acts, accidents, or other causes of a similar nature in the United States and all territory and water, continental or insular, that is subject to the jurisdiction of the United States. Generally, it covers ships with flammable or toxic cargoes, cruise ships, naval ships, and nuclear power facilities and airports.

Regulations Applicable to Natural Gas Pipelines:

- 49 CFR 192: Transportation of Natural Gas and Other Hazardous Materials by Pipeline: Minimum Federal Safety Standards. This federal regulation includes standards for pipeline materials, operational specifications and procedures including public education and emergency procedures and operator qualifications.

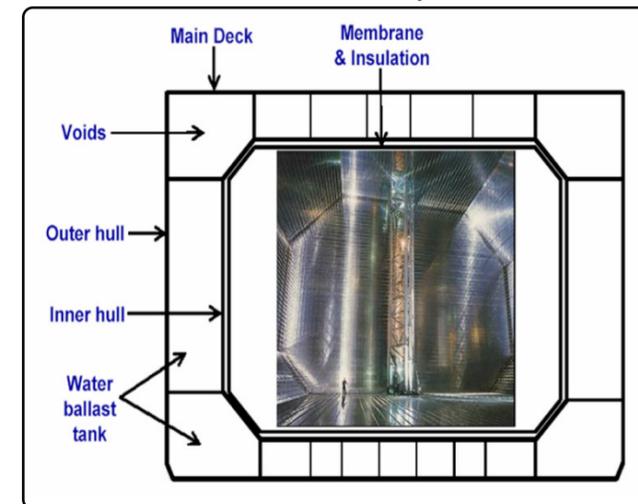
Pipeline Safety Improvement Act of 2002

This Act strengthens federal pipeline safety programs, state oversight of pipeline operators, and public education regarding pipeline safety.



145,000 cubic meters of LNG. They are specially designed and insulated to prevent leakage or rupture. Newer generation LNG vessels are being designed to handle capacities upwards to 250,000 cubic meters. Typically there are either four or five separate LNG tanks or compartments, which are physically separated within the inner hull of these vessels. All vessels are constructed in accordance with International regulations including the International Maritime Organization: *Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk*.

The membrane tank will have double-hull containment for added safety.



The third level of safety is leak detection and mitigation. The integrity of storage tanks aboard LNG vessels and the FSRU would be continuously monitored for leaks by testing for gas in the spaces between the primary and secondary barrier and between the secondary barrier and inner hull. In this manner, even very small leaks can be detected. Should a leak or release occur, the secondary containment would maintain effective cargo containment until such time as the tank can be emptied and repairs made.

To prevent releases of LNG during offloading, LNG vessels have built-in safety features. An emergency shutdown system allows the rapid and controlled safe shutdown of an LNG transfer, automatically stopping pumps and closing critical valves within the cargo system. Quick-release couplings automatically disconnect the unloading arms with minimal loss of LNG whenever the loading arms move towards pre-determined operating limits.

In addition, hazard detection equipment is installed at LNG terminals and carriers to constantly monitor and detect natural gas, smoke, heat, fire, and abnormally low temperatures. Emergency response plans and drills are tailored to each individual facility and coordinated with local and federal public safety agencies.

A fourth level of protection is a safety zone that extends beyond the Broadwater FSRU and carriers. The U.S. Coast Guard establishes safety zones for LNG vessels and for FSRUs. Safety zones are specific to conditions in a given channel or port. No unauthorized marine traffic is allowed to enter into this safety zone when it is in place.

A safety zone must be set up around the Broadwater FSRU and carriers to ensure public activities do not interfere with terminal operations and are not at any risk in the event of an emergency. Proximity to shipping lanes and the intensity and nature of shipping traffic will be factors that influence this safety zone.

Overarching all the layers of safety are the operating procedures for the entire facility. These procedures cover all aspects of the terminal operation including offloading, regasifying, maintenance, bad weather precautions, and storing. Broadwater is committed to ensuring that robust procedures are in place for the FSRU operation and, more importantly, that these procedures are strictly followed.

The Safety Zone

In the event of an emergency, federal regulations identify two needs for safety zones: thermal-radiation protection (from pool fires) and flammable vapor-dispersion protection (from vapor clouds that have not ignited but could migrate to an ignition source). Thermal-radiation safety zone distances ensure that heat from an LNG fire would not be severe enough beyond a certain area to cause death or third-degree burns. These distances are determined by using the National Fire Protection Association (NFPA) standard for the production, storage, and handling of LNG, and by using a computer model that accounts for facility-specific and site-specific factors, including wind speeds, air temperature, and relative humidity. Vapor-dispersion safety zone distances are also determined by the NFPA and by a computer model that considers average gas concentration in air, weather conditions, and terrain roughness.

We do not yet know what the safety zone for Broadwater will be. At the Northville oil terminal located one mile offshore from Riverhead, Long Island, the U.S. Coast Guard



set a 500-yard (radius) operational safety zone. For the Cove Point, Maryland, LNG terminal, which is a loading dock about one mile into the Chesapeake Bay, the U.S. Coast Guard also set a 500-yard safety zone. Based on this experience, we expect that Broadwater may have a 500-yard safety zone.

Emergency Response Plan

While every effort will be made to prevent accidents, as with any activity involving hazardous materials, it is impossible to guarantee an emergency situation will never arise. To further protect and ensure the safety of the facility, its personnel and the public, we will prepare an Emergency Response Plan to address a broad range of possible emergencies. In conjunction with the U.S. Coast Guard and local emergency response agencies, we will create a plan, determine resource needs and conduct training sessions and tests based on this plan on a regular basis. The Emergency Response Plan will include:

- o Identification and description of the organization(s) providing response
- o Procedures for responding to incidents
- o Emergency Action Guidelines
- o Facility Evacuation procedures
- o A list of emergency response providers and responsible parties for the incident command and the supporting organizations

Security Vulnerability Assessment

Under the Maritime Transportation and Security Act of 2002 and new U.S. Coast Guard regulations, each facility or project requires a Security Vulnerability Assessment (SVA) to be developed and approved. We have asked Giuliani

Group to coordinate with federal, regional and local safety and security agencies and to prepare an SVA for Broadwater.

Ensuring the Safety and Security of the Pipeline

Our commitment to safety and security also extends to the connecting pipeline. We must ensure that natural gas moves safely, which begins with the design of our system. Top quality steel and welding techniques would be employed for the pipeline system. During construction, all welds would be checked by x-ray or ultrasound equipment to ensure the welds are sound. To protect against corrosion, the external surface of the pipeline would be coated. During operations, a very low-voltage electrical current - called cathodic protection - will be applied to the pipe. The applied current protects the pipe from corrosion. The cathodic protection system is monitored on a regular basis to ensure proper operation.

The connecting pipeline would be monitored on a real-time basis, 24-hours-a-day, by highly-trained employees working in a computerized control center. They would be able to detect changes in pressure along the pipeline and ensure that all facilities are operating properly. Regular maintenance also would be performed on all facilities and the pipeline. This routine maintenance would comply with industry and government standards. Whenever possible, techniques that do not interrupt the flow of gas would be used. Pipeline maintenance activities would include:

- o Electronic inspection tools would be passed through the pipeline to detect defects
- o Cathodic protection to augment the pipeline coating and provide effective corrosion control
- o Regularly scheduled maintenance that meets or exceeds industry and government standards

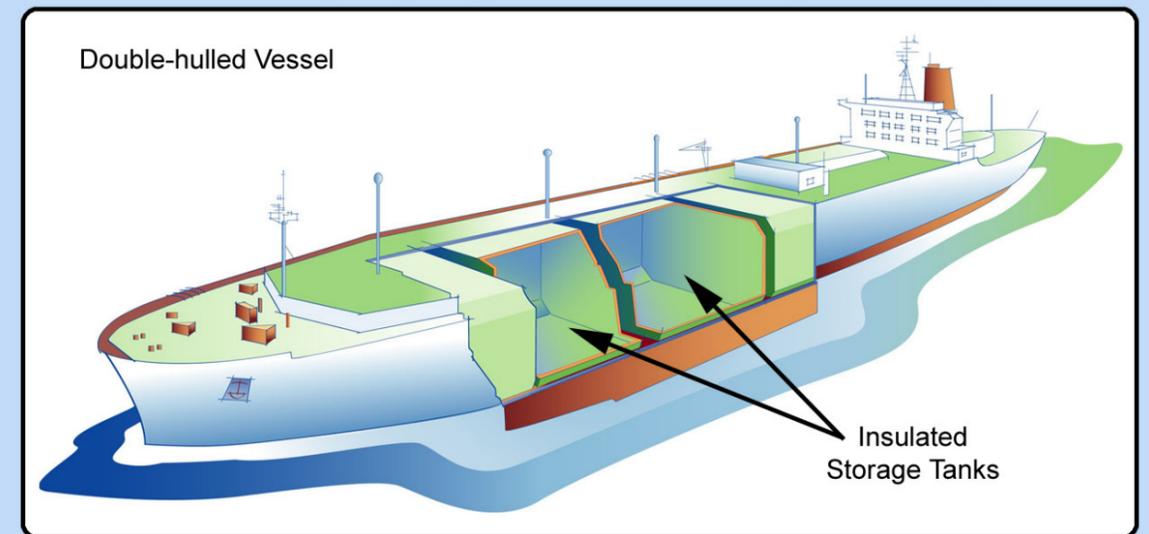
For further information on LNG terminals and shipping visit:

- Center for Liquefied Natural Gas: www.lnginfo.org
- Federal Energy Regulatory Commission: www.ferc.gov
- Interstate Natural Gas Association of America: www.ingaa.org
- Northeast Gas Association: www.northeastgas.org
- Society of International Gas Tanker and Terminal Operators: www.sigtto.org
- University of Houston: www.energy.uh.edu/LNG
- American Gas Association: www.aga.org

LNG carriers are equipped with the most up-to-date navigation and communications technology



LNG vessels are specially designed with double hulls to protect the cargo tanks.





7

Public Review and Regulatory Processes

A Consultative Regulatory and Permitting Process

An open, participatory process, which includes the public, regulatory bodies, energy developers, business leaders, academics and other stakeholders, is among the most important first steps in any major proposed energy project. The years-long process of reviewing a major energy project involves a thorough discussion of energy needs, how they can be met, benefits that a particular solution will offer, as well as the potential adverse impacts and how those can be avoided or minimized.

Through our initial review, we have made some decisions to design a project that is consistent with local needs and priorities. However, the input provided by the local agencies, communities and organizations that are most familiar with the region and sensitive to its unique needs is a vital component to ensuring these initial choices are reasonable.

Throughout the licensing and permitting process, the Broadwater team will make every effort to ensure current information about the project is constantly available and that the issues and concerns of the community and other interested stakeholders are addressed. Should the project move forward to the construction and operational phases, this policy of transparency and openness will continue to ensure that stakeholders play an important role during the life of the project.

The Public's Role in a Formal Review Process

The Federal Energy Regulatory Commission (FERC), under the authority of the Natural Gas Act, has primary regulatory authority over the design, construction, and operation of this LNG project. FERC has developed a National Environmental Policy Act (NEPA) Pre-File Process as a way to identify and resolve issues at the earliest stages of project development by involving the key federal, state, and local agencies and the public early in the project development process. In addition to our own community consultations, we will use the NEPA Pre-File Process for this project.

During the NEPA Pre-File process, engagement with participating federal, state, and local agencies, as well as community stakeholders and stakeholder groups will help

us identify and better define potential issues and impacts and design ways to address them. This process commenced when Broadwater filed an application with FERC to participate in the NEPA pre-file process in November 2004, and should conclude in approximately September 2005. During this period and all through the permitting process, stakeholders will have opportunities to provide their input directly to the project sponsors or to the FERC. Activities and objectives of the process undertaken by the FERC will include:

- o Ensuring that planned projects will avoid or minimize adverse environmental impacts
- o Facilitating communication between project sponsors and relevant federal and state natural resource agencies, tribal management, and state water quality agencies, prior to submitting an application
- o Visiting the location of the proposed project to determine the range of environmental issues requiring analysis
- o Engaging the general public on the scope of issues that they believe should be addressed in reviewing the project
- o Ensuring that all applicants perform the necessary studies to support an informed decision on the project
- o Reviewing design, construction, and operation plans to ensure a safe and reliable project
- o Identifying the most appropriate methods to avoid or reduce environmental impacts
- o Issuing a draft Environmental Impact Statement for public comment

The application that we file with FERC must include an Environmental Report (ER). The ER describes the proposed project in detail and evaluates the anticipated environmental, socioeconomic, and cultural effects of the project.

The information in the ER will be one of the sources of information used by the FERC to prepare an Environmental Impact Statement (EIS). The EIS will identify potential impacts of the proposed project as well as alternatives to the proposed project. The EIS may recommend mitigation strategies to offset impacts of the proposed project, or recommend an alternative to the proposed project if potential impacts cannot be satisfactorily mitigated.

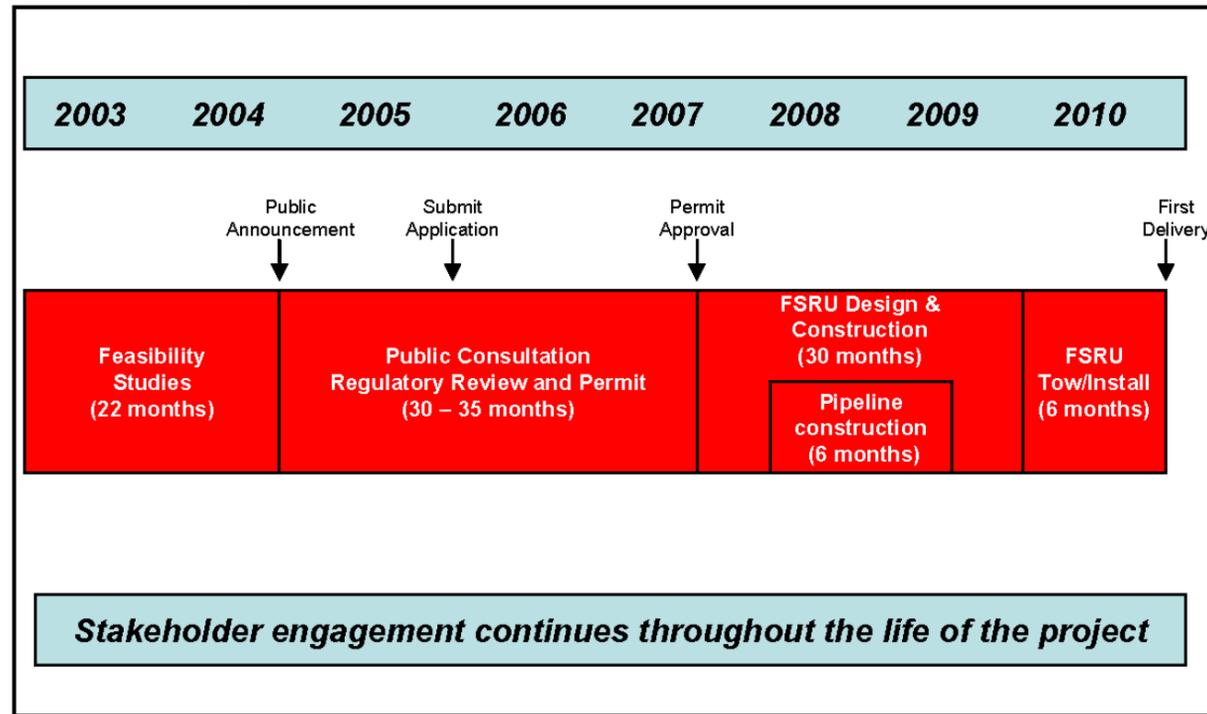


FERC is not the only authority to influence or control the Broadwater design or operations. The U.S. Coast Guard is responsible for safety and security of marine operations. In addition, there are numerous environmental permits, licenses and approvals that we must obtain before we would be able to begin construction. Some of these approvals are provided by state agencies, others by federal authorities. The table on the next page provides a summary of the agencies involved and the environmental-related permits and approvals that are required.

The flow diagram following the table shows the major milestones of the Broadwater FERC Regulatory Process. A proposed timeframe for permitting and constructing the Broadwater project is shown below.

Our consultation with interested parties will continue throughout the life of the project – this means through the permitting, construction, operations and vessel removal phases of the project. This consultation can only take place with your participation. We ask that you visit our website, www.broadwaterenergy.com or call 1-800-798-6379 to learn more about Broadwater. We also hope you will join us at a number of community meetings. The time, dates, and locations of these meetings will be publicly announced and provided on our Website at www.broadwaterenergy.com.

Should the project be permitted, Broadwater would begin receiving LNG shipments in 2010.



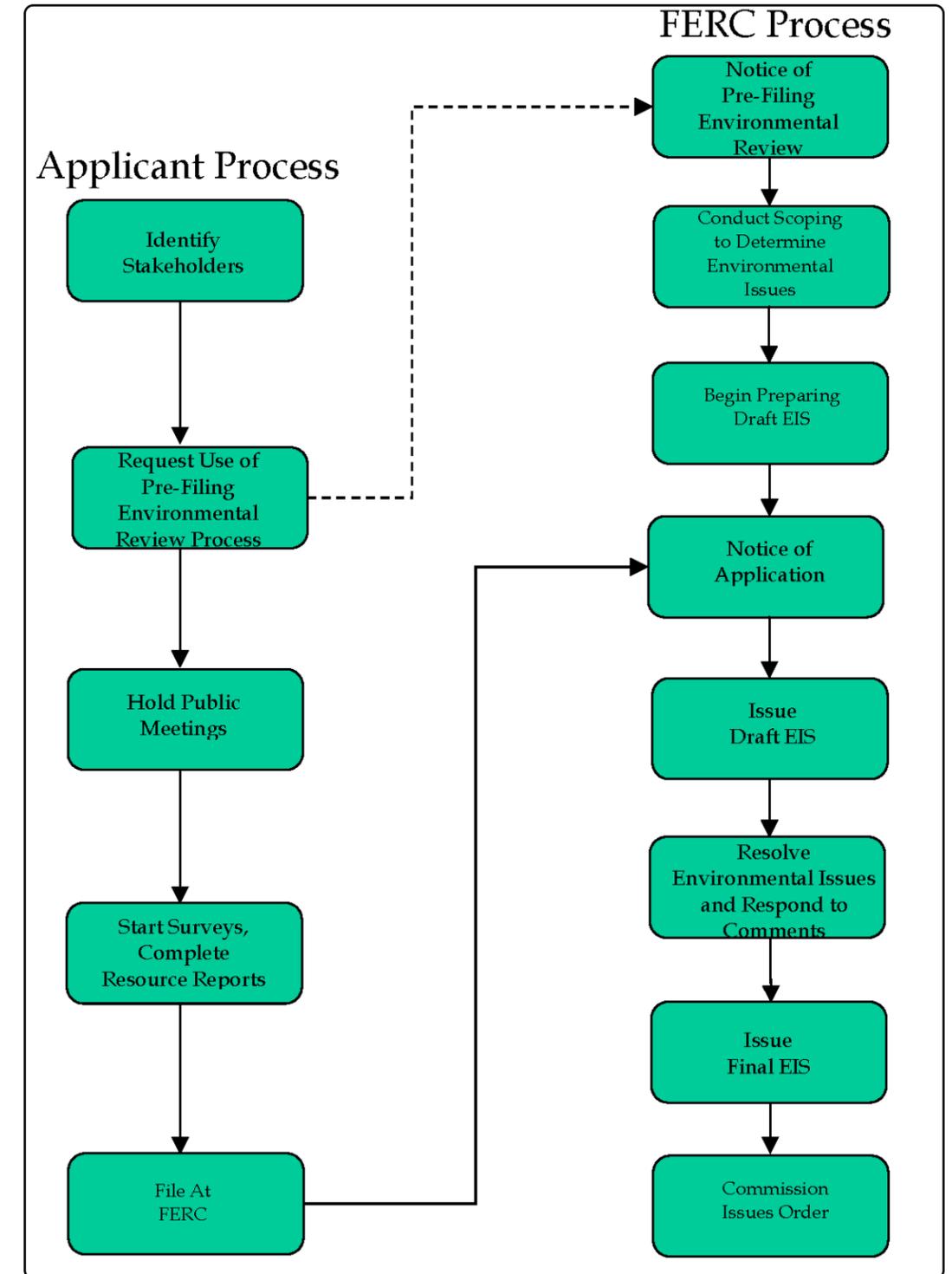
Summary of Major Permits or Approvals Required

Permit or Certificate Approval	Purpose	Authority
Approval Under Section 3 of the Natural Gas Act	Federal approval to construct and operate the Broadwater project.	Federal Energy Regulatory Commission
Terminal Operations	A permit to allow for the operation of FSRU	U.S. Coast Guard
NPDES* Storm Water Construction (and Operating) permit, process wastewater discharge permit, and hydrostatic test water permits	To ensure that any water discharge source into Long Island Sound comply with regulation	NY State Dept. of Environmental Conservation
Wetlands and Dredging Permit	To ensure that impacts to jurisdictional wetlands are managed, any that dredge materials are handled and placed without adverse impacts to the surrounding area	U.S. Army Corps of Engineers
Air Quality Title V Permit	To ensure that air emissions will comply with regulation	NY State Dept. of Environmental Conservation
New (air emission) Source Review	To ensure that this new source of air emissions doesn't significantly alter the overall quality of air resources	NY State Dept. of Environmental Conservation
Coastal Zone Consistency Determination	To demonstrate the project development and operation will be consistent with all (44) stated NY coastal policies	NY State Dept. of State, Coastal Resources Division
Clean Water Act §316(a) or (b)	To ensure that temperature or volume changes in water discharges do not disrupt the local ecosystem, and that water intakes meet design, construction, and fish protection needs of the resources at risk	NY State Dept. of Environmental Conservation

Permit or Certificate Approval	Purpose	Authority
Noise Impacts (Program Policy DEP-00-1)	To ensure that noise emissions from construction and operation will comply with regulation	NY State Dept. of Environmental Conservation
Section 401 Water Quality Certification	To ensure that this project doesn't significantly alter the overall quality of water resources	NY State Dept. of Environmental Conservation
Sections 9 and 10 Rivers and Harbors Act Permit	To ensure the Broadwater facility will not interfere with navigation and other uses of the Sound	U.S. Army Corps of Engineers & U.S. Coast Guard
National Historic Preservation Act (§106) Review	To determine that the project would not adversely affect local cultural or historic sites	NY State Office of Park, Recreation and Historic Preservation
Essential Fish Habitat Review**	To ensure consistency with current management plans	National Oceanic and Atmospheric Administration Fisheries
Marine Mammal Protection Act	To ensure that the project will not adversely affect marine mammals	National Oceanic and Atmospheric Administration Fisheries, U.S. Fish and Wildlife Service
Endangered Species Act (§7) Review	To ensure that the project will not adversely affect listed species (threatened or endangered)	National Oceanic and Atmospheric Administration Fisheries & US Fish and Wildlife Service

* NPDES is the "National Pollution Discharge Elimination System" permitting program, for which the NYSDEC has permit-issuance authority

**From the Magnuson-Stevens Fishery Conservation and Management Act





Visit : www.broadwaterenergy.com | Email: broadwater@broadwaterenergy.com | Call: 1-800-798-6379
Or come to our office: 30 West Main Street, Suite 301, Riverhead, New York.

