PREPARED STATEMENT OF

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BROADWATER ENERGY, LLC
before the
SUBCOMMITTEE ON COAST GUARD AND MARITIME TRANSPORTATION
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
UNITED STATES HOUSE OF REPRESENTATIVES

Field Hearing on the
Safety and Security of Liquefied Natural Gas
Farmingville, New York

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Chairman Cummings, Ranking Member LaTourette, and Member Bishop, thank you for the opportunity to appear before the Subcommittee today to testify on behalf of Broadwater Energy, LLC. My name is John Hritcko, Jr. and I am Senior Vice President and Regional Project Director of Broadwater. Broadwater is a joint venture comprised of subsidiaries of Shell Oil Company and TransCanada Corporation.

Broadwater proposes a project that would bring a new source of reliable, long-term, competitively priced natural gas supply to the Long Island, New York City, and Connecticut markets ("the Region"). Broadwater has undertaken an extensive regulatory review process at both the federal and state level lead by the Federal Energy Regulatory Commission designated as the lead agency. As part of that review, a draft Environmental Impact Statement ("DEIS") was released by FERC late last year. Incorporated into the DEIS was the Coast Guard's assessment of safety and security issues related to determining the suitability of Long Island Sound for the Broadwater project called the waterway Suitability Report. My statement today summarizes the detailed application submitted by Broadwater to FERC with emphasis upon the need for the proposed facilities, highlighting the measures to be incorporated into the project to maintain safety and security of the operations and facility, and reiterates Broadwater's commitment to safety and security without burdening the local population.

As a precursor to the topic of this field hearing, it must be noted that the Region faces enormous challenges with regard to energy. The cost of energy in general and particularly the cost of natural gas is the highest of the lower 48-states and the Region experiences dramatic upward swings during periods of peak demand on the coldest winter days when heating needs are the greatest and during the summer when electricity demands for cooling are the greatest.

Because it is the cleanest and most efficient of the fossil fuels, natural gas is currently the fuel of choice for most new electric power generation being proposed and

constructed. That choice of natural gas to fuel new power generation is driving up the demand for the product not only in the Region, but also throughout the United States.

While the Region's energy challenges are daunting, solutions are available. However, I must emphasize the point that it will take numerous solutions to address these challenges. There is no silver bullet.

To be successful is to achieve plentiful, reliable, and affordable energy. It must begin with rational, fact-based assessment leading to well-reasoned policies and a firm commitment to pursue multiple, diversified paths on how we acquire and use our energy. In the near term on the demand side, we must take steps to improve our ability to conserve and use energy more efficiently. On the supply side, we must diversify and expand the availability of energy, particularly the cleaner burning, more efficient fuels such as natural gas. Longer term, as new technologies and processes develop and become commercially viable, we can transition from our use of fossil fuels.

Broadwater is supply-side proposal seeking to deliver a large new, diversify supply of natural gas directly into the Region. This would be accomplished by siting, constructing and operating an LNG marine import and regasification terminal in the Long Island Sound which will be connected to an existing natural gas pipeline serving the Region. The natural gas would be transported and delivered to the Broadwater terminal as a liquid by specially designed ocean going ships (called "LNG carriers"). The LNG would be transferred from the carriers to Broadwater, slowly warmed back into a gas, and delivered into the pipeline over a number of days.

The proposed Broadwater terminal will consist of a floating storage and regasification unit (the "FSRU"), essentially an LNG carrier without propulsion that is approximately 1,215 feet long and 200 feet wide and rises approximately 80 feet above the water line to the trunk deck. The FSRU's draft is approximately 40 feet. The FSRU will be designed to accommodate net storage of approximately 350,000 cubic meters (equivalent to 2.2 million barrels of LNG or 8.0 Bcf of regasified LNG) of LNG in eight membrane-type LNG storage tanks, with base regasification capabilities of 1.0 Bcf per day using a closed-loop shell and tube vaporization system. It will be capable of delivering a peak sendout of 1.25 Bcf per day. The LNG will be delivered to the FSRU in LNG carriers with cargo capacities ranging from 125,000 cubic meters to a potential future size of 250,000 cubic meters at a frequency of two to three carriers per week. (See a depiction of the FSRU on Exhibit A.)

The FSRU will be moored in place by a yoke mooring system ("YMS"). The YMS will be attached to a tower, which in turn, will be secured to the seafloor by four legs having a diameter of 6.9 feet spaced 115 feet apart and embedded approximately 230 feet into the seabed. The tower will provide a secure mooring for the FSRU as well as support the initial portion of the 30-inch lateral pipeline that will connect with the FSRU to the interstate market. The pipeline lateral will proceed in a southwesterly direction from the FSRU for 22 miles to a sub-sea interconnect with the existing Iroquois Gas

Transmission System ("Iroquois") where it will be delivered into the interstate grid serving the Region. (See a depiction of the mooring tower on Exhibit B.)

The location of the proposed Broadwater terminal is in the Long Island Sound, in a water depth of about 90 feet, approximately nine miles off the coast of Riverhead, Suffolk County, New York. The nearest Connecticut onshore point is approximately 10.2 miles from the proposed terminal location. A map of the proposed facilities is attached as Exhibit C.

The siting of the facility was determined based upon a comprehensive and iterative process that evaluated potential terminal design concepts (e.g., traditional onshore facilities with offshore pier, GBS, floating, shuttle, etc.) and sites throughout the entire Long Island region, including both onshore and offshore locations. This siting process evaluated potential sites against a wide range of environmental and socioeconomic criteria. Key among these was: (i) the distance of the terminal from shore to enhance public safety and minimize visual and noise impacts (Two images, one from the New York shoreline and one from the Connecticut shoreline, developed for Broadwater's view shed analysis and included in the FERC application are attached as Exhibits D and E.); (ii) the length of the connecting subsea pipeline; (iii) minimizing impacts on fishing, boating, and shipping routes; and (iv) avoiding subsea hazards and impacts. The process and analysis is fully detailed in Broadwater's application filed with the Federal Energy Regulatory Commission.

The economic benefits of having 1.0 Bcf per day of natural gas delivered directly into the Region by Broadwater are extremely compelling. Broadwater estimates that wholesale energy savings to the Region would total nearly $10 billion over the life of the project. This savings translates into approximately $680 million per year during the first years of service. Breaking that annual savings down to an average residential consumer, Broadwater would provide approximately $300 to $400 per year in direct and indirect energy cost savings for the average household in the Region. Beyond the economic benefits, Broadwater would provide a substantial amount of natural gas that could greatly assist in helping New York and Connecticut meet their clean air requirements as well as climate change goals under the Regional Greenhouse Gas Initiative. (For reference, a diagram depicting the natural gas pipelines in the Region is shown on Exhibit F.)

The safety and security of the adjacent communities, other users of the Sound, and the facility is of the highest priority to Broadwater. Key aspects of Broadwater's safety controls and security measures are detailed in the FERC application. Incorporated within the design of the facility is a layered approach to the safety of operations. The FSRU will be designed to withstand severe weather conditions and natural catastrophes. Although the Broadwater terminal may be among the first FSRU's in operation, it does not rely on new technologies. The FSRU consists of three main components, all of which utilize existing and proven technology: (i) Hull and Containment, which uses existing LNG carrier technology; (ii) Process Equipment, which employs the same types of vaporization and utilities equipment in use at onshore terminals; and (iii) a YMS that has been used for many years in open-water conditions for the mooring of Floating

Production Storage Offloading Vessels. Because the proposed project does not rely on new technology, Broadwater has been able to develop safety and security measures that are proven and in use today.

The main safety features of the FSRU design are:

Proven Technology: As noted above, the Hull and Containment System incorporates the same features as an LNG carrier and will be designed and constructed in accordance with the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk ("IGC code") and other International Marine codes and regulations and in compliance with Classification Society Rules. These standards result in a hull design that minimizes the potential for an accidental release of LNG.

Collision Avoidance: The FSRU will be equipped with a complete suite of communications equipment and navigational aids (including radar systems, a radar beacon and navigational aids) in accordance with USCG requirements to alert other ships of the presence of the facility.

LNG Spill Containment from Unloading and Process Areas: Broadwater will employ a spill containment strategy to avoid or minimize the potential for gas cloud accumulation fires or explosions. Major LNG spills will be directed safely overboard into the sea, where the majority of the LNG will vaporize on the water surface, well away from the deck facility. In addition, the project will adopt measures for leak prevention, and will employ an emergency shutdown system for detection, isolation, shutdown, and depressurization systems to minimize potential spill sizes.

Safety and Security Zone: The location of the FSRU is significantly distant from populated areas. In fact, the Coast Guard assessment of Broadwater's location reported in Section 8.2 Key Points of the Waterway Suitability Report stated, "The proposed location of the FSRU approximately 10.2 miles from Connecticut and 9.2 miles from New York, has a number of significant safety and security benefits associated with its remoteness, especially with respect to threat and consequence since it would be remote from population centers." The WSR further prescribed a safety/security zone around the FSRU of 1,210 yards in radius centered on the mooring tower. The purpose of a safety and security zone is to reduce the risks to the public by limiting access to the areas of highest consequence in the unlikely event of an LNG fire and to provide a security perimeter to protect the FSRU and the LNG carriers. It noted that this safety/security zone for the FSRU would cover approximately 0.12% of the total area of Long Island Sound.

Hazard Detection: The facility hazard detection system will be in accordance with the requirements of NFPA 59A, Classification Society Rules and IGC Code requirements.

Fire Suppression: The facility will have specific fire protection systems for the different areas of the facility. Fire extinguishing systems will be provided in accordance with Classification Society Rules and IGC Code requirements. It was noted in the WSR that

marine firefighting resources would be required to mitigate fire risks associated with the proposed project and that existing marine firefighting capability in Long Island Sound is inadequate. Broadwater fully agrees with that assessment, which is why we stated on the day we first announced the project that Broadwater would acquire and maintain its own, dedicated fleet of firefighting tugs to protect the facility.

Emergency Shutdown: A loss of electrical power will not compromise the safety and security of the facility. In the unlikely event of a total power failure, an emergency generator will start automatically. This generator is designed to maintain critical facility systems until such time as normal power generation can be resumed.

Emergency Response: Fire-fighting and life-saving arrangements on board the FSRU will comply with the Safety of Life at Sea ("SOLAS") Convention supplemented by the IGC Code. The WSR also included a recommendation that Broadwater develop and submit to FERC and the Coast Guard a process for developing the Emergency Response Plan required by Section 311 of the Energy Policy Act of 2005. This plan would have to be approved by FERC before Broadwater could receive approval to begin construction of the facility. The WSR noted that the plan should be developed through a transparent, public process that actively involves the Coast Guard and appropriate agencies and key officials of state and local governments including New York, Connecticut and Rhode Island. Broadwater has developed the process it proposes to use in creating the Emergency response Plan and has made preliminary contacts with various fire responders and agencies on both sides of the Sound. We anticipate that the process of developing the preliminary Emergency Response Plan will extend through this year, but the plan will be a living document subject to update as the project is designed, constructed and commences operation. Broadwater is also required to prepare and submit an Operations Manual and an Emergency Manual to the Captain of the Port Long Island Sound for review and approval at least six months but no more than twelve months before the FSRU would receive LNG deliveries. These manuals must include the applicable requirements stipulated on the facility license and shall be consistent with the facility's Emergency Response Plan.

Regarding the security of the FSRU, Broadwater understands the vital importance of security review since the events of September 11, 2001, and has fully committed to undertake a through terrorism threat assessment and consequence analysis as a fundamental and continuing responsibility. Integral to this assessment and analysis process is full coordination with all federal and state government agencies charged with the development of threat intelligence information and the development of consequence management modeling and planning. The Broadwater application filed with FERC describes the methodologies that will be used to determine potential threats, the consequences of a successful threat, the security design features and security operating procedures necessary to minimize potential hazards to the public. Detailed security vulnerability analyses and mitigating strategies, including specific security design features and security operating procedures, are being discussed with the appropriate regulatory agencies. As with the Emergency Response Plan, Broadwater must submit a security plan for review and approval of the Coast Guard Captain of the Port Long Island

Sound at least six months but no more than twelve months before the FSRU would receive LNG deliveries.

The cost sharing issues identified in the WSR and the FERC DEIS require the development of a Cost-Sharing Plan identifying the mechanisms for funding all Project-specific security/emergency management costs that would be imposed on state and local agencies. In addition to the funding of direct transit-related security/emergency management costs, this comprehensive plan shall include funding mechanisms for the capital costs associated with any necessary security/emergency management equipment and personnel base. The Cost-Sharing Plan must be filed by Broadwater with the Secretary for review and written approval by the Director of Office of Energy Projects prior to any Project-related construction activity.

Broadwater will meet the requirements outlined by FERC and the USCG and would like to assure this Subcommittee and the public that we have already made provisions within our preliminary budget estimates of these requirements to ensure the burden for protecting the facility and responding in the event of an emergency is carried by the project itself. For example, it has been stated that Broadwater will provide the necessary fire fighting tugs as well as security personnel to protect the facility. The project recognizes that local first responders and communities do not have the capability to respond to an incident at the facility nor would we call upon the resources of shoreline communities. At a minimum, however, we fully expect to establish communications plans and protocols with the appropriate agencies or departments so that necessary coordination and interoperability between Broadwater and these various parties is established. Broadwater is also committed to ensuring that these parties are involved, to the extent that they are willing, in the development of the Emergency Response Plan and security procedures.

In closing, I would like to emphasize Broadwater's commitment to stakeholder engagement. Since announcing this project in November 2004, the project has strived to reach out to as many Long Island and Connecticut groups and individuals as possible. We have taken much of the feedback and incorporated it into the development of the project so that the benefits of the facility are maximized and the impacts are avoided or minimized. We will continue to meet with interested groups and individuals and have seen a growing level of understanding about the project and its role in addressing the Region's energy and environmental challenges.

Thank You.