

## EXECUTIVE SUMMARY

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This final environmental impact statement (EIS) for the KeySpan LNG Facility Upgrade Project (KeySpan LNG Project) has been prepared by the staff of the Federal Energy Regulatory Commission (FERC or Commission) to fulfill the requirements of the National Environmental Policy Act (NEPA) and the Commission's implementing regulations under Title 18, Code of Federal Regulations (CFR), Part 380. The purpose of this document is to inform the public and the permitting agencies about the potential adverse and beneficial environmental impacts of the proposed project and its alternatives, and to recommend mitigation measures that would avoid or reduce any significant adverse impact to the maximum extent possible.

The vertical line in the margin identifies text that has been modified in the final EIS and differs from the corresponding text in the draft EIS.

KeySpan LNG, L.P. (KeySpan LNG) proposes to construct and operate certain upgrades at its existing liquid natural gas (LNG) facility, and Algonquin Gas Transmission, L.L.C. (Algonquin, formerly Algonquin Gas Transmission Company) proposes to site, construct, and operate a new natural gas pipeline and ancillary facilities in Providence, Rhode Island. The activities proposed by KeySpan LNG and Algonquin are referred to collectively as the KeySpan LNG Project. The proposed KeySpan LNG Project would allow for the receipt of marine LNG deliveries at the existing KeySpan LNG facility, augment LNG supplies for truck deliveries to LNG storage tanks in the region, and supply up to 375 million cubic feet per day (MMcfd) of imported LNG to the New England region via the interstate pipeline facilities of Algonquin's existing G system starting in the winter 2005/2006 heating season. The KeySpan LNG facility would also continue to deliver up to 150 MMcfd of vaporized LNG to the New England Gas Company (NEGC) distribution system. In order to provide these services, KeySpan LNG and Algonquin have requested the Commission's authorization to construct, install, and operate the following facilities.

The LNG facility upgrades to be constructed by KeySpan LNG would include:

- a ship unloading facility with a single berth capable of receiving LNG ships with cargo capacities of 71,500 to 145,000 cubic meters (m<sup>3</sup>);
- two 16-inch-diameter liquid unloading arms and a 24-inch-diameter liquid unloading line from the arms to the LNG storage tank;
- two vapor return blowers, a 12-inch-diameter vapor arm, and an 8-inch-diameter vapor return line;
- four boil-off-gas compressors and a boil-off gas condenser;
- a two-stage LNG pumping system;
- an indirect fired vaporizer system with a capacity of 375 MMcfd;
- operations control buildings; and
- ancillary utilities and LNG facilities.

The natural gas pipeline facilities to be constructed by Algonquin would include:

- a 1.44-mile-long 24-inch-diameter natural gas pipeline;
- a receipt point meter station and 30-inch-diameter pig launcher; and
- a 24-inch-diameter tap valve and 30-inch-diameter pig receiver at the point where the new pipeline would tie into Algonquin's existing G-12 Lateral pipeline system.

## **SIGNIFICANT ISSUE**

The existing KeySpan LNG facility commenced operations in May 1974, prior to promulgation of the February 1980 Federal LNG Safety Standards in 49 CFR Part 193. During more than 30 years of operation, the facility has provided winter storage services with the tank filled exclusively by LNG truck, except for a single barge cargo in July 1974.

The draft EIS concluded that the existing facility does not meet the current LNG safety standards in 49 CFR Part 193 and NFPA 59A (2001 edition). We recommended in the draft EIS that KeySpan LNG perform an analysis of how its existing LNG storage and sendout facilities could comply with the current federal safety standards. The draft EIS also instructed KeySpan LNG to evaluate design changes or other measures that would need to be applied to comply with the current standards and to file that information. In response, KeySpan LNG stated that in order to meet the current federal safety standards, it would need to make the following modifications to its existing facility: (1) replace anchor straps, increase inner floor thickness, or replace foundation for seismic requirements; (2) install in-tank pumps and eliminate bottom penetrations to reduce flammable vapor exclusion zones; (3) increase impoundment capacity; (4) add pressure and vacuum relief valves; and (5) acquire legal control of eight adjacent industrial properties for thermal exclusion zones. KeySpan LNG concluded that it would not be feasible to make these modifications due to the high financial costs and the fact that making the modifications would require taking the existing facility out of service for 2two to 3three heating seasons.

**KeySpan LNG's proposed LNG import terminal would not meet current LNG safety standards in 49 CFR Part 193 and NFPA Standard 59A. KeySpan LNG has not provided any data to show that the proposed import terminal can be brought into compliance with the current safety standards.**

## **PROJECT IMPACTS**

The environmental issues associated with construction and operation of the KeySpan LNG Project are analyzed in this final EIS using information provided by KeySpan LNG and Algonquin and further developed from data requests; field investigations and independent analysis by the Commission staff; literature research; alternative analyses; comments from federal, state, and local agencies, including agencies that are either cooperating with the FERC on the EIS or working with the FERC under an interagency agreement; and input from legislators, public groups, and individual citizens.

The majority of the proposed LNG facility upgrade would be constructed on about 17.5 acres of industrially zoned property that KeySpan LNG currently leases from NEGC. The property is part of a 42-acre parcel owned by NEGC. The new ship berth and water-based offloading facilities would be constructed within about 3.5 acres of the Providence River adjacent to the existing KeySpan LNG facility. Construction of the marine facilities would not require dredging. With the exception of three mooring dolphins, which would be installed on adjacent industrial property leased and managed by St. Lawrence Cement, the land-based facilities would be constructed within the existing KeySpan LNG plant. The existing LNG plant has been in operation for 30 years and includes a 95,390 m<sup>3</sup> (600,000 barrel) LNG

storage tank, a containment system, LNG processing equipment and piping, a truck loading and unloading station, buildings, and ancillary equipment.

Construction of the proposed pipeline and aboveground facilities would affect a total of about 21 acres. Approximately 2 acres of the land used to construct the pipeline, meter station, and tap valve would be retained as permanent right-of-way. About 79 percent of the pipeline would be constructed within existing city streets. Algonquin would not obtain a permanent easement for the in-street portion of the pipeline as this portion of the pipeline would occupy land under an occupancy permit from the Rhode Island Department of Transportation.

The discussion below summarizes the environmental impacts and the proposed or recommended mitigation for resources analyzed in this EIS.

## **Geology**

Construction and operation of the project would have minimal impact on mineral resources in the area, and the potential for geologic hazards or other natural events to significantly affect the project is low. The LNG facility upgrade would be designed to address predicted ground shaking associated with a seismic event, and the pipeline would be constructed of modern steel that is capable of remaining elastic during the level of shaking that could occur in the project area. The elevation in some areas of the LNG site would be raised to bring the overall site grade to above the 100-year flood level to minimize the potential for impacts associated with flooding, including that associated with a hurricane or tropical storm. To ensure the stability of the proposed process area equipment, marine, and waterfront structures, we have recommended that KeySpan LNG file its final foundation designs with the FERC prior to construction.

## **Soils and Sediments**

The project would have minimal impacts on soils because construction of the land-based LNG facilities would be within the existing KeySpan LNG facility site, which is primarily covered with gravel and stone and does not contain topsoil, and the pipeline facilities would be within city streets and disturbed industrial land. However, construction of the project facilities would increase the potential for erosion due to sediment discharge from temporary soil stockpiles. To minimize erosion impacts, KeySpan LNG would implement a soil erosion control plan that it is developing based on applicable erosion and sedimentation control measures contained in the FERC's *Upland Erosion Control, Revegetation, and Maintenance Plan* (FERC Plan) and *Wetland and Waterbody Construction and Mitigation Procedures* (FERC Procedures). Algonquin would implement measures in its Erosion and Sedimentation Control Plan (ESCP), which incorporates applicable provisions of the FERC Plan and Procedures.

Due to the history of the KeySpan LNG site as a manufactured gas plant, contaminated soils may be encountered during construction of the proposed LNG facility upgrade. KeySpan LNG would submit a Remedial Action Work Plan (RAWP) to the Rhode Island Department of Environmental Management (DEM) for review and approval prior to construction. The RAWP would specify methods for handling, storing, and disposing of contaminated soils as well as measures to minimize worker exposure to contaminated areas. Contaminated sites are also known to be present in areas along or near the pipeline route. Algonquin has met with the DEM to discuss its approach for conducting pre-construction field investigations to identify contaminated sites and to identify requirements of a Soil and Groundwater Management Plan (SGMP) that Algonquin would develop for DEM review and approval as part of the DEM permitting process. By implementing the measures in their DEM-approved RAWP and SGMP,

KeySpan LNG and Algonquin, respectively, could safely manage contaminated soil encountered during construction.

Aquatic sediments in the vicinity of the KeySpan LNG facility are considered contaminated. No dredging would be required for the proposed in-water facilities. However, contaminants could be released into the water as a result of resuspension of sediments during the driving of piles into the river bottom to support the ship berth and unloading facilities, and from the spuds that would be used to anchor a construction barge from which most of the water-based construction activities would be conducted. Impacts from resuspension of potentially contaminated sediments are expected to be minor and would be extremely small in comparison to impacts associated with the Providence River Dredging Project because only a small area would be affected. Any effects would be short term and limited to the construction period.

## **Water Resources**

### Groundwater

There are no private or public drinking supply wells near the proposed facilities and there are no federal or state sole-source aquifers or protected aquifers in the project vicinity. KeySpan LNG would construct the LNG facility upgrade without excavation into the surficial aquifer, and would thus avoid contact with contaminated groundwater. In addition, KeySpan LNG would implement the measures in its DEM-approved RAWP as noted above, and would take precautions to protect and preserve existing monitoring or recovery wells at the LNG facility. It is likely that contaminated groundwater would be encountered during construction of the pipeline. As noted above, Algonquin would develop and obtain DEM approval of an SGMP, which would include measures to be implemented if contaminated groundwater is encountered during pipeline construction. By implementing their DEM-approved RAWP and SGMP, KeySpan LNG and Algonquin, respectively, would avoid or minimize significant impacts on groundwater quality and protect workers during construction.

### Surface Water

Construction of the proposed marine-based facilities could temporarily affect surface water quality in the Providence River as a result of increased turbidity; however, these impacts would be localized, temporary, and short term, and would not affect water quality beyond the duration of construction. The proposed pipeline would not cross any waterbodies.

Surface water could also be affected by stormwater runoff during construction or by hydrostatic test water discharges. To prevent or minimize impacts associated with stormwater runoff, KeySpan LNG and Algonquin would implement the measures specified in their respective soil erosion control plans and RAWP or SGMP, and would comply with requirements of their respective Rhode Island Pollution Discharge Elimination System construction stormwater discharge permits and/or other applicable permits and authorizations. KeySpan LNG and Algonquin would conduct hydrostatic test water discharges in accordance with the FERC Procedures, which include regulation of discharge rates, use of energy dissipation devices, and installation of sediment barriers as necessary to prevent erosion or streambed scour.

There is also potential for a spill of hazardous material such as fuel or lubricants to affect groundwater or surface water during construction of the proposed facilities. To minimize potential impacts from spills, KeySpan LNG and Algonquin would implement their respective Spill Prevention, Control, and Countermeasure Plans (SPCC Plans). KeySpan LNG has committed to implementing applicable measures in the FERC Procedures, including the requirement to develop spill prevention and

response procedures, which we refer to as an SPCC Plan. Algonquin included its SPCC Plan in its FERC application and we have confirmed that Algonquin's SPCC Plan meets the requirements of the FERC Procedures. An LNG spill into the Providence River during operation of the LNG terminal would be unlikely, but if such a spill were to occur, the cryogenic liquid is not soluble in water and would vaporize rapidly upon contact with the warmer air and water. Therefore, an LNG spill would not affect water quality.

### **Aquatic Resources**

Turbidity resulting from the resuspension of sediments during construction of the proposed marine facilities could affect aquatic resources by reducing light penetration and the corresponding primary production of aquatic plants, algae, and phytoplankton, and by causing decreased dissolved oxygen levels that could temporarily displace motile organisms and stress or kill sessile benthic organisms in the affected area. Pile driving would propagate underwater noise energy, which could harm fish or temporarily reduce fish usage of the area, and would disturb the existing benthic community. Following construction, the piles would occupy about 450 square feet (ft<sup>2</sup>) of the river bed and other structures (e.g., unloading platform, trestle, mooring and breasting dolphins) would be above mean lower low water but would partially shade about 9,300 ft<sup>2</sup> of water surface. None of these impacts would likely be significant because only a small area would be affected, and most of the effects would be short term and limited to the construction period. Mobile aquatic species would likely avoid construction activities and temporarily relocate to adjacent areas. Additionally, when completed, the new ship berth and unloading facilities would provide additional structural habitat.

During operation of the LNG terminal, potential impacts on aquatic resources could include entrainment or impingement of fish during water withdrawals for ship ballast and impacts from increased turbidity generated by prop wash during LNG ship transit. Based on available ichthyoplankton density data and the maximum anticipated ballast water intake of 11 million gallons, we estimate that the number of fish eggs or larvae that could be affected by water withdrawals during each LNG ship delivery could range from 0 eggs or larvae up to 1.8 million eggs or 86,000 larvae depending on the time of year and the distribution of ichthyoplankton within the water column in relation to the ballast water intakes. However, we note that ichthyoplankton density data is difficult to interpret because natural mortality rates are very high and few eggs or larvae typically survive to become fish. Based on studies conducted for the Manchester Street Power Station that convert numbers of fish eggs and larvae entrained and impinged at the station to numbers of adult fish, we estimate that the intake of ballast water by 50 to 60 LNG ships per year would result in the annual loss of about 339 to 559 adult fish per year.

A 1995 EIS prepared by the U.S. Army Corps of Engineers (COE) and Massachusetts Port Authority included the results of modeling conducted for the Boston Harbor Navigation Improvement Project to assess the effect of ship passage on the resuspension of surface sediments in federal shipping channels. The analysis modeled the effects of several types of vessels, including an LNG tanker, and found that sediments in federal channels and berth areas are subject to resuspension from prop wash by ships. However, the results also indicated that sediments resuspended by ship currents settle back to the substrate after being transported relatively short distances. In addition, while demersal eggs such as those of winter flounder may be partially or completely covered by fine particles as the particles settle back to the bottom, results of recent studies indicate that winter flounder eggs may be more resistant to burial than previously thought. Several factors mitigate the potential for LNG ships to introduce invasive species to the project area, including but not limited to the fact that the LNG ships would not discharge ballast water into Narragansett Bay or the Providence River. We also note that, under a new international convention adopted by the International Maritime Organization, the LNG ships would have to carry a Ballast Water Record Book and carry out ballast water management procedures to a specified standard. Further, the U.S. Coast Guard (Coast Guard) has developed *Mandatory Practices for All Vessels with Ballast Tanks*

*on All Waters of the United States.* Moreover, in February 2005, the Ballast Water Management Act of 2005 was introduced to Congress to amend the Nonindigenous Aquatic Nuisance Prevention and Control Act to establish vessel ballast water management requirements.

Information obtained from National Oceanic and Atmospheric Administration (NOAA Fisheries) documents indicates that the Providence River and Narragansett Bay have been designated as Essential Fish Habitat (EFH) for 16 federally managed fish species. This EIS includes an EFH Assessment as necessary for compliance with the Magnuson-Stevens Fishery Conservation and Management Act. We have determined that the proposed project could affect water column, benthic habitat, and man-made structure EFH. The project also has the potential to affect anadromous fish and shellfish, two of the primary prey groups for managed fish species. However, we expect that none of these effects would be noticeable or significant due to the small area that would be affected by the project and the relatively short duration of construction, which is when most of the potential effects would occur. Additionally, KeySpan LNG's and Algonquin's implementation of erosion and sediment control measures and spill control and containment procedures would avoid or minimize impacts on managed fish species and designated EFH, and the proposed new marine terminal facilities would increase the amount of man-made EFH habitat in the project area. We have requested NOAA Fisheries concurrence with our determination.

### **Vegetation and Wildlife**

The KeySpan LNG Project would be constructed in a developed commercial/industrial area. Land that would be affected by construction and operation of the proposed facilities predominantly consists of previously disturbed paved, concrete, and gravel surfaces. No forest land or wetlands would be affected. Vegetation within the areas that would be affected by the project is limited to isolated areas of sparse vegetation within the existing LNG facility and about 0.17 acre of maintained herbaceous growth at the proposed tap valve site. Due to the lack of significant vegetation in the area of impact, the proposed project would not adversely affect vegetation.

Wildlife expected to be found in the project area reflects the urban nature of the area and includes species that have adapted to an urban setting. Construction of the proposed facilities could result in localized, short-term, and temporary alteration of urban terrestrial wildlife habitat, temporarily displace mobile species, and kill or injure less mobile species. However, the developed nature of the area limits habitat value within and adjacent to proposed construction areas. Therefore, neither construction nor operation of the project is likely to result in adverse impacts on wildlife species.

### **Threatened and Endangered Species**

The U.S. Fish and Wildlife (FWS) has indicated that no federally listed species, proposed species, or designated habitat under its jurisdiction are known to occur in the project area and that the project is, therefore, unlikely to adversely affect federally listed species, proposed species, or designated critical habitat. The FWS identified a peregrine falcon nest present on the Pell Bridge. The peregrine falcon is not federally listed but is protected under the federal Migratory Bird Treaty Act (16USC 703-712). However, due to the nature of the proposed activities, the project would not adversely affect the peregrine falcon. We concur with the FWS' findings.

We received a determination from NOAA Fisheries that no federally listed endangered or threatened species under its jurisdiction are known to occur in the Providence River at the proposed LNG terminal site, and that construction and operation of the proposed facility would not affect listed species. We concur with NOAA Fisheries' findings regarding the LNG terminal site.

Through an informal consultation, NOAA Fisheries also indicated that the transiting LNG ships would be unlikely to affect listed species under its jurisdiction, noting that the area has only transitory occurrences of sea turtles and that LNG ships would be unlikely to affect any special status species in Narragansett Bay because of the relatively low speeds at which they would be traveling. However, in its comments on the draft EIS, NOAA Fisheries stated that an increase in vessel traffic in Narragansett Bay could potentially affect federally listed marine mammals or sea turtles as a result of vessel strikes. Of particular concern is the North Atlantic right whale. NOAA Fisheries has developed a Strategy to Reduce Ship Strikes of Right Whales, which is not yet finalized, but would establish speed restrictions within 20 to 30 miles of the approaches in specific areas. In addition, the Coast Guard has been coordinating with NOAA Fisheries on various measures to reduce vessel strikes. KeySpan LNG has committed to complying with applicable speed restrictions for LNG ships if implemented by NOAA Fisheries. We have determined that these measures are important for the protection of right whales from ship strikes, but because the proposed rule has not yet been finalized or implemented, we have recommended that KeySpan LNG coordinate with NOAA Fisheries to determine appropriate speed and seasonal restrictions or other applicable measures to avoid or minimize impacts on right whales and to file the results of that coordination with the Secretary of the Commission. Such protective measures may also facilitate avoidance and/or minimization of impacts on other federally protected marine animals such as other whale species and sea turtles with the potential to occur in the vicinity of the project. With the adherence to restrictions developed through coordination with NOAA Fisheries and with our recommendation, we conclude that the project is not likely to adversely affect North Atlantic right whale (or other federally listed species) and are requesting NOAA Fisheries' concurrence with this finding.

#### **Land Use, Recreation, and Visual Resources**

The Rhode Island Statewide Planning Program conducted a review of the project's consistency with relevant components of the Rhode Island State Guide Plan. Based on the Statewide Planning Program's comments, it appears that the project is generally consistent with many of the individual goals, policies, and strategies of the State Guide Plan; however, the Statewide Planning Program commented that the draft EIS lacked certain information necessary for it to find the project consistent with the plan. We have provided or discussed in the final EIS the information the Statewide Planning Program identified as lacking.

Providence 2000: The Comprehensive Plan (Comprehensive Plan), which presents a guide for future growth and change in Providence, encourages water-dependent uses in the industrial waterfront area along the Providence River and recognizes the economic importance of energy-related industries in this area. Because the proposed project would involve converting an existing energy-related facility to a water-dependent use in the industrial waterfront area, we concluded that the project is consistent with the Comprehensive Plan.

We also evaluated the consistency of the project with the Providence 2020 Downtown Investment Strategy, particularly with respect to plans for the future development of Narragansett Landing, a portion of the City of Providence that encompasses the project area. The Narragansett Landing plan is a long-term plan that the City of Providence anticipates will be implemented over the next 20 to 25 years. The plan would involve acquisition of existing properties, relocation of existing land users, remediation of contaminated sites, and development of various mixed uses. The specific details for implementing the plan are still conceptual, and it does not appear that funding has been committed or that a schedule has been established. If the Narragansett Landing development plans are realized, the proposed KeySpan LNG Project would not be consistent with the plans' ultimate objectives, which include removal of the existing KeySpan LNG facility from its current site. However, the existing facility would have to be acquired and removed regardless of whether the proposed upgrade is constructed. The upgrade would add to but not fundamentally change this requirement. Thus, the project would not prevent the

Narragansett Landing plans from being implemented. In addition we conclude that the project would not be likely to threaten the development of Narragansett Landing or make it difficult to attract investment money. This conclusion is based on our review of a marketing analysis that focused on Charlestown, Massachusetts, which borders the transit route of LNG ships supplying the Distrigas LNG terminal in Everett, Massachusetts. Charlestown has been undergoing urban redevelopment including a mixed-use development project referred to as the Charlestown Navy Yard, which has attracted hundreds of millions of dollars for revitalization projects in the area. The analysis found that the presence of LNG shipping activity does not appear to have had an adverse impact on redevelopment efforts in Charlestown.

The City of East Providence and other commentors expressed concern about the potential impacts of the proposed project on the recently created East Providence Waterfront Special Development District Plan to develop and revitalize the East Providence waterfront district, about 2,200 feet to the east. However, the project would not affect land or water in the City of East Providence or result in any change in existing land use patterns. The primary impact of the project on the riverfront would be the arrival and departure of LNG ships once a week throughout the year. These ships would be visible from the East Providence shoreline opposite the LNG facility, but would be generally consistent with existing activities in the industrial waterfront area. Based on our review of the Rhode Island Bays, Rivers, and Watersheds legislation, we anticipate that the KeySpan LNG Project would not conflict with the goals and intentions of the systems-level plan to be developed by the Coordination Team. To provide the Coordination Team with an opportunity to comment on the project, we sent the Coordination Team a copy of the draft EIS. Two members of the team provided comments in their capacities within other organizations or agencies, but no members provided comments specifically related to the Rhode Island Bays, Rivers, and Watersheds legislation.

Because the project would involve activities in the coastal zone of Rhode Island and requires federal permits, it must undergo a Federal Coastal Zone Consistency Review. KeySpan LNG and Algonquin each filed an application with the Rhode Island Coastal Resource Management Council (CRMC) for a Category B Assent to certify that the project is consistent with the Rhode Island Coastal Resource Management Program (RICRMP) and the Coastal Zone Management Act. The two companies subsequently withdrew their applications, asserting that a Category B Assent is not required for the proposed project. The need for a Category B Assent is currently being addressed in another forum. After withdrawing their Assent applications, KeySpan LNG and Algonquin each submitted a federal consistency certification with the CRMC and have requested CRMC concurrence with their respective certifications. We have recommended that both KeySpan LNG and Algonquin file documentation demonstrating the project's consistency with the RICRMP prior to construction.

There are about 2,580 residences or residential structures within 1 mile of the KeySpan LNG facility site boundaries. The nearest residential area to the LNG facility is about 1,000 feet to the south (measuring from the limits of the nearest project site boundary), and the nearest residences to the pipeline route are about 950 feet to the west on the west side of Interstate 95. There are no residential structures within 50 feet of any of the proposed construction areas. During construction, potential impacts on neighboring areas could include construction-related traffic, dust, and noise. However, these effects would be localized in the vicinity of the construction activities and would decrease rapidly as the distance from the construction site increases. Construction-related traffic would use a small number of local roads that connect the project site to Interstate 95 and would not need to cross residential neighborhoods. Operation of the proposed facilities would not affect residential land use because the majority of project-related activities would take place within the existing KeySpan LNG facility, and the pipeline would be underground.

Pipeline construction would temporarily affect traffic on the affected roadways. Impacts would include slower speeds, higher congestion, lane closures, and detours. Algonquin has described certain

measures it would implement to minimize impacts on commuter traffic such as selective scheduling of activities, attempting to maintain an open traffic lane, and limiting the length of open ditch within the streets to the length of pipe that would be installed each day. Algonquin would also maintain access to businesses except for the brief periods essential for laying in the pipeline. To further insure that traffic impacts are minimized, we have recommended that Algonquin develop a detailed construction and traffic plan in consultation with appropriate state and local agencies.

Construction of the proposed facilities would not affect commercial shipping. Recreational boaters might experience temporary impacts as a result of human activity and noise associated with construction of the proposed marine facilities, but these impacts would be temporary and localized within a small area of the river immediately adjacent to the existing LNG facility. Operation of the upgraded LNG terminal would not affect commercial shipping or recreational boating during periods between LNG deliveries because none of the structures to be constructed as part of the ship berth or offloading facilities would be within the navigation channel. However, commercial and recreational ships and boats, fishermen, and others engaged in marine-based activities could be affected by the safety and security zones that would be imposed by the Coast Guard during periods when an LNG ship is in transit to or berthed at the LNG terminal. Ships and boats present along the shipping channel might experience delays as LNG ships transit the channel, and fishermen would be required to avoid or vacate the areas encompassed by the moving security zone. However, because the security zone would be a moving zone around the ship, such delays would be temporary and of short duration. Passage of the LNG ships might also damage lobster gear that is placed within the shipping channel. However, the ships would use an existing dredged federal navigation channel that is maintained specifically to allow passage by large vessels, and the placement of lobster gear within the channel assumes this inherent risk. Further, during a series of security workshops sponsored by the Coast Guard, the Coast Guard expressed its intent to minimize impacts on other users of the waterway. In addition, the Coast Guard noted that the security zone around a berthed LNG ship would not be treated as an absolute exclusion zone, and that other commercial and recreational vessels might be allowed to transit through the security zone with the permission of the Captain of the Port.

The proposed LNG facilities would be located at or adjacent to existing facilities and are not expected to alter the visual character of the site. The LNG ships calling on the KeySpan LNG terminal would result in the most noticeable visual impact of the project. The ships would be most visible from the river and from the East Providence waterfront for approximately 24 hours at a time, 50 to 60 days of the year. However, the Providence River navigation channel is currently used by other cargo ships, tankers, and barges, and less frequently, liquefied petroleum gas carriers. Although the LNG ships would be larger than other vessels typically seen in the area, their periodic presence would be generally consistent and visually in character with existing uses of the river. The most visually noticeable component of the pipeline facilities would be the tap valve, which would be constructed adjacent to the entrance road into Collier's Point Park. We have recommended that Algonquin develop a visual screening plan consisting of shrub plantings or similar measures to screen the tap valve site from park users.

### **Socioeconomics**

Construction of the project would result in a temporary increase in population and related demand for temporary housing and public services. These effects would be temporary and limited to the period of construction. Construction and operation of the project would have a beneficial impact on local tax revenues and economies, and KeySpan LNG anticipates hiring 20 to 25 new permanent employees to operate the upgraded LNG terminal. The project is not expected to have a major impact on most public services, but could result in additional costs for security during LNG ship transit and offloading. In addition, there is a concern that an incident at the LNG terminal could exceed the current response

capacity of the local police and fire departments. KeySpan LNG has begun coordinating with local agencies and governmental officials to develop an emergency response plan to be used in the event of an incident and is providing direct financial assistance to the State of Rhode Island and the City of Providence to assist each in its evaluation of the project and preparation of emergency response plans. In addition, KeySpan LNG has committed to providing certain training activities for local firefighters and to funding direct transit-related security costs.

At the request of the COE, we conducted an analysis to estimate the potential cost of delays that might be experienced by other commercial ship traffic as a result of the addition of the LNG ships that would call on the KeySpan LNG facility. Based on our analysis, we estimate that the cost of shipping delays could range from about \$103,000 to \$108,000 per year.

Based on several general and site-specific studies, as well as the fact that the proposed upgrade would be located at an existing LNG facility within a greater industrial area and the values of properties close to the site may already reflect their location near the existing LNG facility and other industrial properties, we concluded that the project would be unlikely to have a negative impact on property values in the surrounding area.

We have determined that the potential impacts of the project would not have a disproportionately high or adverse effect on environmental justice areas near the upgraded LNG terminal and federal navigation channel.

### **Cultural Resources**

KeySpan LNG assessed existing information to identify aboveground cultural resources, terrestrial archaeological resources, or submerged archaeological sites or shipwrecks that could potentially be affected by the proposed LNG facility upgrade. Previous surveys at the LNG facility documented 10 aboveground historic structures associated with the Sassafras Point Station, an early to mid twentieth century gas storage facility, that were recommended as eligible for listing in the National Register of Historic Places. The structures are not within areas that would be directly affected by the proposed project and, to provide further protection of the Sassafras Point Station structures, KeySpan LNG proposes to implement safeguards such as identifying these structures as sensitive resources on construction plans and posting signage outside of each structure. No terrestrial or underwater archaeological sites were identified, and the potential for such resources to occur at the project site were determined to be low. The Rhode Island Historic Preservation and Heritage Commission (RIHPHC) found that the project would not affect historic resources, and we concur with this finding.

Algonquin conducted research and surveys to identify aboveground or archaeological resources that might be affected by the pipeline component of the project. Background research identified two previously documented aboveground resources, including the Manchester Street Station and the Sassafras Point Station, but neither of these properties would be affected by the pipeline right-of-way or proposed extra workspaces. The RIHPHC found that the proposed pipeline would not affect historic resources, and we concur with this finding.

### **Air Quality and Noise**

Construction and operation of the proposed LNG facility upgrade and pipeline would result in air emissions. The fugitive dust and tailpipe emissions associated with construction activities would be temporary and intermittent, and would not result in a long term impact on air quality. Dust emissions would be minimized by the application of water or calcium chloride. Based on comments provided by the EPA, and to further minimize emissions associated with the use of diesel fuels during construction, we

have recommended that KeySpan LNG and Algonquin provide a feasibility assessment determining which, if any, of the controls used by the Connecticut Department of Transportation in the Interstate 95 New Haven Harbor Crossing Corridor Improvement Program could be used for the KeySpan LNG Project, and that the companies use transportation grade or better diesel fuel in construction equipment used for the project.

The operational air emissions from the new stationary LNG equipment and from LNG ships would not cause or significantly contribute to a violation of an ambient air quality standard. The primary pollutants emitted during operation of the LNG terminal would be nitrogen oxides (NO<sub>x</sub>) and carbon monoxide. Operational air emissions would be minimized by the use of electric boil-off gas compressors and pumps, low NO<sub>x</sub> burners with flue gas recirculation on the natural gas-fired water/glycol heaters, and KeySpan LNG's taking of enforceable operating limits on various equipment. The facility would operate as a closed system, no evaporative losses would occur, and natural gas would not be vented to the atmosphere during normal operations. For these reasons, we do not expect the emissions from the LNG terminal to have a significant effect on air quality. Additionally, the majority of the new stationary sources proposed as part of the LNG facility upgrade would require a minor source air permit prior to construction and would be required to demonstrate compliance with applicable state and federal regulations on an ongoing basis. As such, the air emissions from these units are presumed to conform to the Rhode Island State Implementation Plan.

Noise receptors in the immediate vicinity of construction activities would experience an increase in noise levels. In most areas, the increase in noise would be localized, temporary, and limited primarily to daylight hours. The most significant noise activity during construction would be the driving of piles for marine construction, and the most prevalent sound source would be the internal combustion engines of the construction equipment. Due to the distance between the construction activities and the nearest noise sensitive area (NSA), the temporary nature of the noise, work hours, and variable location of noise generating equipment, we do not expect noise impacts from construction activities to be significant. To ensure that noise during construction at the KeySpan LNG facility does not exceed acceptable levels, we have recommended that KeySpan LNG prepare a construction noise mitigation plan that specifies the noise mitigation measures it would use during construction. The predicted operational noise from the LNG terminal would be below the FERC's 55 decibels of the A-weighted scale day-night sound level criterion at the nearest NSAs and in compliance with Providence noise standards. We have recommended that noise surveys be conducted after the upgraded LNG terminal is in service to ensure that the LNG terminal operates in compliance with these guidelines.

## **Reliability and Safety**

We evaluated the safety of both the proposed facility upgrade and the related LNG vessel transit through Narragansett Bay to Providence. As part of our evaluation, we performed a cryogenic design and technical review of the proposed terminal design and safety systems. Several areas of concern were noted with respect to the proposed facility upgrade, and specific recommendations to be addressed prior to construction have been identified. We also note that construction of the existing KeySpan LNG facility predated the February 1980 federal LNG safety standards in 49 CFR 193, and the facility has operated for 30 years under the grandfather provision of the Pipeline Safety Act of 1979. However, the proposed project represents a significant modification to the historical mode of operation, providing the opportunity to re-evaluate the existing facility and to raise the level of safety to that required for new LNG import terminals. Our review found that the existing facility does not meet the standards of the current version of 49 CFR 193 and NFPA 59A (2001 edition) with respect to standards for thermal radiation and flammable vapor exclusion zones, impoundment capacity requirements, and seismic design requirements.

Thermal radiation and flammable vapor hazard distances were also calculated for an accident or an attack on an LNG vessel. For 2½-meter and 3-meter-diameter holes in an LNG cargo tank, we estimated distances to range from 4,340 to 4,810 feet for a thermal radiation level of 1,600 British thermal units per hour per foot squared, the level which is hazardous to unprotected persons located outdoors. However, the evaluation of safety is more than an exercise in calculating the consequences of worst case scenarios. Rather, it is a determination of the acceptability of risk which considers: the probability of events, the effect of mitigation, and the consequences of events. Based on the extensive operational experience of LNG shipping, the structural design of an LNG vessel, and the operational controls imposed by the Coast Guard and the local pilots, the likelihood of a cargo containment failure and subsequent LNG spill from a vessel casualty – collision, grounding, or allision – is highly unlikely. For similar reasons, an accident involving the onshore LNG import terminal or LNG trucking from the terminal is unlikely to affect the public. As a result, the risk to the public from accidental causes should be considered negligible.

Compliance with the flammable vapor exclusion zone requirements of 49 CFR Part 193.2059 for the proposed facilities is based on the assumption that the entire volume of cold vapor from the design spill would be contained within the main LNG storage tank impoundment, and therefore the flammable vapors would not extend beyond the LNG terminal site. However, the results of field tests would appear to refute this assumption that the 20-foot-high KeySpan LNG storage tank berm would completely contain the cold vapor from the design spill. As a result, we have recommended that KeySpan LNG provide a revised flammable vapor exclusion analysis for design spills that considers the effects of mixing with air on LNG vapors evolving from a spill within the impoundment in order to verify compliance with 49 CFR Part 193.2059.

As part of our marine safety analysis, we considered how vessel security requirements for LNG ships calling on the KeySpan LNG terminal might affect other ship and boat traffic in Narragansett Bay and the Providence River. The potential impacts on other commercial and recreational boaters can be evaluated for several general security requirements: (1) moving safety and security zones for inbound and outbound LNG vessels; (2) safety and security zones around a moored LNG vessel; and (3) other measures as deemed appropriate. The moving safety and security zone, and the safety and security zone at the terminal would affect other commercial, ferry, and recreational traffic using the bay and river. Based on a navigation simulation study conducted by Moffatt & Nichol, International (MNI) on behalf of KeySpan LNG, the addition of 50 to 60 LNG ships per year would cause about 5 percent of the total commercial ship traffic to experience some delay. The impact on ferry traffic would generally be small because most of the ferry routes only cross the LNG ship route and conflicts could be managed by schedule coordination. Further, the Coast Guard has indicated that it would typically grant permission for the Providence to Newport ferry, which would travel along the same route as the LNG ships for several miles, to pass the LNG ship or transit through portions of the security zone.

The extent of the impact on recreational boaters would depend on the number of boats in the project area during the 50 to 60 days that LNG ships would call on the LNG terminal and on several other variables such as the width of the channel at the point where a boat encounters the LNG ship. Using certain assumptions based on the MNI study, we estimate that a recreational craft attempting to travel in the opposite direction of an LNG ship at one of the narrower locations within the navigation channel might need to wait up to 18 minutes for the LNG ship to pass. To minimize potential impacts on other marine traffic, the Coast Guard is expected to use radio announcements to give advance notice of approaching LNG ships. The Coast Guard and pilots would also consider measures to minimize impacts on recreational boaters when determining the appropriate time to bring an LNG ship to port.

Operation of the upgraded LNG facility would not significantly affect vehicular traffic. LNG truck traffic would not increase over the current peak levels because the physical ability to load and unload trucks is limited by the design characteristics of the existing truck loading and unloading station, which can handle up to 24 trucks per day. No changes are proposed for the trucking station. During the recently completed Coast Guard security workshops, port stakeholders and law enforcement agencies determined that it would not be necessary to close the Pell Bridge to vehicular traffic during passage of the LNG ships unless warranted by the threat condition or current intelligence. For those transits when the bridge would not be completely closed, other security measures would be in place to protect against potential threats.

Unlike accidental causes, historical experience provides little guidance in estimating the probability of a terrorist attack on an LNG vessel or onshore storage facility. For an LNG import terminal proposal that would involve having a large volume of energy transported and stored near populated areas,<sup>1</sup> the perceived threat of a terrorist attack is a primary concern of the local population and requires that resources be directed to mitigate possible attack paths. While the risks associated with the transportation of any hazardous cargo can never be entirely eliminated, they can be managed.

Several commentors have expressed the concern that local communities would have to bear some of the costs of ensuring the security of the LNG facility and the LNG vessel while in transit and unloading at the dock. As a result of its recently completed security workshops, the Coast Guard has identified a robust security plan that requires significant Coast Guard, public, and private resources that would be necessary to implement security measures. To meet its anticipated security responsibilities, the Coast Guard has initiated a formal proposal for additional resources through its internal budgeting process for inclusion in the 2006 appropriations bill. A determination on that proposal is pending. KeySpan LNG and BG LNG have committed to providing funding for direct transit-related security costs, which are estimated at approximately \$40,000 to \$50,000 per vessel port call, or between \$2 and \$3 million annually for 50 to 60 LNG ships per year. In addition to these direct transit-related state and local security costs, there may be a need to fund additional capital costs associated with security and emergency response, such as equipment and personnel. Therefore, we have recommended that KeySpan LNG provide a comprehensive plan identifying the mechanisms for funding all project-specific security and emergency response/management costs that would be imposed on state agencies and local communities, including capital costs.

## **ALTERNATIVES CONSIDERED**

We evaluated the alternatives of no action or postponed action, system alternatives, alternative LNG terminal sites, marine berthing alternatives, and pipeline system and route alternatives. While the no action or postponed action alternative would eliminate the environmental impacts identified in this EIS, the project objectives of providing a source of new, firm, reliable baseload supply of natural gas to Rhode Island and the New England region in the near future and augmenting the supply of LNG to fill regional storage capacity via truck deliveries would not be met.

Our analysis included an evaluation of existing, recently approved, and proposed LNG facilities and pipelines as alternative systems that could be used to meet the objectives of the KeySpan LNG Project. The existing LNG import terminal in Everett, Massachusetts (Distrigas) could not be used to meet the objectives of the KeySpan LNG Project because the Distrigas facility lacks room for additional storage and vaporization, and because construction of new pipeline facilities necessary to meet the existing vaporization capacity at Distrigas would result in greater environmental impacts than the proposed KeySpan LNG Project. We also considered onshore and offshore system alternatives including

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<sup>1</sup> We note that LNG is stored at the existing facility under current operations.

LNG import terminals in the New England region. Although there are perceived safety and environmental advantages to locating an LNG terminal offshore, there are also environmental, economic, and technical factors that make an offshore LNG terminal not preferable as an alternative to the facilities proposed for the KeySpan LNG Project. In addition, offshore LNG facilities cannot meet the project objective of storage, and supplying a new source of trucked LNG for the peak shaving market.

We also considered recently approved and proposed LNG facilities outside of the New England region, including Canadian sites. The other LNG facilities we considered are too far away or otherwise would not meet the project objectives, or would not confer a clear environmental advantage. In addition, the expansion of existing pipeline systems, even if combined with the use of an existing, modified, or proposed LNG facility outside the New England region, would not meet the project objectives and would not be environmentally preferable to the proposed project. The use of recently approved LNG facilities in Canada as alternatives to the KeySpan LNG Project would require expansion of existing pipeline infrastructure that would result in environmental impacts that could be as great as or greater than the KeySpan LNG Project. Further, the Canadian sites also cannot economically provide trucking of LNG to supply peak shaving needs in southern New England.

In addition to system alternatives, we considered potential site alternatives to the proposed project location at the existing KeySpan LNG facility. We did not identify any alternative LNG terminal sites at onshore locations that are reasonable and/or would be environmentally preferable to the proposed project. Difficulties associated with identifying suitable locations in the New England region include finding property available for industrial development in an area accessible to LNG ships where there would be fewer environmental impacts.

We evaluated potential marine berth alternatives that would increase the distance of the marine berth from the federal navigation channel. Our analysis included the Northern Waterfront Alternative that would place the berth on the north side of the existing LNG facility and an Eastern Bulkhead Alternative that would place the berth immediately adjacent to the existing bulkhead on the east side of the site. The Northern Waterfront Alternative would require significant dredging and could result in geotechnical soil conditions that could jeopardize the stability of portions of the existing facility. The Eastern Bulkhead Alternative would require dredging to achieve the required water depth adjacent to the bulkhead, which could potentially undermine the existing bulkhead and impinge on existing underwater pipelines. In addition, the Eastern Bulkhead Alternative would require repositioning of the mooring and breasting dolphins in a manner that would create unsafe working conditions for plant personnel. In response to the COE's comments on the draft EIS, we reviewed potential economic impacts on users of the federal navigation project as a result of the security zone associated with both the Northern Waterfront and the proposed eastern berth alternatives. Based on the Coast Guard's security workshops, it appears that there would be no significant economic impact on other users of the federal navigation project as a result of Coast Guard-imposed security measures at either berth alternative. For these reasons, we do not believe that either alternative provides an environmental or safety advantage over the proposed berth design.

Finally, our alternatives analysis included the evaluation of seven alternative pipeline routes that would allow delivery of natural gas to the Algonquin natural gas pipeline system. Alternatives 1 through 5 would all involve crossing the Providence River by horizontal direction drilling and would not offer any environmental advantage over the proposed route. In its application, Algonquin identified a number of utilities within Allens Avenue that could complicate the proposed alignment. As a result, Alternatives 6 and 7 were identified to minimize the amount of pipeline that would be constructed within Allens Avenue, and we recommended that Algonquin provide additional environmental and engineering information regarding Alternatives 6 and 7 in its comments on the draft EIS. Based on the information Algonquin provided in response to our recommendation, we have determined that neither Alternative 6

nor Alternative 7 provide a clear environmental advantage over the proposed pipeline route in Allens Avenue.

In summary, our analysis of potential alternatives to the KeySpan LNG Project concludes that no single alternative or combination of alternatives would be capable of meeting the project objectives with fewer construction- or operations-related environmental impacts.

## **PUBLIC INVOLVEMENT AND AREAS OF CONCERN**

On May 11, 2004, the FERC issued a *Notice of Intent to Prepare an Environmental Impact Statement for the Proposed KeySpan LNG Facility Upgrade Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Meeting* (NOI). The NOI announced that FERC staff was initiating its NEPA review of the KeySpan LNG Project under Docket Nos. CP04-223-000 and CP04-293-000,<sup>2</sup> and provided information about a public scoping meeting to be held in the project area. The NOI was sent to 566 interested parties including federal, state, and local officials; agency representatives; conservation organizations; Native American tribes; local libraries and newspapers; residents within a 0.5-mile radius of the proposed LNG terminal; and property owners along the proposed pipeline route. On May 19, 2004, the FERC issued a *Notice of Site Visit*, which provided the meeting time and location for interested parties wishing to attend FERC staff's inspection of the project site.

On June 3, 2004, FERC staff conducted a public scoping meeting in Providence to provide an opportunity for the general public to learn more about the proposed project and to participate in our analysis by commenting on issues to be included in the EIS. Eight people commented at the meeting. On June 4, 2004, FERC staff conducted an inspection of the KeySpan LNG facility, including the proposed marine terminal site, and the proposed pipeline route. The site inspections were open to and attended by the public.

Several of the early scoping comments addressed the scoping process, including the number and location of scoping meetings, the length of the scoping period, the extent of the FERC's notifications, and requests for translation assistance for participants with limited English language abilities. In addition, elected officials requested additional scoping meetings on behalf of their constituents. On June 17, 2004, the FERC issued a *Notice of Extension of the Scoping Period for the Proposed KeySpan LNG Facility Upgrade Project* announcing that the scoping period had been extended for an additional 30 days and that FERC staff would hold additional scoping meetings before the end of the extended scoping period. On June 17, 2004, the FERC also sent copies of the NOI to an additional 171 parties including local officials, local libraries, and newspapers encompassing communities along the proposed shipping channel; individuals who had requested to be added to the mailing list; authors of scoping comment letters; and intervenors.<sup>3</sup>

On June 23, 2004, the FERC issued a *Notice of Public Scoping Meetings for the Proposed KeySpan LNG Facility Upgrade Project and Algonquin-KeySpan Interconnect Pipeline Project*, which provided the times and locations of two additional scoping meetings. The additional meetings were held on July 7, 2004 at location recommended by a commentator near the KeySpan LNG site in Providence, and on July 8, 2004 in Middletown, Rhode Island at a location convenient for communities along the shipping channel. Three people commented at the Providence meeting, and four people commented at the

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<sup>2</sup> At the time FERC staff issued the NOI, Algonquin had not yet filed its application for the proposed pipeline facilities, but the pipeline was included in the summary of the proposed activities provided in the NOI. When Algonquin filed its application in June 2004, its application was assigned Docket No. CP04-358-000.

<sup>3</sup> Intervenors are officials to the proceeding and have the right to receive copies of case-related Commission documents and filings by other intervenors. Likewise, each intervenor must provide 14 copies of its filings to the Secretary of the Commission and must send a copy of its filings to all other intervenors. Only intervenors have the right to seek rehearing of the Commission's decision.

Middletown meeting. On September 9, 2004, the FERC conducted a cryogenic design and technical conference in Providence to discuss design and engineering aspects of the KeySpan LNG Project. The meeting was limited to existing parties to the proceeding (i.e., representatives of KeySpan LNG and Algonquin and others who specifically requested to intervene as a party), as well as agency personnel and elected officials.

In total, the FERC received 45 letters and oral statements during and shortly after the designated scoping period. Each of the written and oral statements were evaluated and divided into individual comments, which yielded a total of 189 individual comments about the project. Additional correspondence received after the scoping period included letters from public and/or elected officials regarding the review processes for LNG facilities and the safety and emergency response planning processes, and a letter from a citizen requesting additional public meetings. In addition, the FERC received one letter and 370 copies of signed postcards that were submitted as comments on the Weaver's Cove LNG Project draft EIS, but also had the KeySpan LNG Project docket number added, and a petition stating opposition to both the KeySpan LNG and Weaver's Cove LNG Projects. Although these comments were received outside of the designated comment period for the KeySpan LNG Project, we have noted them here because some of the issues on the two projects overlap (e.g., safety and security, LNG ship traffic) and because of the stated general opposition to LNG facilities in urban areas.

The most frequently raised concerns about the project have focused on the safety of operating an LNG facility in a populated urban setting. Specific safety concerns were expressed regarding the impacts on the surrounding area if there were a fire at the proposed terminal or a fire associated with an LNG ship spill in route to the terminal. There is also concern about the potential for the terminal and LNG ships to be targets of a terrorist attack and the impact of such an attack on surrounding communities. We have also received numerous comments regarding alternatives; the impacts of LNG ship transit on commercial and recreational vessels in the navigation channel; the impacts of potential bridge closures during LNG ship transit; the demand of the project on local services, especially the costs of providing police and fire protection or emergency response; environmental justice impacts; and other environmental issues, including the compatibility of the project with existing land uses and development plans; air quality impacts; seismic risk; and the impact on water quality and aquatic resources.

The FERC prepared a draft EIS and issued a *Notice of Availability of the Draft Environmental Impact Statement for the Proposed KeySpan LNG Facility Upgrade Project* (NOA) on November 30, 2004. A formal notice that the draft EIS was available for review and comment was published in the Federal Register on December 7, 2004. The draft EIS was mailed to 800 interested parties, including federal, state, and local officials and agencies; special interest groups; parties to the proceeding; area libraries and newspapers; and individuals and affected landowners who requested a copy of the draft EIS. A 45-day public comment period was established to allow the public to review and comment on the draft EIS both in the form of written comments and at two public meetings that were held in Providence and Middletown on January 11 and 12, 2005, respectively. The FERC staff provided Spanish and Portuguese handouts describing the public comment process and the applicants provided Spanish and Portuguese translators, although none of the participants requested translation. Thirty-eight speakers made oral statements at these public meetings. Transcripts of these comments are part of the public record for the KeySpan LNG Facility Upgrade Project and are provided in Appendix F with our written responses.

The comment period for receiving written comments on the draft EIS closed on January 24, 2005. We received 59 comment letters during the designated comment period. As of the time this final EIS is being prepared, 32 additional letters were received after the comment period ended. Of the letters we received, 28 were copies of the same form letter. Transcripts of the public meeting comments and the comment letters are part of the public record for the KeySpan LNG Project. We have responded to all comments received on the draft EIS in this final EIS.

There has been considerable opposition to the proposed project by elected and public officials, municipality representatives, special interest groups, and the public. Based on public meeting comments and comment letters on the draft EIS, elected and public officials that have identified themselves or have been identified by others as opposed to the project include but are not necessarily limited to the following: U.S. Senator Jack Reed, U.S. Senator Lincoln Chafee, U.S. Congressman Patrick Kennedy, U.S. Congressman James Langevin, Rhode Island State Representative Bruce Long, Rhode Island State Representative Joseph Amaral, Rhode Island State Representative Raymond Gallison, Rhode Island State Representative Susan Story, Rhode Island State Representative Amy Rice, Rhode Island Governor Donald Carcieri, Rhode Island Lieutenant Governor Charles Fogarty, Rhode Island Attorney General Patrick Lynch, Mayor David Cicilline of Providence, the Providence City Council, the City of East Providence, Mayor Edward Lambert of Fall River, Massachusetts, the Jamestown Town Council, the Town of Narragansett Planning Board, the Barrington Town Council, the City of Warwick, and the Town of Bristol. On March 15, 2005, six Rhode Island representatives proposed a resolution in opposition to the proposed Weaver's Cove LNG and KeySpan LNG Projects and the associated LNG ship traffic in Narragansett and Mount Hope Bays.

## **MAJOR CONCLUSION**

The KeySpan LNG Project, as proposed, would not meet current federal safety standards in 49 CFR Part 193 and NFPA 59A (2001 edition). LNG import terminals should comply with current safety regulations. KeySpan LNG indicated that to bring the terminal into compliance with current standards would not be feasible due to the high financial costs, the need to acquire several adjacent properties, and the fact that making the modifications would require taking the existing facility out of service for two to three heating seasons.

Apart from the fact that the proposed import terminal would not meet current safety requirements, we believe that with the appropriate mitigation, construction and operation of the KeySpan LNG Project would result in limited adverse environmental impact.

The primary reasons for our decision regarding the environmental impacts are:

- the project would be constructed and operated in accordance with KeySpan LNG's and Algonquin's proposed mitigation and our recommended mitigation measures;
- the project would make use of an existing LNG facility within a designated port area, which would minimize environmental impacts and maintain consistency with existing land uses;
- the project would not require dredging, which would minimize impacts on water quality and aquatic resources;
- KeySpan LNG would implement applicable provisions of FERC staff's Plan and Procedures and Algonquin would implement the measures specified in its ESCP to mitigate impacts on soils and waterbodies;
- KeySpan LNG and Algonquin would develop and obtain DEM approval of an RAWP and SGMP, respectively, to provide for safe handling of contaminated soil and groundwater;
- the project would not affect wetlands, forest land, agricultural land, or residential property;

- the project would not affect federally listed threatened or endangered species, species proposed for listing, or critical habitat under jurisdiction of the FWS; and is not likely to adversely affect the North Atlantic right whale or other federally listed species under the jurisdiction of NOAA Fisheries;
- the project would not affect historic resources;
- about 79 percent of the pipeline route would be within existing city streets;
- the appropriate consultations with the CRMC would be completed before KeySpan LNG or Algonquin would be allowed to start construction;
- KeySpan LNG would obtain applicable permits and authorizations from the COE prior to beginning construction;
- KeySpan LNG and Algonquin would obtain all other applicable federal, state, and local permits and authorizations prior to initiating activities requiring such permits and authorizations;
- operational controls would be imposed and implemented by the local pilots and the Coast Guard with assistance of state and local authorities to direct the movement of LNG vessels, and the security provisions to deter attacks by potential terrorists; and
- the environmental inspection and mitigation monitoring programs that would ensure compliance with all mitigation measures that become conditions of any FERC authorization.

While a majority of the physical environmental impacts described in the final EIS would be temporary and most significant during the construction period, some adverse impacts associated with project operations would be unavoidable. These include: (1) the impact on aquatic resources due to ballast water withdrawals in the Providence River during the LNG unloading; and, (2) recreational boating delays of up to 18 minutes that would occur during the arrival and departure of the 50 to 60 LNG ships per year as a result of the anticipated LNG vessel security zones imposed by the Coast Guard.