From John Lust

Regarding the Proposed Islander East Natural Gas Pipeline

A Report and Recommendations

by the

Branford Blue Ribbon Committee

November 28, 2001
Branford, Connecticut

BRANFORD BLUE RIBBON COMMITTEE'S "REPORT AND RECOMMENDATIONS REGARDING THE PROPOSED ISLANDER EAST NATURAL GAS PIPELINE"

Branford's First Selectman appointed a Blue Ribbon Committee in mid-September to study the application by Islander East Pipeline Company, LLC before the Connecticut Siting Council for a certificate of environmental compatibility and public need. The **Committee was comprised of members of various town boards or commissions that exercise regulatory authority under the Town charter and whose members are familiar with both local and state regulations governing the use of land and water resources and acceptable development practices**.

The committee's charge was to gather information about the proposed project and report to the Board of Selectmen. On November 28th, the Committee submitted its report and recommendations to the Board of Selectmen, which unanimously adopted the report. The report reflects the **town's recommendation that the Siting Council reject the application as presented by Islander East**.

In the course of its work and in addition to its own research, the **Committee conducted five nights of public hearings** in order to collect information and to hear the views of the public. These hearings also afforded Islander East the opportunity to publicly present its plan and to respond to information requests from both the public and Committee. In addition to Islander East representatives, **more than sixty residents and business people addressed the Committee** and submitted **more than thirty exhibits supporting their statements.**

The **Committee's conclusion and recommendation is that the Islander East's application should be rejected because it is incomplete and premature**. The Committee found the information in **the application to be insufficient for any regulatory - local, state or federal - to make an informed decision**. The Board of Selectmen unanimously voted to accept the Committee's report and forward its recommendation on to the Siting Council as the Town's recommendation.

Attached is a two-page summary of the Committee's thirty-four page report.

Attachment

SUMMARY OF BRANFORD BLUE RIBBON COMMITTEE'S "REPORT AND RECOMMENDATIONS REGARDING THE PROPOSED ISLANDER EAST NATURAL GAS PIPELINE"

Islander East's Proposal is incomplete and premature. (p. 2)

- The **application contains insufficient information** for any regulatory agency to make and informed decision;
- Numerous, specific **requests for information were not met;**
- It is **unacceptable to leave planning to on-site decisions;**
- **Islander East does not to know how most important procedures will be conducted** (e.g., horizontal directional drilling);
- **The applicant lacks basic information for plan development.**

Alternatives and Variations analysis is deficient. (pp. 2-7)

- **Several transportation corridors (other gas lines, highways, rail line) were not considered as alternatives** from the main Algonquin pipeline to Long Island Sound;
- The **landfall sites for the proposed route,** as well as for one of the Branford alternatives, **were already rejected by the Connecticut Siting Council;**

Fails to meet local state and federal standards (pp. 7-11)

- Islander East **failed to consider the Town's Plan for Conservation and Development and existing Town zoning and wetland regulations** (even though they have copies);
- The **application contains insufficient data to determine the impact on adjoining commercial, industrial and residential facilities;**
- There is **no information on meeting public safety standards;,**
- No consideration is given to the impact on the community's character and appearance.

Critique of Islander East's construction methods (pp. 12-17)

- Proposed **construction procedures do not meet local standards** (application of local standards would not prevent construction of the pipeline);
- The application **lacks details necessary to accurately estimate environmental costs** to wetlands
- Proposed **restoration plans for wetlands and wooded uplands are inadequate** and are based on erroneous assumptions;
- Proposal to designate **a company employee as environmental inspector provides insufficient protection;**
- **Horizontal directional drilling (HDD) is untried** in the proposed context and Islander East has no credible evidence that HDD is feasible;
- Islander East has, at best, **provided minimal detail regarding the disposal of the spoils** generated by the proposed HDD;
- They have provided **no data supporting their ability to reduce excessive noise** from the HDD phase of the project;
- They have **not yet prepared a contingency plan** for how the pipe will be laid in the event HDD fails;.
- The proposed plan to use hydrojetting or mechanical plowing **will disrupt the bottom and water quality throughout the area;**
- The lay barges that need to be used will **impact a corridor more than two-thirds of a mile** wide; the barge anchors alone will damage shellfish beds.

Economic and social impact (pp.17-24)

- The use of tugs, barges and their large anchors proposed pipeline **risks the loss of one of Branford's most valuable natural resources – its shellfish beds;**
- The Islander East timetable **provides no opportunity to analyze the data** they say they will collect prior to construction;

Summary of Branford Blue Ribbon Committee Report re: Islander East Pipeline

Economic and social impact; con't.

- Sedimentation will have **negative impacts on shellfish beds;** tide changes will not clear it out;
- **Islander East has not provided necessary data regarding sedimentation** as other applicants have (CT Siting Council Findings of Fact, Docket. No. 197, Section 65, page. 14);
- Denials of other applications cite **silt and sedimentation threat to shellfish** (CT Siting Council, Docket No. 197, Section 93, p. 19);
- **Islander East provided no response or information to questions regarding sediment testing;**
- **Islander East cannot support its claim** that HDD will not damage shellfish beds;
- There is **no provision for restoring damaged shellfish beds;**
- The **overall loss is valued at $861,300,000** for destruction of the town's shellfish resource;
- **Islander East has not provided the necessary information for local businesses** to determine how the pipeline will affect their ability to operate (see Tilcon/BSR's application as intervenor);
- Pipeline **project will adversely impact the town's $500,000 tourism industry;**
- Islander East has **failed to adequately respond to public safety concerns;**
- Islander East **failed to provide information about security;**
- Proposed route **will degrade outdoor recreational resources;**
- **Costs imposed on abutting residents.**

Financial assessment (pp. 25-26)

- Limited liability structure protects Duke and KeySpan stockowners; the **town, however remains vulnerable to financial risk;**
- **Islander East has not agreed to secure performance bonds** for this project;

Environmental analysis (pp. 27-32)

- The project **will irrevocably damage important environmental resources;**
- Two-thirds of the **proposed Branford route is through a green corridor;**
- The proposed route unnecessarily criss-crosses the Branford Steam Railroad tracks, **maximizing its adverse impact on environmentally sensitive areas;**
- **The pipeline will disrupt and degrade important coastal wildlife habitats**, including many species identified by the state as endangered, threatened or special;
- The **suspension of heavy metals and other toxic compounds** now buried in bottom sediments **would harm marine life and the mammals and birds** that feed on them;
- Islander East **has failed to provide for an acceptable restoration of 'temporary' construction areas** to a semblance of their original condition.

Areas in which requested conditions to be placed on Islander East (pp. 32-34)

- **Bonds** (for liability, remediation, closure, lost revenue);
- **Route selection and construction practices;**
- **Environmental oversight by san independent environmental inspector;**
- **Restoration and management;**
- **Marine construction.**

Conclusion (p. 34)

- **Sufficient need has not been demonstrated;**
- **Long-term economic value of $1billion**, as well as permanent environmental destruction.

Table of Contents

Section	Page
Statement of purpose	1
The Islander East application is incomplete and premature	2
Alternatives and variations	2
Islander East's Proposal Fails to Meet Local, State and Federal Standards and Regulations	7
Planning & Zoning Standards and Regulations	7
Inland Wetlands and Watercourses Standards and Regulations	9
Critique of Islander East's Construction Methods	12
Construction in and around wetlands	12
Horizontal directional drilling (HDD)	14
Off-shore pipeline installation	16
Hydrotesting	17
Potential Economic and Social Impacts of the Pipeline on Branford	17
Damage to shellfish beds and other marine resources	17
Impact on local businesses	21
Impact on tourism in Stony Creek and the Thimble Islands	21
Safety-related costs	22
Disruption and degradation of outdoor recreational resources	24
Costs imposed on abutting residents	24
Financial assessment	25
Preliminary Environmental Analysis	27
Requested conditions to be placed on Islander East	32
Conclusion	34
List of Attachments	35

Branford Blue Ribbon Committee

TOWN HALL
BRANFORD CONNECTICUT 06405

To: The Board of Selectmen
Town Hall
Branford, CT 06405
Attention: Hon. Anthony J. DaRos, First Selectman

Re: Islander East Pipeline Company, LLC
Application to the Connecticut Siting Council

Statement of purpose

A Blue Ribbon Committee was appointed by the First Selectman to consider the impending application by Islander East Pipeline Company, LLC to the Connecticut Siting Council for a certificate of environmental compatibility and public need. The Committee was formed September 16, 2001 to gather information about the proposed project and report to the Board of Selectman about the impact of the project on the town. The Committee was composed of an eclectic group of citizens brought together to examine this application from their various viewpoints: Chairman, Danny Shapiro (Inland Wetlands Commission Chairman), Joan Berdick (Branford Housing Council), Bill Horne (Conservation & Environment Commission), John Lust (Planning & Zoning Commission), Al Mignone (Economic Development Commission Chairman), Kyle Nelson (Shellfish Commission Chairman), and Lorraine Young (Board of Finance). Five public hearings were held to assemble a body of knowledge regarding the specifics of this application. Representatives from Islander East made presentations and the citizens of the Town of Branford and elsewhere asked questions, presented their opinions, and stated their concerns. The hearings drew a large and diverse group of people (50 to 75 at each hearing), and the Committee received oral or written testimony from 50 individuals and organizations with specific local knowledge and (or) a specific professional expertise who offered technical commentary and submitted a body of evidence which is appended here (*Attachment 1*). The Committee was also informed that signatures had been collected from 5,556 people opposing the construction of the pipeline. We are indebted to those who donated their time and effort to understand the Islander East application, study the route of the proposed pipeline, and submit technical documents offering their professional opinions. Without their effort, the Islander East proposal could have been given only a cursory review during the short period of time allotted for this process.

The Islander East application is incomplete and premature

It is the inescapable conclusion of the Committee that **this application provides insufficient information for this Committee or any regulatory agency to make an informed decision** about the environmental compatibility of the proposed route. **Details of construction techniques are woefully lacking,** particularly for wetlands crossings and the proposed horizontal directional drilling (HDD). **Specific requests by the Committee for information were not met,** even when the information requested could be derived from the company's previous experience with techniques such as noise abatement at HDD sites. The applicant apparently fails to realize that **it is not suitable to leave the planning to on-site decisions involving the application of generic methodology** designed for crossing hundreds of miles of unbroken forests in northern Maine when the route passes through one of the most densely populated regions of the country.

Furthermore, it appears that **Islander East doesn't even know how some of the most important procedures will be carried out** and in some cases even **lacks some of the basic information** needed to develop those plans. Time and again, the application to the Siting Council makes statements such as:

- "Specific details regarding ... hydrostatic testing ... are being developed." (p. 17)
- "Islander East is presently evaluating techniques to contain and recover drilling mud from the seafloor at the exit hole." (p. 39)
- "Islander East is presently developing a study to predict and assess sediment transport within Long Island Sound during construction." (p. 57)
- "The analysis is scheduled to begin in the fall of 2001 **and be completed by the fall of 2002.**" (p. 58, emphasis added)
- "Islander East is preparing a *Directional Drill Contingency Plan* describing how inadvertent releases of drilling mud will be handled." (p. 78)

If the applicant doesn't know how it will construct the pipeline, how can the Town of Branford determine how the project might affect this community? Time and again, the Committee was told that Islander East wants to work with the town, but the consistent unspoken message was "You don't need to know about what we're going to do. Just trust us and stay out of our way." Islander East should be told to reapply when it has the answers to some very basic and important questions.

Alternatives and Variations

Islander East's analysis of alternative corridors and variations within the proposed corridor is deficient. They fail to address issues that argue against their choice of route and casually impose costs on the town and individual property owners when it suits their economic purpose. It should not be the responsibility of the Town of Branford or of individuals whose property values will be diminished by the pipeline to determine a suitable alternative. The main Algonquin pipeline runs the length of the state from Danbury to Killingly. Numerous transportation corridors (other gas transmission pipelines, highways, major railroad corridors, i.e., Amtrak) offer alternative routes from the main Algonquin pipeline to Long Island Sound.

Two such possible alternative corridors are offered as examples. The first follows an Amtrak right of way from the point at which the existing Algonquin C-1 and C-1 L pipelines, which will be upgraded as part of this project, cross the right of way just west of Interchange 12 on Interstate-91 (near MP 11.8) in North Haven. From this point south to New Haven, the Amtrak right of way lies within a highly industrialized corridor where, based on a review of U.S. Geologic Survey topographic maps, the cumulative impact of the pipeline will be less than that of the proposed route through Branford. The single required crossing of the Quinnipiac River could be accomplished by horizontal directional drilling (HDD). In this case, both the entrance and exit points of the HDD would be on land. The location of the pipeline in the rail corridor offers the additional advantage of access to multiple locations for entering Long Island Sound where the corridor passes near the shore or crosses existing pipeline right of ways (i.e., New Haven Harbor via the Long Wharf area or near the West River, next to the existing Iroquois pipeline or other points in Milford).

The second alternative example is for Islander East to run the pipeline in the existing Iroquois right of way from Brookfield where the existing Algonquin main pipeline intersects the Iroquois corridor. The entire installation in Connecticut would be along a gas pipeline right of way, which is already disturbed and where installation would be easier than through the wetlands and other natural areas along the Branford route. The distance across Long Island Sound would be very much the same, and would run through the area that was impacted by and has yet to recover from the Iroquois pipeline installation, minimizing further destruction and disturbance of the Long Island Sound.

Islander East (or alternatively the federal government and the states of New York and Connecticut, if transporting gas from Connecticut to Long Island is such an important public good that the government's power of condemnation of property is given to private corporations) should be required to evaluate all of these routes and to site the pipeline where it truly causes the least environmental damage and economic hardship.

The landfall sites of the proposed route and the Short Beach alternative were evaluated and rejected by TransÉnergie.

The Findings of Fact for Connecticut Siting Council Docket No. 197 (March 28, 2001) states:

> "**TransÉ evaluated six alternative landfall locations ... including ... Short Beach and Trap Rock Dock in Branford. .... The alternative landfall routes ... were evaluated and rejected** by TransÉ because of disturbance to shellfish beds, undesirable offshore constraints or geologic conditions; insufficient access and working space within the right-of-way; potential for disruption to residential neighborhoods, public recreation areas, public services and utilities; potential for disturbance to ecological resource areas, species of special concern, and significant natural communities; potential for exposure to known and suspected contaminated soil and groundwater,"
>
> (Finding of Fact No. 51, page 10, emphasis added)

The same constraints and considerations apply to the use of these sites in Branford by Islander East, arguing that these sites are not suitable for siting this gas pipeline.

All three of the routes that were presented have serious drawbacks

While most of this report focuses on the route along the Branford Steam Railroad track, the Islander East application presents two alternative routes, the Short Beach and Sachems Head alternatives. Low resolution topographic maps are the only information that has been supplied for these routes, making it impossible to properly evaluate them as alternatives. However, even the little information that was made available suggests that both alternative routes have major impacts on environmental resources, especially Town- and Land Trust-owned conservation land. The Short Beach alternative clearly crosses public water supply watershed land and appears to cross two Land Trust properties, including a 19.5 acre parcel of high salt marsh and a newly acquired 40 acre nature preserve, the only significant parcel of undeveloped wooded land in the most densely populated neighborhood in Branford. Nearly ten percent of that wooded preserve would be cleared for construction if the procedures described for the preferred route were followed. The Sachems Head alternative traverses a major assemblage of Town- and Land Trust-owned open space in Branford and Guilford that includes over 600 acres of contiguous protected open space. This area encompasses the Towner Swamp/Hoadley Creek watershed, a largely undeveloped coastal watershed that provides critical wildlife habitat and enhances the water quality of Long Island Sound. Even Islander East concedes that these alternatives are not desirable. Kevin Galligan described the Short Beach alternative as "a miserable one". (*Attachment 2*; October 9 public hearing transcript, page 67.)

Islander East considers no variations in the preferred route

The Islander East proposal does not discuss possible variations in the preferred route that would reduce the environmental, economic and social impacts to Branford. (Two alternatives were presented to the Branford Land Trust after the close of the public hearings.) As noted elsewhere in this report, the Town has a number of concerns about specific features of the proposed route, which will be summarized below. However, the discussion of possible variations is dominated by the fact that **there are no good options for much of the route through Branford**. By choosing to follow the Branford Steam Railroad track from North Branford to Long Island Sound, Islander East has attempted to thread the pipeline through a very narrow corridor that is severely constricted along much of its length by residences, a school, and environmentally sensitive wetland and upland habitat, much of it dedicated conservation land. All of this to take advantage of an existing right of way that is barely as wide as a country road in many places. Moreover, the pipeline cannot be placed within the railroad right of way nor is the right of way accessible for construction purposes since the railroad is used continuously by Tilcon, Inc. and the Branford Steam Railroad (BSR) to transport crushed stone to the Tilcon shipping facility on the shore of Long Island Sound. (This Committee notes that Tilcon and BSR have expressed concerns in their petition to the Federal Energy Regulatory Commission to be granted intervenor status (page 3) that the construction and maintenance of the pipeline may restrict their ability to operate and maintain the railroad and that they "have not been provided adequate information by Islander East ... to

form a conclusion or belief as to the potential impacts it might have on their respective operations".)

The proposed pipeline route would impose unbearable costs on a small businessman

Between MP 7 and 7.3, the route occupies a narrow strip of upland between the BSR track and wetland that is currently occupied by a private access road to a local landscaping business, owned and operated by Mr. George Ghiroli. Across the track from Mr. Ghiroli's property is an industrial facility, which should be considered as a possible route. This point was indicated as an example of a design problem by the Town Planner, who noted the constraints imposed on the access road by the track and the wetlands. Mr. Ghiroli, has stated that constructing the pipeline on his access road will prevent him from operating his business (see *Attachment 3*, Ghiroli letter). An Islander East employee, Mr. Ed Harney, stated to the Committee [see *Attachment 4*, October 10 hearing transcript, page 41] that the company had spoken with Mr. Ghiroli on site and had made "a minor adjustment to address his concern." Mr. Ghiroli disputes Mr. Harney's testimony and still believes that the pipeline will force him to stop operating his business.)

Changes in the route would reduce impacts to wetlands

As noted in the section on environmental impacts, variations exist that would reduce the environmental impacts of the Branford River crossing (MP 7.7) and completely avoid impacting wetlands A32 (MP 8.7) and A34 (MP 9.0), although in the case of wetland A32, the upland variation would require blasting and major changes in the topography of a Land Trust-owned preserve. In the latter two cases, Islander East's design engineers appear to have dismissed the alternative in order to avoid the expense of transporting and off-site disposal of blasted rock.

At some points there are no satisfactory routes

In addition to the dilemma of deciding between degrading wetland A34 and blasting across Land Trust property, at least two points along the route present **no satisfactory options**. Where the pipeline crosses Rt. 146 (MP 8.95), the Wightwood School parking lot separates the school building from the west side of the railroad track by little more than 100 feet, while a Land Trust-owned wetland abuts the other side of the track. The Land Trust preserve is chosen as a staging and spoil storage area for the road crossing. Across the street from the Land Trust's wetland, a house located about 50 feet from the track, (with the septic system between the house and the track) presents another obstacle.

The second point where no good option exists is the natural area south of the Amtrak line. If Islander East insists on clinging to the BSR track, there appear to be three possible alternatives here: clearing a right of way through the uplands of the Land Trust's Goss property, as described in the application, trenching through the pond, or trenching along the edge of the salt marsh. (These three options were in fact presented to the Land Trust by Islander East after the close of the public hearings with a cover letter that falsely implied that the Land Trust was actively working with Islander East to design a route through Branford.) The willingness of the design engineers to route the pipeline through the upland here, despite

the presence of extensive ledge, suggests that they intend to leave the blasted rock on the nature preserve, given their reluctance opposite wetlands A32 and A34 to design a route that would require off-site disposal of excess rock. The Tilcon dock and sedimentation ponds and the Juniper Point residential development place additional constraints on locating the pipeline through this area. Each of the options damages a valuable environmental resource.

No alternative route is presented for entering the water by conventional trenching

Islander East states that it is developing a contingency plan for use in the event that the horizontal directional drill fails to achieve its objective. As noted elsewhere, the company's representatives concede that such failure would require resorting to conventional trenching to enter Long Island Sound. This Committee is concerned that trenching would not be possible at the site of the Tilcon dock and channel, requiring a major change in the route. Islander East has either not identified a possible route for the trenching option or failed to present that route in its application.

Transmission facilities across Long Island Sound should be located where they will have the least negative impact.

Several individuals and organizations testified about the need to plan utility crossings of Long Island Sound in a regional context and to identify opportunities to locate pipelines and cables within corridors in order to minimize environmental and economic impacts. Anstress Farwell, President, New Haven Urban Design League, testified that from an "Eco-view", Long Island Sound represents a vital asset to the Town and the State and that threats to this resource should be addressed on a comprehensive regional basis. Barbara Gordon, Executive Director, CT Seafood Council, testified that Long Island Sound represents a "major" food source and that it needs to be protected. She states that "once disturbed, never made whole". Nick Crismali, President CT Lobsterman Association, stated that Long Island Sound is New England's "largest natural resource" and that any intrusions on the Sound need to be evaluated with all other pending projects so as to minimize impacts.

Islander East has chosen this location to cross the Sound because it the shortest straight line between two points controlled by Duke Energy and KeySpan, not because it is the best place in terms of minimizing damage to the Sound. (It is the longest distance between the Connecticut and Long Island coasts, maximizing the impact on marine resources.) Detailed evaluation of the nature of the underwater terrain to be crossed, the sediments that would be disturbed and the currents that will spread that sediment into undisturbed areas was initiated only after the route was chosen, and will not be complete for a year. The application fails to discuss the relative merits of this route and other possible paths across the Sound.

A region-wide analysis of proposed Long Island Sound crossings is needed to avoid the willy-nilly degradation of an important regional and national resource.

The Blue Ribbon Committee was told that as many as 19 transmission facilities (gas, electric, communications) across Long Island Sound have been proposed or are in the planning or conceptual stages. Selection of sites for these facilities must be based on a careful study throughout the Sound of currents and bottom conditions, including the presence

of toxic chemicals in the sediments, and the locations of biological and economic resources. Routes across Long Island Sound must not be selected based only on considerations of cost and convenience for a few large corporations. Routes that minimize the length of the Sound crossing and the idea of a single corridor that accommodates multiple lines must be carefully considered.

Islander East's Proposal Fails to Meet Local, State and Federal Standards and Regulations

Planning & Zoning Standards and Regulations

It is not possible to determine the extent to which the pipeline project is consistent with local planning, zoning and engineering standards and regulations.

An evaluation of the Islander East proposal for the portion of the pipeline that would pass through Branford requires analysis of its environmental, safety and economic effects on our community within the framework of the Town's plans and regulations. Zoning regulations went into effect in 1954. As a result of a process begun in 1969, a Plan of Development was adopted in 1972. The original plan has been refined in the ensuing years to include such elements as a Plan for Conservation and Development, most recently revised in 1997. This forms a basis for considering any proposal presented to the Town. Islander East failed to consider the Plan of Conservation and Development which states policies concerning cohesion of neighborhoods, impacts on scenic roads, preservation of landscape and visual integrity of landscape.

The pipeline degrades the character and appearance of Branford.

No consideration appears to have been given to the impact of the proposed pipeline on the general character and appearance of the community. As noted in the section on environmental impacts (below), the pipeline would open a cleared right of way down the center of a wooded greenway composed of dedicated conservation land and other undeveloped properties that flank the narrow Branford Steam Railroad. For much of the length of the greenway, the railroad is only a single track with tall trees arching over and nearly closing the canopy above the track. The 75 foot wide cleared construction corridor will cross Route 146, which was the first state road to be designated a "Scenic Route" approximately 10 years ago. The pipeline corridor will have a major impact on the scenic nature of this part of Scenic Rt. 146, a loss that cannot be compensated.

The Committee notes that the potential **cumulative** negative impact of the pipeline on the character and appearance of the community is greater than the impact of the specific proposal before us. In a response to questions from the Federal Energy Regulatory Commission about projected demand exceeding the capacity of the pipeline, Islander East stated that it would increase capacity by "minor looping", that is by installing additional pipes parallel to the proposed pipeline. Thus, the width of the required right of way is anticipated to widen as Islander needs to increase its capacity. When asked to describe specifically how such looping might affect the pipeline right of way in Branford, Mr. Kevin Galligan of Islander East stated that the explanation of looping was too complicated (see *Attachment 5*, October 9 hearing

transcript, pp.48-49). The Committee is thus left to assume the worst, i.e., that additional pipes and the widening of the scar across the town lie in the future.

Branford's regulations should be respected.

Branford's Zoning Regulations are not onerous or unduly restrictive. Rather, they are designed to provide the Town with the information necessary to make informed decisions and to protect the town and its residents from the consequences of poorly designed or narrowly self-interested projects. Indeed, the presence of a strong commercial and industrial base and a variety of types of residential neighborhoods within the town suggests that local regulations provide an appropriate basis for guiding development in the context of protecting community values and character.

As was pointed out by Town Planner, Shirley Rasmussen and Town Engineer, Stephen Dudley in their testimony on October 10, the Islander East plans do not provide sufficient detail to determine specific impacts on adjoining commercial, industrial and residential facilities. The plan, which consists only of (1) aerial photographs overlaid with property lines, the route and construction area at a scale of 1 inch to 200 feet and (2) generic examples of construction practices, fails to meet several individual standards found in the regulations. Section 31 requires an A-2 survey at a scale of 1 inch to 40 feet, existing and proposed contours (2 foot intervals), existing wooded areas, wetlands and watercourses, and Coastal Area Management boundary, among other features. Section 44 is concerned with topsoil, sand and gravel removal, and provides requirements for details of final contours, minimum distances for blasting, hours of operation, disposal of excavated material, etc. None of these details are provided by Islander East. Section 41 provides performance standards for generation of dust and air pollution, noise, glare of light, refuse, danger of explosion and fire. These issues are not addressed in sufficient detail. It was noted that in Connecticut, erosion and sedimentation control measures must be designed and approved on a site-specific basis.

Public safety is one of the standards that must be met. During the constructions period of a project, traffic circulation and public access must be planned for. No details were provided about how these issues would be addressed. In addition, concerns were voiced by Mr. Timothy Raynor, member of Branford's Fire Commission, about additional costs for training emergency personnel that would be required by the presence of the pipeline. (The latter question is dealt with in greater detail in the discussion of economic impact, below)

Despite the short time available and the inadequacy of the details provided by the Islander East plan, the Town Planner and Town Engineer were easily able to identify two examples of potential conflict of the pipeline and existing facilities. One is at the rear of buildings on Business Park Dr., the other is the Ghiroli property on Flax Mill Rd. Ms. Rasmussen and Mr. Dudley illustrated these problem sites with maps provided to the Committee. Mr. Dudley pointed out that a portion of the proposed pipeline runs parallel to sanitary sewers and crosses storm sewer systems, and stated concerns that the presence of the proposed pipeline would impede access for maintenance and expansion of sewer lines. Mr. Dudley also noted that the Branford Steam Railroad required the town to install sanitary sewer pipes in 1986 by jacking them under the tracks, and questioned if the gas pipeline would need to be installed in a

similar manner. No information was provided by Islander East about how the pipeline would be installed under the tracks.

Branford must not be made to bear the social costs of the pipeline.

Finally, questions were raised about what mechanism exists for addressing problems that might arise in the event that the pipeline is constructed through Branford, and if the Town would have any recourse other than relying on its own resources. Islander East proposed the formation of a "task force" to address problems that might arise. However, The Committee places little confidence in the value of such an offer, given the fact that residents of North Haven are still complaining about "problems with surface and groundwater flow, septic system drainage disruption, well damage, and erosion" caused by the construction of the existing Algonquin pipelines. (See *Attachment 6*, request from Joanne Wachholder, FERC Environmental Project Manager, to Islander East and Algonquin Gas Transmission Co., dated November 2, 2001.)

Inland Wetlands and Watercourses Standards and Regulations

In the State of Connecticut, local Inland Wetland Commissions derive their authority from Connecticut General Statutes 22a. Like those of other Connecticut Municipalities Branford's Inland Wetland regulations are consistent with the State Statutes, as recently determined by a unanimous State Supreme Court decision (SC 16486). Branford's Inland Wetland Regulations incorporate requirements that are not met by the Islander East application, including

- a "no net loss of wetland" policy
- a requirement to present an analysis of prudent and feasible alternatives.

Islander East's proposal fails to provide for no net loss of wetlands.

Branford has placed a high value on preservation of its wetlands in their unmolested state and specifies that wetland disturbances must be mitigated according to an approved wetland mitigation plan that enhances, restores or creates a wetland in an area ratio of not less than twice the area of the proposed wetland disturbance. This requirement is in keeping with the goal of "no net loss" of wetlands that has been adopted by local, state and federal governments. At the federal level, this goal was annunciated by President George H. W. Bush in 1989. Under the Clean Water Act, permits issued under Section 404 of that act require that the permittee provide compensatory mitigation for unavoidable damages to wetlands.

> "To achieve no net loss of wetlands within the Section 404 program, a permittee is first expected to avoid deliberate discharge of materials into wetlands and then to minimize the discharge that cannot be avoided. When damages are unavoidable, the Corps of Engineers can require the permittee to provide 'compensatory mitigation' as a condition of issuing a permit. Compensatory mitigation specifically refers to restoration, creation, enhancement, and in exceptional cases, preservation of other wetlands as compensation for impacts to natural wetlands."
>
> *Compensating for Wetland Losses under the Clean Water Act,* National Research Council, National Academy Press, 2001, p 2.

The "no net loss" standard is applied to all activities in Branford's wetlands, including those by the local government that are related to the public health and safety. The Town of Branford currently has a permit to modernize the sewer treatment plant. Said application required the filling of Inland Wetlands and this taking is to be mitigated by a proposal to enhance another wetland on a scale of not less than 2:1.

Contrary to local, state and federal standards, the Islander East application fails to avoid discharge of materials into wetlands or to minimize the discharge that cannot be avoided (see comments below regarding construction practices). Moreover, no compensatory mitigation for damage done to wetlands or wetland crossing or work in close proximity to wetlands has been proposed. As per Section 7.5.5 of the Town of Branford Inland Wetland Regulations, mitigation must be offered at a rate of not less than 2:1 for any wetland that is disturbed, filled, or permanently altered. Any and all activities such as stream and wetland crossing must be accompanied by wetland mitigation plans to specifically "enhance, restore, or create" wetlands either in the same watershed or elsewhere. Such mitigation plans are not optional.

Islander East's proposal to permanently open the canopy above wetlands will damage and possibly destroy those wetlands.

Construction of the pipeline involves the clearing of 75 feet or more along the entire length of the pipeline for the permanent easement and the "temporary" construction area. There should be no distinction between acreage disturbed during construction and acreage kept cleared after construction unless an active and extensive restoration plan is undertaken. As noted in the critique submitted by Inland Wetlands Commissioner Dr. Richard Orson, Professional Wetlands Scientist and Certified Senior Ecologist (see *Attachment 7*), the effects of the construction process will permanently alter the nature of the wetlands and watercourses that it traverses even with a properly managed intensive mitigation plan, and no such plan has been offered. The cutting of the nearly unbroken canopy of trees over the wetlands, including those that lie along the rail line, will permit new levels of light and heat to penetrate down to the floor of the forested wetlands, changing the biological community of the wetland and subjecting it to drying. Furthermore, as we in Connecticut have so frequently witnessed, the opening of the canopy also provides a direct corridor for penetration of invasive species that competes with and displaces our local indigenous flora, thereby reducing our natural biodiversity and robbing our community of its unique composition of native vegetation. The great majority of inland wetlands along the proposed route of the pipeline exhibit high values and are populated by a preponderance of native vegetation. Invasives are only visible where the rail line intersects a road and the otherwise intact canopy has been broken (i.e. at Rte. 146). The local Inland Wetlands Commission requires an invasive species control plan that includes at least five years of monitoring, something that has not been included here.

Islander East fails to consider prudent and feasible alternatives

State statute and the Branford Inland Wetland and Watercourses Regulations require the consideration of "prudent and feasible" alternatives to any significant regulated activity proposed. Analysis of prudent and feasible alternatives may consider the cost of alternatives, but a mere showing of increased costs is not enough to rule an alternative infeasible.

Islander East proposes many activities that would be considered "significant" and "regulated" by the Branford Inland Wetland Commission. There are 14 wetland crossings proposed and several other upland review areas that would be transected by the pipeline installation. The IWC would be unlikely to approve this proposal because alternatives are available that cause less damage to Branford's wetland resources. In many cases (wetlands A27, A30, A31, A23, A33, A32, A24, A36, A37), the alternative is as close as the other side of the Branford Steam Railroad track. Passing under some wetlands using the horizontal directional drill (HDD), which Islander East has proposed to use for entering Long Island Sound to lessen impacts on coastal area shellfish beds, is another alternative that Islander East would be asked to analyze.

Islander East has proposed a uniform 75 foot wide construction zone in wetland areas. Approving a uniform 75 foot cleared zone for construction purposes legitimizes the worst-case conditions. In many instance, the corridor is bound by ledge, steep side slopes, or other natural obstacles. It is improbable that clearing of the 75 foot wide construction zone is helpful in these instances. A prudent and feasible alternative would be for Islander East to work within as narrow a construction zone as is practical, determined in a site-specific manner.

Islander East has proposed opening of the tree canopy over wetlands in order to conduct aerial inspections for unauthorized activity that might damage the pipeline and thereby threaten public health and safety. We find that the proposed persistent opening of the canopy through and adjacent to our forested wetlands is not prudent when the necessary observations might be easily attained through other less intrusive measures. For example, the presence of the Branford Steam Railroad provides a prudent and feasible alternative to surveying the pipeline from the air. The passage of BSR trains along the entire length of the corridor several times each day provides ready access for much closer visual inspection of the right of way than is afforded from a plane.

Critique of Islander East's Construction Methods

Construction in and around wetlands

Islander East's construction procedures in and around wetlands do not meet local standards.

The "Erosion and Sedimentation Control Plan" as submitted by Islander East does not meet Branford's standards. Specifically Section 5, dealing with wetlands crossing, allows sidecasting (placing the excavated material adjacent to the trench) as a method of handling soil removed from a trenching operation in a wetland of intermediate or larger size. Placing spoils in a wetland area amounts to filling a wetland. There are many prudent and feasible alternatives that disallow the sidecasting of spoils. In the case of small and intermediate size wetlands crossings seem to allow for the stockpiling of spoils within 10 feet of the wetland boundary. The experience of the Branford Inland Wetland Commission is that a 10 foot buffer is not sufficient to exclude the migration of soil particles and associated phosphates into the wetlands. We would typically require an absolute minimum of 25 feet between stored construction materials or spoils and an inland wetland (as recommended by DEP Bulletin #28, The River Book by James MacBroom). The 1993 EPA publication "*Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters,*" recommends "that no habitat-disturbing activities should occur within tidal or nontidal wetlands. In addition, a buffer area should be established that is adequate to protect the identified wetland values. Minimum widths for buffers should be 50 feet for low-order headwater streams with expansion to as much as 200 feet or more for larger streams. In coastal areas, a 100-foot minimum buffer of natural vegetation landward from the mean high tide line helps to remove or reduce sediment, nutrients, and toxic substances entering surface waters (MWCOG, 1991)."

Islander East claims that their proposal meets Federal standards. We cannot comment on this issue as it pertains to construction and route selection practices, but we see no compelling reason that our local standards should be preempted by Federal standards that do not attain the same high levels. Application of local standards would not prevent the construction of the pipeline, the consequence that preemption by federal regulations is designed to prevent. It would only ensure that Branford is not unnecessarily damaged by the pipeline project. The local standards, recently validated by the State Supreme Court, have been applied fairly and uniformly to all those that have performed work within our Town boundaries. They should apply equally to Islander East.

Islander East's proposal lacks the specific details necessary to accurately estimate the environmental costs to wetlands.

Islander East's submission included only generic plans for wetland crossing and construction procedures for work near wetlands. The boiler plate procedures and cut and paste diagrams consisted of possible ways of working in and around wetlands. Never at any juncture did the proposal indicate which procedure would be used in which instance. This approach is contrary to the requirements that the Branford Inland Wetlands Commission

places on all applications submitted for review. Obviously, some procedures caused less damage than others but no procedure has been specified for a particular wetland or work on a particular section of the installation. It is therefore impossible due to the curious lack of detail to estimate the environmental cost of wetland "takings" and "losses". Approval of the current application, with its lack of detail, could only be construed as legitimizing the worst-case scenario of what might actually be done. Approval of this application should be conditioned on Islander East providing a suitable regulatory body, that includes municipal personnel, with maps (of scale not less than 1" equals 40 foot) that show the exact location of wetlands, construction areas, and soil and erosion controls within each construction zone before starting work at that location.

The restoration plans proposed by Islander East for wetlands and wooded uplands are inadequate and based on erroneous assumptions.

Islander East proposes to do no restoration of the construction area other than to scatter some seed of herbaceous species and otherwise let plants regrow from roots and seeds left in place during construction. As extensively documented by Dr. Richard Orson, writing for the Inland Wetlands Commission, disturbance on the scale proposed here changes the trajectory of the evolution of a plant community. An additional disturbance pointed out by Inland Wetlands Commissioner Carol Lemmon would be the spreading or burying of large volumes of wood chips where the right of way passes through wooded areas. This would be an illegal filling in the wetlands and in upland areas would act as a thick mulch, complicating the restoration of the right of way. Without active post-disturbance management, a mix of species similar to that present prior to the disturbance hardly ever occurs. In particular, the combined effects of the initial disturbance and altered light, soil and water conditions that result from the changing of a mature woodland to an immature, early successional community favor the dominance of invasive species. Furthermore, Dr. Orson states (p. 2, para. 2c) that since attaining even a semblance of the preconstruction state will take decades, there should be no distinction between acreage disturbed only during construction and acreage kept cleared after construction "**unless the applicant is proposing to return the site to the conditions that existed prior to any pipeline installation (i.e., replanting 50 ft trees removed for construction).**"

Branford's Inland Wetlands regulations require a clear and precise wetland planting plan that provides for at least five years of post-construction monitoring. Wetlands that are unavoidably disturbed must be re-vegetated with local wetland species. The Islander East Sedimentation and Erosion Control Plan (p. 1-2), referencing FERC Procedure (Section VI.D.5), states that forested wetlands will be re-vegetated with annual ryegrass. It further states that, "subsequent reestablishment of native species would be a natural process developing from the seed bank and rootstock present in the wetland topsoil". This runs contrary to our experience. The critique of the Islander East plan that was submitted by Inland Wetlands Commissioner Dr. Richard Orson directly refutes Islander East's position on re-vegetation. Dr. Orson states, based on his wealth of local experience and an extensive scientific literature, that a wetland system will be altered forever by the procedures defined by Islander East. He specifically criticizes the reliance on "the local seed bank" in the stockpiled soil.

Islander East's proposal to designate a company employee as environmental inspector provides insufficient protection.

Islander East's proposal that a member of the construction crew perform this watchdog function is untenable and cannot be made to work. A crew member cannot adequately perform this task as he will lack the necessary formal training and experience and his status as a company employee will create conflict of interest if environmental requirements conflic with efficient installation of the pipeline.

Horizontal directional drilling (HDD)

Islander East proposes horizontal directional drilling for entering Long Island Sound in a way that minimizes damage to Town-leased shellfish beds. (As noted in the section of Economic Impacts, shellfish beds that are threatened by the pipeline installation are an important economic resource to individuals and to the Town of Branford.) The proposed length of the HDD is 4,000 feet, about 500 feet under land and about 3500 feet under the sea floor. It is important to note 174 acres under Branford's jurisdiction lies beyond the propose exit point of the HDD. The pipeline will be placed using hyrdrojet or mechanical plow trenching techniques past this point.

There are several specific concerns about the HDD methodology.

Horizontal directional drilling is untried in the context proposed here.

Islander East has not presented any credible evidence, such as data from coring studies, t indicate that the proposed HDD is feasible. Islander East is proposing the longest HDD project in Duke Energy's history and its first attempt at HDD in ocean conditions, starting o land and exiting on the ocean floor. Having the drill exit under water poses extreme technical challenges that Islander's engineers have never faced before. The depth of the exit point (see Appendix 5 of Islander East's application) is approximately 13 feet below mean low water (19 feet or more below mean high water). Since HDD is performed using a suspension of bentonite clay injected under high pressure into the bore hole to lubricate the drill bit and enhance the cutting efficiency of the drill, a containment structure must be in place where the drill exits the hole to prevent large volumes of the pressurized bentonite slurry from escaping into the water and dispersing in the currents. Islander East confirmed t the Committee that it is still designing a containment structure, i.e., **Islander East does not know how it will contain the slurry at the exit point of the drill**. It is unconscionable tha this experiment could be permitted to go forward in the midst of extremely valuable shellfis beds and other marine resources.

Islander East stated that the bentonite clay used for drill lubrication "flocculates" i.e., congeals and falls to the sea floor without dispersion. This claim may be incorrect, since the dispersion of bentonite and for that matter all sediment suspended during the underwater construction phase of the pipeline project depends largely on the salinity levels, pressure, specific gravity and tidal current strength in the area of discharge. Given the low salinity of Stony Creek Harbor that results from the influx of fresh water streams, the potential for dispersion of bentonite and other sediment raises concerns.

In addition, there is no guarantee that the drill will exit at the planned point. Larry Williams, a professional shellfisherman who worked beds near Milford that were damaged by the installation of the Iroquois pipeline, testified (see *Attachment 8*, October 10 public hearing transcript, pp. 61-62) that Iroquois' HDD under the Housatonic River, which was not designed to exit under water, miscarried and released bentonite into the river. Depending on the nature of the material (granite bedrock, glacial till, sediments of various degrees of consolidation) that the drill will encounter, the possibility exists of an accidental release at a point some distance from whatever containment structure might eventually be designed. Further concern has been raised given that the chance of failure is increase by the presence of large amounts of granite in the area proposed for HDD. To date this Committee has not seen data that documents successful HDD efforts through granite.

Islander East has provided minimal detail regarding the disposal of spoils generated by the HDD.

Islander East stated that material removed by drilling, together with the spent bentonite slurry, will be collected in a small impoundment pool, where the bentonite will be separated from the drill spoil for reuse. Several residents voiced concerns about whether the pools would reliably impound the discharged material from the drill and about the impact on the salt marshes should the spent slurry escape. The Town Engineer also expressed concern about the disposal of the drill spoil (over 2000 cubic yards), noting his experience that such materials seldom ended up very far from the site at which they were generated (see *Attachment 9*, October 10 public hearing transcript, pp. 47-48).

Islander East has provided no data that would support their ability to reduce excessive noise from the HDD phase of the project.

Noise from the HDD can potentially be a problem for residents of Juniper Point, immediately adjacent to the drilling site, as well as for residents of Pleasant Point and Stony Creek, which are across the water from the drilling site. In fact, Tilcon restricts the operation of its loading facility (the HDD site) to times between 6:30 AM and 9:30 PM to limit noise problems. Loud noise from the HDD operation is a potential threat to wildlife as well (see Environmental Impacts, below) Islander East indicated that it will consult with an acoustics expert to design mitigation measures and will be responsive to neighbors who might still have complaints. Once again, however, there is no design or plan that could be evaluated, not even an example of mitigation structures used by Duke Energy companies at other HDD sites, which the Committee requested. Islander East also failed to provide data on the level of HDD-related noise measured at these other sites that was requested by the Committee.

Islander East has not yet prepared a contingency plan for how the pipe will be laid should directional drilling fail.

In testimony, Islander East Environmental Project Manager Joe Reinemann discussed the alternatives available should the HDD prove to be unable to open the necessary path for the pipe. These were, move the drill path or fall back to trenching techniques. The first option raises concern, given that movement of the directional drill not only creates a second and/or

East is proposing to begin this phase of construction immediately upon completion of the collection of data on currents and bottom conditions. **This leaves little or no time for analysis of the data and careful consideration of the results of the study before construction begins.**

Sedimentation will have negative impacts on shellfish beds.

It is important to note that the sediment that is suspended and dispersed during construction will not necessarily clear itself out with the tide changes. Given the unique coastline layout of this area and the currents that result, it may take several days for this sediment disposition to clear naturally. In that time, much of the sediment created may settl in previously clean areas, permanently. The environmental impact of such events has not been addressed. At the hearings, Kyle Nelson, Committee Member, asked for specific detai regarding the amount (in millimeters), the composition and dispersion of sedimentation. It i important to note that the TransÉnergie's proposal to install an electric cable from New Haven to Long Island provided details of sediment disposition details for the proposed submarine installation. Islander East has not provided any similar data. TransÉnergie's proposal provided the acreage of shellfish beds affected by the primary sediment disposition zone, the depth of the sediment suspended, transported and deposited over the primary zone. taking into consideration sediment concentration in the water column, the near bottom velocity of currents, and the direction of the water currents. (Connecticut Siting Council, Finding of Facts, Docket No. 197, Section 65, page 14.) The Siting Council's denial of the TransÉnergie project states:

> "Juvenile and adult stages of Eastern Oyster can be found inhabiting the bottom regions of Long Island Sound where hard clean substrates, turbidity and salinity allow. High suspended silt and sediment loads, resulting periodically from storms or man-made disturbances would adversely affect filter feeding and growth of the Eastern Oyster. Oysters filter seawater in order to obtain food and oxygen. Filter feeding activity of oysters is directly proportional to temperature, and inversely proportional to sediment load. Clams and oysters have the ability to discharge unacceptable material collected through filtration during short-term exposure periods however, clams and oysters would assimilate contaminated suspended sediment over extended periods of time. The primary cause of deaths of oysters in Connecticut waters is suffocation and starvation caused by silt. Oysters do not tolerate complete burial and would cease filtering seawater and die. Five millimeters of sediment would bury small oysters" (CT Siting Council, Docket No. 197, Section 93, pg. 19)

Jonathan Waters, of Thimble Island Shellfish, stated concern about this sediment and the negative impact it will have on seed and market oysters (see *Attachment 15*, October 14 Waters statement). He went on to testify that purging of sediment by shellfish is more difficult in the winter months (the time frame for this phase of the project is Fall, 2002). Mr Waters expressed concern about the impacts to water quality throughout construction and stated that Branford has seen significant year to year improvements in water quality as documented by the Department of Agriculture's recent reclassification of Area B (Shellfish beds between Linden Point and Hotchkiss Grove Beach). He is also concerned that the

sedimentation may negatively impact several species of finfish that populate in the area, including blackfish (a.k.a. tautog).

In addition, concerns have been raised regarding the dispersal of contaminated sediments. SuZanne Botta (Menunkatuck Audubon) testified that copper is in the sediment found near Stony Creek and that this creates a problem for filter feeders that take this in. She went on to state that once contaminants like copper enter the food chain it would not take long to impact marine life further up the food chain. Islander East states in its report that elevated levels of the heavy metals silver, cadmium, chromium, copper, manganese, nickel, lead and zinc occur in the area of Long Island Sound where the project is located, and that they are planning to perform a complete study of the sediments, water quality and biological resources along the route (p. 58). This is particularly important in Branford's off-shore waters.

Ms. Botta asked Islander East specifically who would be performing the sediment testing, when would it be complete and have they (Islander East) set acceptance levels of contaminants (see *Attachment 16*, October 16 public hearing transcript, pp. 87-88). These questions were never answered. The Committee notes that the projected completion date for this study is not until Fall of 2002, the proposed initiation date for construction. **Until the results of this study are available and have been carefully reviewed by disinterested experts, any determination of the best route for this pipeline is premature. In the absence of such a peer-reviewed study, the Committee has to assume that sedimentation will negatively impact private and town-owned shellfish beds, marine life and potentially contaminate the food chain.**

Islander East does not support its claim that HDD will not damage shellfish beds.

The Committee is concerned about the impact of vibration from the drilling on the survival of shellfish. Robert Radulski, Branford Shellfish Commission, also asked for specifics regarding the change in compaction of overlying sediment as this too may impact shellfish survival.

> "The sea floor along our coastline is predominately comprised of what the industry refers to as "hard mud". Hard mud serves as an excellent base for the cultivation of both clam and oyster beds. If these areas are disturbed as proposed in the construction phase of this project, our concern is that it may damage and possibly destroy these beds, soften the soil, and potentially prohibit future shellfish habitation." (Branford Shellfish Commission Position Statement to FERC)

Larry Williams stated to the Committee that the planned HDD exit point is on "valuable shellfish ground that has potential for cultivation in the future". Since the proposed exit point is in the immediate vicinity of known shellfish beds, questions regarding the scope of the area that could be affected, the volume of discharge release and the extent of potential damage to existing beds have been raised. At this point in time, Islander East has not provided those details.

No provision has been made for restoring damaged shellfish beds.

Another concern raised by the commercial shellfisherman who testified is the apparent lack of a plan for the restoration of shellfish beds once they are damaged. There is no method proposed for restoring the deep depressions left by the barge anchors. The attempts by Iroquois to level the seabed by dragging a heavy steel beam across the ocean floor actually did more harm as additional sediment was dispersed, negatively affecting adjacent beds, and could not be used today. Larry Williams testified that the Iroquois project restoration plan included filling the holes with bushels of hard shell which he stated created a surface that oysters could not grow on. Both Jonathan Waters and Larry Williams stated that they could not recall a single successful restoration of shellfish beds after trenching had been used. Islander East did not respond when asked if it would insure against damage to the shellfish beds.

Estimation of the potential cost of damage to the shellfish beds

The economic impact of this proposed pipeline on shellfishing is somewhat difficult to quantify. According to Jonathan Waters, his business is "priceless". To estimate the value of the shellfish beds that installation of the pipeline could reasonably be expected to affect, the following assumptions have been made:

- The HDD successfully reaches the proposed 4000 feet, bypassing some of the shellfish beds
  174 acres beyond the HDD exit point are impacted
  The shellfish beds are permanently destroyed as a natural resource.
  1 acre produced 1,000 bushels (200 pieces per bushel).
  1 bushel sells at $50.

Conclusion: The annual cash flow generated in the shellfish industry area impacted is $8,700,000.

Note: Present value is calculated at 99 years for this natural resource, although Branford has the oldest shellfish beds in Connecticut – several hundred years old. Present value is calculated without reducing the value in the future because reduction in value is offset by the rate of inflation.

Conclusion: The present value is $861,300,000, which equals the overall loss for permanent destruction to this natural resource.

Likewise, the Town of Branford is impacted if it can no longer lease this area and does not receive tax income based on the assessed value of these beds. To estimate the value of the shellfish beds that installation of the pipeline could reasonably be expected to affect, the following assumptions have been made:

- The HDD successfully reaches the proposed 4000 feet, bypassing some of the shellfish beds
  174 acres beyond the HDD exit point are impacted
  The shellfish beds are permanently destroyed as a natural resource.

- Assessed value $1001/acre - used recent tax revaluation in Guilford - next shoreline town abutting Branford, since Branford tax revaluation is currently in progress.

Conclusion: Annual income value - $174,174. Present value - 99 years, $17,243,226.

The use of 99 years in determining present value is conservative, since existing beds are the oldest in Connecticut – dating back to Connecticut's colonial era. Some areas produce more than 1,000 bushels pre acre. The dock price per bushel in 1991-1992 in Talmadge Bros. v. Iroquois was $55. The additional assumptions are proposed in Islander East documents provided to the Town or information from public documents or experts.

Overall, the present value of this natural resource, with centuries of history of cultivation, harvesting and sale of shellfish, is $878,543,226.

Impact on local businesses

The proposed pipeline will impose costs on other businesses in Branford. The business most extensively affected is Tilcon, Inc./Branford Steam Railroad, which will have a pipeline running within 25 feet of its track for most of its length. Also, Tilcon must periodically dredge the Marine Terminal basin, the basin/channel transition area and the channel, which is 80 feet wide and extends 8900 feet from the Marine Terminal and includes two turning locations at approximately 2900 feet and 4240 feet from the basin limits. If the HDD is unsuccessful and Islander East resorts to conventional trenching, the pipeline could conflict with maintenance of the basin and channel in the future. The Committee notes that Tilcon/BSR has intervened with the Federal Energy Regulatory Commission, in part because it has been unable to obtain the necessary information to determine just how the pipeline will affect it's ability to operate its trains and to maintain its track, and in part from a concern that Islander East has been misrepresenting Tilcon's position to suggest that Tilcon supports the pipeline.

Another business is more seriously threatened by the pipeline. As noted earlier, Mr. George Ghiroli operates a landscaping business that will be crossed by the pipeline. In fact, the pipeline will run directly along his access route on a narrow strip of upland between the track and a wetland. Contrary to representations by Islander East, Mr. Ghiroli remains convinced that his business will be closed down by the construction of the pipeline (see *Attachment 3*).

Impact on tourism in Stony Creek and the Thimble Islands

The State of Connecticut has put great emphasis on the economic value of tourism as an industry and has identified tourism as one of the main cluster groups in economic value for the state. Over 50,000 people visit Stony Creek each year for Thimble Island cruises, a glimpse into an historic shoreline community, eclectic shops, beautiful views, nature trails and bird watching. The several marinas draw boaters to the Branford shoreline who dine and entertain in Branford's many wonderful restaurants. There are two beach clubs, a golf course, and tennis courts within close proximity of the proposed pipeline. Boating and fishing for residents and guests have always been a main source for attracting tourists to Branford. All of this has an economic value to the Town of Branford. The value of the

visitors to Stony Creek alone, using a conservative formula of $10.00 spent by each visitin tourist, represents $500,000 that could be threatened by any activity that reduces the attraction of the Stony Creek area.

Safety-related costs

Training emergency personnel will impose additional costs on Branford. Based on testimony by Islander East, the Committee believes that **Islander East has not allocated sufficient resources, both time and personnel, to alleviate the additional financial burden that the pipeline will impose on the Town of Branford.** The Commit is seriously concerned about the training of Branford's emergency personnel and who wou bear the cost of that training. This issue was raised by Mr. Timothy Raynor, a member of Branford's Fire Commission. **Islander East has not provided detailed information regarding the scope of its safety training program,** making it difficult to properly analyz this issue. Islander East testified that they provide training via a Liaison Program on a 3-ye rotation basis for towns that are impacted by their gas pipelines. However, the Committee was told that the budget afforded to training of municipal emergency personnel in an area from New York to Rhode Island is only $2,000 to $3,000 annually and the responsibility fc providing that training falls to one individual, Jim Luskay (see *Attachment 17*, October 16 public hearing transcript pp. 114-115). It was also reported by Loretta Fox that the Fire Marshall in North Branford, through which an existing Algonquin pipeline runs, has stated that Islander East training was insufficient. (The Committee was unable to directly confirm the North Branford Fire Marshall's opinion.) Kyle Nelson, Committee member, asked Islander East to provide copies of all safety training materials, including videos, hand-outs, copy of curriculum, biographies for all course instructors and a course schedule. Islander East stated that they would provide that material, but all that was produced (on the last day the municipal consultation period) was a statement that since materials were developed on site-specific basis, there was nothing that could be presented for Branford.

The presence of the pipeline will require additional emergency equipment.

This Committee is also concerned that local fire, police, and emergency personnel in Branford do not have all the necessary equipment to respond to a major gas pipeline disaste The Town's fire and police departments are not set up to handle such an event. Specifically the proposed route through heavily wooded and wetland areas, which damages the town's environmental resources, also limits access to the pipeline for the fire and rescue apparatus currently in the town's possession.

Islander East has failed to adequately respond to concerns about pipeline safety.

Several individuals throughout the hearings raised safety as a primary concern. Dr. Walter McCoy, Head of School at Whitewood School, raised questions of safety given the extremely close proximity to the schools playground [Note: question never addressed by Islander East]. Several other residents asked if Islander East performed any analysis to determine "worst-case" scenarios for accidents, explosions and the potential impact area of such events [Note: question never answered by Islander East].

Becky Mars testified that she herself had seen Tilcon barges loosing their load and asked Islander East if they have measured the potential impact of such events and if they have created any provisions in their plans to avoid such occurrences. In a letter received on the last day of the municipal consultation period, Islander East states that since HDD will place the pipeline well below the bottom in the vicinity of the Tilcon Barge Terminal, it does not believe that the operation of the barges poses any credible threat to the pipeline nor will the pipeline interfere with routine maintenance of the channel. **These comments obviously no longer apply in the event that HDD fails and conventional trenching methods are required at the point of entry into the Sound.** This again raises the issue, discussed above in the Alternatives section, of the lack of an alternative entry route in the event that HDD fails and conventional trenching is used.

It was also asked if Islander East could provide any data that would support the safety of locating a gas pipeline in such close proximity to a railway system [Note: question never answered by Islander East]. Loretta Fox testified about a train derailment that took place over a pipeline buried 14 feet underground. Clean-up from the derailment caused a pipeline explosion. Loretta Fox also testified that the National Transportation Safety Board (NTSB) has stated that a concern related to pipeline safety was the insufficient resources (e.g., inspectors) available, 55 employees to be exact, to inspect the over 2 million miles of pipelines across the country (Exhibit 10.17.01-D, pages 3 and 19). She also stated that the NTSB was funded insufficiently by user fees. This testimony was supported by an August 1, 2001 story in The Wall Street Journal entitled "Pipeline Explosions Have Industry, Energy Regulators Under Fire". This article states that the NTSB "lacks the trained manpower, reliable data on accidents and the will to crack down on unsafe practices before deadly blasts occur. The pipeline industry has resisted calls from the NTSB and others for mandatory periodic inspections of pipelines and national employee-training standards". Kiki Kennedy, CT Stop the Pipeline, cited an article in the January 2001 issue of Utility Business, written by senior editor Pam Kufahl, that in the past 15 years, 3184 natural gas pipeline incidents have killed 328 people and caused $488 million in damages .

Islander East failed to provide information about its security plan.

Fred Rosenthal, 10 Gaylea Drive (Juniper Point Association) requested copies of the Security Plan for terrorist attacks. Mr. Galligan of Islander East responded:

> "If you folks don't have a copy of ... the safety section in the FERC proceeding ... we can provide you separate copies of that for the Committee. [Note: a copy was provided only on the last day of the municipal consultation period. It was minimally informative.] What it does do is it goes through a fairly good recap of our safety section. Even though that's not really the purview of the Siting Council, I think it helps in providing added information for the Committee to disseminate. And when the report comes out, it's probably public information. On the other hand, we have always taken the caution to protect specific information relative to plant specifics relative to fairly detailed information, and the location of certain protections for the pipeline. And we won't divulge those. It's important that we don't."
>
> *Transcript, October 17 hearing, pp. 66-67*

Shut-off valves only proposed at each end of the over 22 miles of undersea pipeline crossing Long Island Sound is a safety concern.

Another safety concern was the distance between emergency shut-off valves. With valv on either shore in Branford and Long Island, over 22 miles of high pressure gas would be released from the system once the valves were shut. [Note: issue never addressed by Islande East]

Disruption and degradation of outdoor recreational resources

The coastal preserve through which the pipeline proposes to pass contains a recreationa trail across the salt marsh along an old trolley right of way that connects Stony Creek and Pine Orchard, as well as hiking trails on the Land Trust Goss and Vedder properties on the west and east ends of the marsh, respectively. The presence of these trails, which are components of a trail that circumnavigates the entire town, makes this environmentally diverse preserve an important local and regional recreation area and one of the few state-listed coastal access areas in Branford. Several residents spoke at hearings held by this Committee and at an earlier public meeting convened by the Selectmen of Branford about t importance of this area to them. Islander East states that access to the trails will not be impeded, but presents no plan for how this will be accomplished. It is difficult to imagine, the absence of any concrete plans, how the clear-cutting and grading (including blasting) o 75 foot wide right of way, the trenching and the installation of the pipe can be accomplishe while the public passes back and forth along the trail. Furthermore, once construction is complete, the transformation of a secluded woodland trail to a broad cleared utility right of way will completely alter the esthetics of the recreational area.

Costs imposed on abutting residents

In addition to the habitat value of the woodlands on either side of the Branford Steam Railroad tracks, these areas also serve to buffer the adjoining residential areas from the noi and dust inherent in the transportation of the crushed stone from the quarry to the shore. BSR maintains land adjoining the tracks in an undeveloped state specifically in order to provide such a buffer. Maintaining a broad right of way that is cleared of trees will reduce the buffering and increase the impact of the railroad on the neighboring houses. This is a issue of long-term impact of the pipeline. A more immediate concern to neighboring residents and the Town is increased noise related to construction, particularly the horizont directional drilling (HDD).

Financial Assessment

Corporate structure of Islander East and what it means for who bears financial risk

Islander East Pipeline Co. LLC is a limited liability corporation, a partnership of Duke Energy Islander East Pipeline Co. LLC, a wholly owned subsidiary of Duke Energy, and Keyspan Islander East Co. LLC, a wholly owned subsidiary of Keyspan Energy Development. Keyspan is one of the largest natural gas utilities in the northeast and fourth in the country. It generates, manages the transmission of, and distributes electricity for Long Island Power Authority to 1.1 million electric customers. Duke Energy is one of the world's leading integrated energy companies, with a number of subsidiaries involved in different aspects of energy production and distribution. The limited liability corporate structure of Islander East, LLC, protects value for owners of Duke Energy and Keyspan stock, but shifts the risk to the communities through which the pipeline passes.

Should Islander East's request for permission to construct a natural gas pipeline be approved, the Town of Branford recognizes the vulnerability of its community to potential financial risks. Islander East has not agreed to secure a performance bond for the proposed financial risk that may occur. Islander East LLC has limited liability. However, they recognized there are construction risks (among others). [Pg. 25 Application for Certificates of Public Convenience, Necessity and Related Authorization FERC.]

Should this application by Islander East be approved, it should be made contingent on Islander East issuing a performance bond. That includes (lawyer decides what should be included, i.e., all companies hired – losses.) It is important that any bonds that are in place cover all the consequences of any actions of contractors hired by Islander East, in order to avoid the situation encountered by a Connecticut company when it tried to recover for damages suffered during the construction of the Iroquois Gas Transmission pipeline. In that case (Talmadge Bros. Inc. v. Iroquois Gas Transmission System L.P., No. CV 92-0124088, Aug 14, 1998, Pg. 5), Iroquois hired a contractor which was not its "agent" but rather an independent contractor, limiting tha ability of the plaintiff to recover for the damages incurred.

Although Islander East states in its application that it will minimize the adverse effects of this project, it does not appear that it has sufficiently evaluated or disclosed how it will minimize such effects or how this project may negatively impact Branford and its taxpayers. It has however negotiated a yearly lease of transmission capacity from Algonquin Gas for $4,009,620, plus operating costs and property taxes as it related to leased capacity. On the $140,000,000 project, Mr. Ed Gonzales was comfortable with his budget and a 2% contingency. All this suggests that the risk of this project as planned will be borne by the taxpayer, not by Islander East LLC. A mechanism to provide assurance that the risk is borne by the company and not the Town should be a primary condition when granting approval.

The parent companies and their subsidiaries have provided substantial resources for this project of Islander East: the time necessary for research and preparing filings as well as an

array of legal talent. However, lacking this information the Town is burdened by the need use its resources to ascertain which of the Town's assets may be at risk.

Decreased property values? Potential losses for owners and the Town

Several residents expressed fear that the pipeline would decrease the value of their property. A local realtor testified that her experience has been that some buyers will not lo at a house with a gas pipeline running through or near the property. Islander East responde that a survey conducted by the Interstate Natural Gas Association of America Foundation (INGAA), a gas industry organization, found (using what appears to be a deficient methodology) that selling prices of houses were not affected by the presence of a pipeline, although the time necessary to find a buyer increased. Interestingly, in an apparent attempt to downplay the value of homes in Juniper Point, the residential area most closely impacted by the pipeline, Islander East has described Juniper Point in the preliminary document sent the Siting Council as abutting an industrial site. While Juniper Point is located next to the Tilcon dock facility, the Juniper Point Association consists of new custom-built homes witl market value in excess of $500,000 that are located next to a Land Trust preserve and withi walking distance of the Pine Orchard Yacht and Country Club.

Islander East identified over 50 Branford properties, residential and commercial, that w be impacted by the construction and installation of the gas pipeline. Of these, 25 properties many of which are residential, will be crossed by the pipeline route. The assessed value fro 1991 for the more than 50 impacted properties is $28,862,720 and market value in 1991 $41,232,457 (assumes assessed value is 70% of market value). The present assessed value generates tax income of $805,847 from these properties annually.

This project may affect property values by as much as 10-25%. A fair estimate of 17.5% will have an annual impact (using current assessed values and mill rate of 27.92 for 2001-2002) of a loss of $141,023 in tax income to the Town. This pipeline installation will occu at the same time as the 10-year tax revaluation. Over the 10-year term of this assessment a loss of $1,410,232 would be experienced by the Town of Branford.

The 20 mile shoreline of Branford is occupied with highly valuable homes, 2 beach clut a golf course, and several marinas on the Branford River that feeds into Long Island Sound. Any unexpected destruction resulting from construction or operation of the pipeline could have a devastating impact on the Town of Branford's tax income by devaluing this very valuable source of income to the town. If residents in 25 homes require relocation during tl construction and drilling time, replacement accommodations required will be comparable tc their existing residence for the construction time, 6 months, 5000 x 25 x 6 = $750,000. Nor of these potential financial impacts have been addressed by Islander East.

Impact on Town services

The area around Stony Creek does not have sewers. However it is expected in the futu that those areas will be sewered. Providing sewers to these areas will require a pumpi station to accommodate the proposed gas pipeline installation. The additional cost to tl town is estimated to exceed $1 million bonded over 15 years. These costs exceed tl

currently expected cost for sewers and are a direct cost incurred because of the installation of the gas pipeline.

There is a potential major risk to the Branford waterways should Islander East break a sewer pipe. The sewage in this area would flow into the water in Long Island Sound. This cost would be the responsibility of Islander East and funds should be set aside for unanticipated construction risk inherent in a new venture of this type (pg. 25- application).

The Town of Branford recently constructed a $33 million sewer plant from its Clean Water Fund. With the help of the Branford River Project (a joint program of the Land Trust and Rotary Club) it has also purchased a pump-out boat to provide boaters a convenient alternative to discharging the contents of their holding tanks into the Branford River and the Sound. This is the kind of action Branford has taken and continues to take to protect its shoreline and the water quality of Long Island Sound.

Preliminary Environmental Analysis

Environmental Considerations and Conclusions

The Blue Ribbon Committee, after hearing expert and citizen testimony from five evenings of public hearing, reading the materials presented by Islander East, and inspecting much of the pipeline route on the ground, offers the following analysis of the potential environmental effects of the Islander East proposal, referring to specific locations where possible. Due to the short time and limited resources available, our comments are preliminary and should not be construed as being comprehensive. Our intent is to point out some of the most egregious practices that pose a significant threat to Branford's resources. The Committee notes that the lack of sufficient detail in the Islander East proposal does not allow the detailed analysis that a project of this magnitude requires.

Much of what is proposed by Islander East fails to measure up to the standards of our local community, which are embodied in Connecticut State Statute. It is our expectation that any project permitted in our community will meet the standards we have imposed upon ourselves. Much more work, study and planning are needed before moving forward with a project of this magnitude.

The construction of the Islander East pipeline will irrevocably damage important environmental resources within the Town of Branford and its offshore waters.

The selected route and the two alternatives that Islander East identified as having been considered all impose unacceptable environmental costs to Branford. This is made clear by an examination of the Siting Council application provided by Islander East, of the testimony and materials submitted by organizations and individuals during the public hearings and of the 1997 Town of Branford's Plan of Conservation and Development (Town Plan), an important planning tool mandated by state statute. However, the full scale of the environmental damage cannot be evaluated because of the lack of detail in the Islander East application. This lack of detail is particularly true of Islander East's alternatives.