



Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

REQUEST FOR PROPOSAL
Investigations of Submerged Cables and Pipelines
in the Connecticut portion of Long Island Sound

The Connecticut Department of Environmental Protection (DEP) is seeking proposals from academic institutions and consultants for Investigations of Submerged Cables and Pipelines in the Connecticut portion of Long Island Sound. In particular, the DEP seeks to retain the services of a consulting firm or academic institution with considerable experience in analyzing the impacts that result from the installation of cables and pipelines in marine or aquatic environments.

The request for proposal is available online at <http://www.dep.state.ct.us/business/index.htm>, or from Ron Rozsa, Department of Environmental Protection, Office of Long Island Sound Programs, 79 Elm Street, Hartford, CT 06106. Telephone (860) 424-3034, Fax (860) 424-4054. Deadline for response submission is 4:00 PM, Friday, December 12, 2003.

I. RFP BACKGROUND:

The Connecticut Department of Environmental Protection (DEP) is seeking independent technical assistance regarding the environmental and navigational impacts of the installation of energy telecommunications infrastructure in Long Island Sound. DEP is committed to ensuring that development of any infrastructure proceeds in a manner that is protective of the environment and safe for navigation while meeting the energy needs of the citizens of the state. Deregulation of the electric and gas utilities in the 1990's has resulted in a large number of proposed transmission projects across Long Island Sound to Long Island, New York. In response, the Connecticut legislature has passed two 1-year moratoriums on new cable and pipeline crossings, the latest of which expires in June of 2004.

In response to concern about pending projects, Governor Rowland and the legislature established a Task Force to investigate energy issues and utility crossings in the Sound. A copy of the report completed in June of 2003 may be found at <http://www.sustainenergy.org/taskForceWorkingGroup/AssessmentReport2.pdf>. With respect to existing environmental data for the Sound, the Task Force found:

“An inventory of the available natural resource information required under PA No. 02-95 has been summarized. Much of the data presented was developed by state and federal agencies, and is useful in generally identifying the resources of Long Island Sound. However, substantially more detailed and timely resource information is required for comprehensive planning, and for making project-specific assessments and site-specific determinations of resource delineation, environmental impact, and engineering constructability.”

Section 2.5 of the Task Force Report contains a description of the existing and proposed energy infrastructure which crosses Long Island Sound, including a direct current cable (Cross Sound), an alternating current cable consisting of 7 individual cables (Northeast Utilities and Long Island Power Authority), an installed gas pipeline (Iroquois), a proposed gas pipeline (Islander East) and two telecommunication fiber optic cables (ATT and MCI). Basic available information regarding the installation techniques and environmental impacts/assessments of the installed project is summarized in the Task Force Report.

The DEP wishes to retain services to independently verify certain information submitted by permittees and investigate through field studies and literature analysis, various issues associated with the installation of energy and telecommunication infrastructure in the marine environment.

II. SCOPE OF SERVICES

Listed below are two discrete investigations. The item A investigation (Cross Sound Cable) is required and the item B investigation (Benthic Impacts) is optional. Separate detailed study plans and cost breakdowns are required for each investigation proposed. **The study results for item A shall be due June 25, 2004.**

The following information is available over the internet and may be useful in the development of study proposals:

U.S. Geological Survey Open-File Report 00-304, Georeferenced Sea-Floor Mapping and Bottom Photography in Long Island Sound. (<http://pubs.usgs.gov/of/of00-304/>).

Upon request, the DEP can make available an ArcView shapefile showing the approximate location of cables and pipelines for this study, derived principally from georeferenced nautical charts.

A. Cross Sound Cable

Background:

The Cross-Sound Cable Company, LLC (Cross-Sound) DC electric cable from New Haven, Connecticut to Shoreham, Long Island received state and federal approvals in early 2002, but was not subsequently installed to the required depth along portions of its route. Specifically, the permits require that within the federal navigation channel the cable be buried to a depth of 6 feet below the seabed or to an elevation of -48' mean lower low water (MLLW), whichever is lower, in order to ensure a minimum of six feet of cover over the cable if the federal navigation channel, in which the cable runs, is deepened to 40' from 35'. A post installation survey of the cable by Cross-Sound revealed that there are seven areas (sea attached map labeled "Cross Sound Cable") where the cable is not buried to the required depth within the federal navigation channel. According to Cross-Sound, the jet plow used for installation encountered a tree stump at one location, ledge at one location and firm unconsolidated sediments in the other five locations. The DEP has concluded that operating the cable at the present depth would constitute a violation of the permit, because the cable has not been installed in accordance with the requirements of the permit. The DEP's consideration of Cross-Sound's application to modify its state permit to allow operation at the present depth has been prohibited by the two moratoriums.

Given the obstacles encountered during installation, it is possible that construction techniques required to bring the cable into compliance with the requirements of the permits will create significant adverse environmental impacts or that operation of the cable at its current depth may create environmental, safety or navigational impacts. The purpose of this investigation is to evaluate the options for burial of the cable to its proper authorized depth and identification of associated environmental and navigational impacts of doing so or not doing so. In addition, an evaluation of any electromagnetic field (EMF) and temperature impacts from the cable at its existing depth in the Harbor and its authorized depth along the cable route and that of an AC cable is required. Identification of any potential adverse impacts to navigation from the cable at its present depth is also required, including the possible impact of an anchor strike and drag.

Investigation:

With the exception of the EMF and temperature survey and location survey, the investigation will be confined to the 7 areas within the federal navigation channel in New Haven Harbor where the cable has not been buried to the authorized depth. At a minimum the following tasks are required:

1. Verify the location and depth of the cable and the existing sediment cover above the cable at the seven sites within the Federal navigation project where the cable is not buried to the required depth.
2. Verify the sediment and substrate characteristics at the 7 sites. Verification may require additional field sampling such as coring or the use of techniques such as side scan sonar to confirm the nature and uniformity of the sediments.

3. Conduct surveys of the EMF and water and sediment temperature along the reach represented by the seven locations within the Federal navigation project and compare such information to an adjacent control area outside of the project area. For comparison purposes, also determine EMF and temperature in several locations where the cable has been buried to authorized depth inside and outside of New Haven Harbor and along select portions of the Northeast Utilities AC cables from Norwalk, Connecticut to Southport, New York.
4. Conduct a literature search to determine if any identified EMF and/or temperature variation may adversely impact shellfish or other marine life or interfere with navigation.
5. Review the types of ships and vessels that use this section of New Haven Harbor and evaluate potential safety and navigation issues from anchor strikes and drags given the existing shallow depth of the cable.
6. Evaluate available technologies for achieving the required burial depth including but not limited to the following: air lifting, jet plow, dredging, horizontal directional drilling, blasting, and relocating the cable with or without splicing. Identify the feasibility of each technology and the associated environmental impacts.

B. Benthic Impacts

Background:

The DEP seeks to determine what, if any, long-term negative environmental impacts have resulted from the installation of the Northeast Utilities cables, Iroquois pipeline and the two telecommunication cables (MCI and ATT) in the Connecticut portion of Long Island Sound (see attached map labeled "Cables and Pipeline Investigation"). In the case of the Cross-Sound Cable, the investigation will focus upon short-term impacts from cable installation and will largely be verifying sampling results conducted by Cross-Sound (pre-construction and post-construction surveys, the later conducted on a 6 month basis) that is currently required as a condition under their permit. One of the overarching objectives of examining this suite of pipelines and cables is to better predict timeframes for the duration of impacts and establish recovery trajectories, which may vary depending upon environmental setting and installation technology used.

The cables and pipeline were installed using a variety of different construction techniques including trenching, jet plowing, and laying the cable on the bottom. Each method has different impacts depending on the sedimentary environment and the size of the infrastructure. The sedimentary environment also influences post construction restoration of habitat and rates of species recoveries. The formation of trenches and the presence of mounds may influence benthic populations and sometimes migratory behavior as in the case of lobster and may cause obstructions to fishing. In addition, alteration of the sedimentary environment may adversely impact the benthic habitat of shellfish beds, both natural and managed beds. The state's aquaculture division has suggested that all waters between the 10 and up to 40-foot depth contour are potential shellfish habitat and should be protected, however, there are no field studies to verify those claims.

Investigation:

Evaluate the impact from installation of the above referenced cables and pipelines:

1. Characterize the existing benthic communities along each corridor crossing in relation to adjacent reference sites and describe any long term impacts of the cable and pipeline upon the benthic communities and shellfish beds.
2. Post construction (e.g., trenched (but backfilled) area, mounds, anchor scars and cable sweeps) impacts affect habitat usage by mobile macrofauna such as lobster. Characterize lobster usage of impacted areas compared to adjacent undisturbed benthic habitat.
3. Survey the nearshore section (trenched/drag beamed area and the anchor depressions) of the Iroquois Gas pipeline specifically with regard to shellfish impacts based upon 1991 Iroquois surveys and anecdotal impacts reported by shellfishermen.

4. Determine if mounds or trenches are present along the installation routes and identify the habitat impact from such features.
5. Utilizing reference sites, determine the long-term impact to the sedimentary environment along the installation routes.
6. Conduct independent oversight of ongoing monitoring, required by the permit, being performed by Cross-Sound.

III. QUALIFICATIONS

- A. Extensive expertise and experience in marine sediment survey and characterization.
- B. Extensive expertise and experience in marine benthic community analysis.
- C. Access to the necessary vessels and equipment to conduct submerged bottom surveys including but not limited to generating photographic records of bottom conditions, sediment penetration technologies to determine sediment or geological strata including documenting the position and location of buried pipelines and cables.
- D. Ability to collect and analyze temperature and EMF data from submerged sediments.
- E. Extensive expertise and experience in marine construction methods and techniques particularly with respect to the installation and burial of marine cables and pipelines.
- F. Extensive expertise and experience in analysis of marine navigation and safety issues, particularly with respect to anchor strike and drag issues.
- G. Individuals who have previously been retained to provide services regarding the listed cables or pipelines are **ineligible to participate as investigative team members**.

IV. MANDATORY RESPONSE FORMAT

All proposals must follow the required format and address all requirements listed in the prescribed order and using the prescribed numbering convention. Proposals must set forth accurate and complete information inclusive of the following items.

- A. Information about the Bidder. Provide the name, location, mailing addresses, telephone numbers, FEIN/SSN of the bidder and other pertinent information. (See Agency Vendor Form.)
- B. Description of How Work Will Be Performed (Workplan). Description of How Work Will be Performed (workplan). The proposal shall include a draft scope of study that details the activities specified in Section II, Scope of Services. Such scope of study must include a detailed schedule of work activities and deliverables including submission of a final scope of study, a draft report for review and adequate time for review by DEP staff, and delivery of the final report. At a minimum, the scope of study must address item IIA. Item IIB, if included in the scope of study, will be listed as a separate work activity and have a separate budget proposed. Please limit this part to no more than ten (10) pages. For the IIB investigation, the proposal should set forth a cost-effective survey strategy in anticipation that it would be cost prohibitive to survey the entire length of all submerged cables and pipelines.
- C. Personnel Listing. Provide a complete listing of the professional staff identified in the work plan along with their resumes. Each resume shall include the individual's qualifications and experience in the areas identified in Section III Qualifications, and shall identify any cable or pipeline projects with which such individual(s) were associated in any direct or indirect manner.



- D. Summary of Relevant Experience. List projects in the area of related marine and estuarine consulting or investigative services that the bidder has completed within the last three (3) years. Describe and quantify the knowledge and experience required of the bidder in Section III, Qualifications.
- E. Access to Vessels and Equipment. Describe the vessels and equipment to be used and how the bidder proposes to access such items (currently owns, will rent or sub-contractor, proposes to purchase, etc.)
- F. Conflict of Interest. Disclose any current (within the last 3 years) business relationships, which may pose a conflict of interest including all business relationships with the companies, corporations, limited liability companies, partnerships, subsidiaries or subcontractors associated with the listed pipelines and cables to be studied.
- G. Additional Data. Provide any additional information, which the bidder wishes to bring to the attention of DEP, that is relevant to this RFP.

V. SUBMISSION, REVIEW AND AWARD PROCEDURES

- A. All proposals and correspondence regarding this Request for Proposals should be directed to the DEP contact person: Ron Rozsa, Department of Environmental Protection, Office of Long Island Sound Programs, 79 Elm Street, Hartford, CT 06106; Telephone (860) 424-3034; Fax (860) 424-4054; email ron.rozsa@po.state.ct.us.
- B. The original and six (6) paper copies of the proposal and an electronic version of the proposal in Microsoft Word 2000 (or COMPATIBLE software) **must be received at the above address no later than 4:00 PM (ET), Friday, December 12, 2003.**
- C. All questions regarding this RFP and submission requirements must be directed, in writing, to the DEP contact person identified in B above by 4:00 PM (ET), Friday, November 21, 2003. Bidders are required to limit their contact regarding this RFP to the persons named herein. Written responses to all questions received will be posted to DEP's Internet and forwarded to all bidders by December 1, 2003.
- D. A Selection Committee composed of representatives of DEP technical staff will review all proposals and recommend a finalist to the Commissioner of DEP by December 24, 2003.
- E. It is our intention to notify the successful bidder by January 9, 2004, and to initiate this engagement as soon as possible thereafter.

Schedule of Deadlines

Week 2	Questions regarding RFP submitted to DEP
Week 3	Response to questions posted
Week 5	Proposals due to DEP
Week 6-6½	DEP technical committee completes review
Week 8	Notification of successful bidder

- F. Following notification of the successful bidder, a contractual agreement with DEP will be executed which will specify more detailed terms and deliverables.
- G. The anticipated contract commencement date will be February 2, 2004 and will run through the January 31, 2005 if both Cross Sound Cable and Benthic Impact Investigations are to be conducted. Final report for Cross Sound Cable Investigations are due to the DEP not later than June 25, 2004.
- H. The State is an Equal Opportunity and Affirmative Action employer and does not discriminate in its hiring, employment, or business practices. The State is committed to complying with the Americans

with Disabilities Act of 1990 (ADA) and does not discriminate on the basis of disability, in admission to, access to, or operation of its programs, services, or activities.

VI. EVALUATION OF PROPOSALS

The following criteria are expected to be among those utilized in the selection process. They are presented as a guide for the bidder in understanding the State's requirements and expectations for this project and are not necessarily all-inclusive or presented in order of importance.

- A. Proposed statement of work. Emphasis will be on grasp of the problems involved, soundness of approach and the quality of the overall proposal.
- B. Experience, expertise, and capabilities of the bidder in the area of submerged cable and pipeline investigations, benthic habitat surveys and assessments, estuarine sediments surveys and assessments, EMF analysis and evaluation, and marine navigation and safety evaluation.
- C. The use of a consortium approach to bring together the best experts and technical capabilities will be considered.
- D. The additional data the bidder wishes to bring to DEP's attention.

VII. CONDITIONS

All bidders must be willing to adhere to the following conditions and must positively state this in the proposal.

- A. All proposals in response to this RFP are to be the sole property of the State. Bidders are encouraged NOT to include in their proposals any information that is proprietary. All materials associated with this procurement process are subject to the terms of state laws defining freedom of information and privacy and all rules, regulations and interpretations resulting from those laws.
- B. Any product, whether acceptable or unacceptable, developed under a contract awarded as a result of the RFP is to be the sole property of the State.
- C. The bidder agrees that the proposal will remain valid for a period of 90 days after the closing date for the submission and may be extended beyond that time by mutual agreement.
- D. The State may amend or cancel this RFP, prior to the due date and time, if the State deems it to be necessary, appropriate or otherwise in the best interests of the State. Failure to acknowledge receipt of amendments, in accordance with the instructions contained in the amendments, may result in a firm's proposal not being considered.
- E. Any costs and expenses incurred by bidders in preparing or submitting proposals are the sole responsibility of the bidder.
- F. No additions or changes to the original proposal will be allowed after submittal. While changes are not permitted, clarification of proposals may be required by the State at the bidder's sole cost and expense.
- G. In some cases, bidders may be required to give presentations or further explanation to the RFP selection committee.
- H. The bidder represents and warrants that the proposal is not made in connection with any other bidder and is in all respects fair and without collusion or fraud. The bidder further represents and warrants that they did not participate in any part of the RFP development process, had no knowledge of the specific contents of the RFP prior to its issuance, and that no agent, representative or employee of the State participated directly in the bidder's proposal preparation. This paragraph shall not be construed to prohibit consortiums or teams applying as one bidder.

- I. All responses to the RFP must conform to instruction. Failure to answer all questions or to follow the requested format may be considered appropriate cause for rejection of the response.

VIII. DELIVERABLES

The awardee will be required to submit a draft report of its findings to DEP for its review. Following DEP's review of the draft document, comments will be provided to the awardee. All comments must be addressed by the awardee and a final report must be prepared and submitted to DEP prior to the execution of final payment.

IX. RIGHTS RESERVED TO THE STATE

The State reserves the right to reject any or all bids; to award in part, to reject any and all bids in whole or in part for misrepresentation or if the bidder is in default of any prior State contract, or if the proposal limits or modifies any of the terms and conditions and/or specifications of the RFP. The State also reserves the right to waive technical defect, irregularities and omissions if, in its judgment, the best interest of the State will be served.