

U. S. DEPARTMENT OF ENERGY, OFFICE OF SCIENCE

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)
ENVIRONMENTAL EVALUATION NOTIFICATION

To be completed by "Applicant," i.e., organization with responsibilities for a "Federal action" involving application to DOE for a permit, license, exemption or allocation, or other similar actions. For assistance, refer to "Instructions for Preparing Environmental Evaluation Notification."

Solicitation/Award No. (if applicable): DE-SC0020830

Organization Name: Triton Systems, Inc.

Proposed Action Title: Wave Energy Harvesting to Power Ocean Buoys

Total DOE Funding/Total Funding: 1,149,849.00

I. Project Description: **(Use explanation pages if additional space is required)**

A. Proposed Project/Action (if applicable, delineate Federally funded/Non-Federally funded portions)

The proposed project entails the deployment of an ocean buoy containing a wave energy converter (WEC) prototype for field trials on an existing permitted aquaculture site. The buoy will be deployed for no more than one year and will be located approximately 2.24 miles offshore of Little Boars Head, New Hampshire. The WEC will be deployed in a 1.6 meter buoy that is moored using a stretch hose and a 6.5 square foot anchor. In addition to the main buoy, a smaller buoy will be attached to house the WEC.

B. Would the project proceed without Federal funding?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>

If "yes," use explanation page.

II. Description of Affected Environment: **(Use explanation pages if additional space is required)**

The proposed site is the Atlantic Ocean at N 42.95055, W -70.71472. This location is approximately 2.24 miles offshore of Little Boars Head, NH. The deployment location is approximately 125 feet deep. The seafloor is composed of a sandy silt mix with cobble. Based on consultation between USACE and NMFS the project has been deemed Not Likely to Adversely Effect NMFS ESA listed species and have a negligible effect on essential fish habitat present at the site. Further USACE has determined no effect is expected to UFWS protected species present at the site. Similarly, no effects to historic property or other trust or natural resources present are expected (see USACE/GARFO ESA NLAA form, USFWS No Effect determination and USACE authorization attached).

III. Preliminary Questions:

- | | Yes | No |
|---|--------------------------|-------------------------------------|
| A. <u>Is the DOE-funded work routinely administrative or <i>entirely</i> advisory or a “paper study?”</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

If “Yes”, ensure that the description in Section I reflects this and go directly to Section V.

- B. Is there any potential whatsoever for: (Provide an explanation for each “Yes” response)

- | | | |
|--|-------------------------------------|-------------------------------------|
| 1. Work to be performed outdoors? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Major modification of a building facade or interior? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Threat of violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Siting, construction or major expansion of waste treatment, storage, or disposal facilities? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Disturbance to hazardous substances, pollutants, or contaminants preexisting in the environment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. The presence of any environmentally-sensitive resources? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7. Any potential whatsoever for high consequence impacts to human health or the environment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8. The work being connected to another DOE existing/proposed activity that could potentially create a significant impact? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 9. Nearby past, present, and/or reasonably foreseeable DOE future actions such that collectively significant impacts could result? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10. Scientific or public controversy, uncertainty over potential impacts, or conflicts regarding resource usage? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

If “No” to ALL Section III.B. questions, go directly to Section V.

IV. Potential Environmental Effects: (Provide an explanation for each “Yes” response)

- A. Environmentally Sensitive Resources: Could the proposed action potentially result in changes and/or disturbances to any of the following resources?

- | | Yes | No |
|--|-------------------------------------|-------------------------------------|
| 1. Threatened/Endangered Species and/or Critical Habitats | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Other Protected Species (e.g., Burros, Migratory Birds, Pollinators) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Tundra, Coral Reefs, or Rain Forests | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Cultural or Historic Resources | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Important Farmland | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. Non-Attainment Areas for Ambient Air Quality Standards | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Class I Air Quality Control Region | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8. Special Sources of Groundwater (e.g., Sole Source Aquifer) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 9. Navigable Air Space | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10. Coastal Zones | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 11. Areas with Special National Designation (e.g. National Forests, Parks, Trails) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 12. Floodplains and/or Wetlands | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

- B. Regulated Substances/Activities: Would the proposed action involve any of the following regulated items or activities?

- | | | |
|--|--------------------------|-------------------------------------|
| 13. Natural Resource Damage Assessments | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 14. Invasive Species or Exotic Organisms | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 15. Noxious Weeds | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 16. Clearing or Excavation greater than one acre or Removal of Trees Governed by Local Requirement | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 17. Dredge or Fill (under Clean Water Act, Section 404, greater than one acre) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

B. Regulated Substances/Activities: Would the proposed action involve any of the following regulated items or activities? (continued)

	Yes	No
18. Noise (in excess of regulations)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
19. Asbestos Removal	<input type="checkbox"/>	<input checked="" type="checkbox"/>
20. Polychlorinated biphenyls (PCBs)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
21. Import, Manufacture, or Processing of Toxic Substances	<input type="checkbox"/>	<input checked="" type="checkbox"/>
22. Chemical Storage/Use Including Emerging Chemicals (e.g., PFAS)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23. Pesticide Use	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24. Hazardous, Toxic, or Criteria Pollutant Air Emissions	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25. Liquid Effluents	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26. Spill Prevention/Surface Water Protection	<input type="checkbox"/>	<input checked="" type="checkbox"/>
27. Underground Injection	<input type="checkbox"/>	<input checked="" type="checkbox"/>
28. Hazardous Waste	<input type="checkbox"/>	<input checked="" type="checkbox"/>
29. Underground Storage Tanks	<input type="checkbox"/>	<input checked="" type="checkbox"/>
30. Radioactive or Radioactive Mixed Waste	<input type="checkbox"/>	<input checked="" type="checkbox"/>
31. Radiation Exposure	<input type="checkbox"/>	<input checked="" type="checkbox"/>
32. Nanoscale Materials	<input type="checkbox"/>	<input checked="" type="checkbox"/>
33. Genetically Engineered Microorganisms/Plants or Synthetic Biology	<input type="checkbox"/>	<input checked="" type="checkbox"/>
34. Ozone Depleting Substances	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35. Off-Road Vehicles	<input type="checkbox"/>	<input checked="" type="checkbox"/>
36. Biosafety Level 3-4 Laboratory	<input type="checkbox"/>	<input checked="" type="checkbox"/>
37. Research on Human Subjects or other Vertebrate Animals	<input type="checkbox"/>	<input checked="" type="checkbox"/>
38. Facility footprint exceeds 5,000 Square Feet	<input type="checkbox"/>	<input checked="" type="checkbox"/>

C. Other Relevant Information: Would the proposed action involve the following?

	Yes	No
39. Existing, Modified, or New Federal/State Permits	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40. Involvement of Another Federal Agency (e.g. license/permit, funding, approval)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
41. Action in a State with NEPA-type law	<input type="checkbox"/>	<input checked="" type="checkbox"/>
42. Action Would Require Expansion of Public Utilities/Services	<input type="checkbox"/>	<input checked="" type="checkbox"/>
43. Depletion of a Non-Renewable Resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>
44. Subject to an Existing Institutional Work Planning and Control Process	<input type="checkbox"/>	<input checked="" type="checkbox"/>
45. Other Pertinent Information Which Could Impact Human Health or the Environment	<input type="checkbox"/>	<input checked="" type="checkbox"/>

V. Applicant certification that to the best of their knowledge all information provided on this Notification is accurate:

Does this disclosure contain: classified, sensitive business, or other exempt information that DOE would not be obligated to disclose pursuant to the Freedom of Information Act.

Yes	No
<input checked="" type="checkbox"/>	<input type="checkbox"/>

A. Organization Official (Name and Title): Collette Jolliffe, Director of Contracts

Signature: *Collette Jolliffe* Date: 11/26/25
 e-mail: cjolliffe@tritonsys.com Phone: 978-856-4158

B. Optional Secondary Approval (Name and Title): _____

Signature: _____ Date: _____
 e-mail: _____ Phone: _____

Remainder to be completed by DOEVI. DOE Concurrence/Recommendation/Determination:

A. DOE Project Director/Program Manager or Contract/Grant Management Specialist:

Has the Applicant completed this Notification correctly?

Yes

☐

No

☐

Does an existing generic categorical exclusion apply?

☐☐

If yes, indicate: _____

Name and Title: _____

Signature: _____

Date: _____

B. DOE NEPA Team Review (if requested):

Is the class of action identified in the DOE NEPA Regulations (Appendices A-B to 10 CFR § 1021)?

Yes

☐

No

☐

If yes, specify the class(es) of action: _____

Name and Title: _____

Signature: _____

Date: _____

C. DOE Counsel (if requested):

Name and Title: _____

Signature: _____

Date: _____

D. DOE NEPA Compliance Officer:

The preceding pages are a record of documentation required under DOE Final NEPA Regulation, 10 CFR § 1021.102.

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Action may be categorically excluded from further NEPA review. I have determined that the proposed action meets the requirements for Categorical Exclusion referenced above.

☐

Action requires approval by Head of the Field Organization. Recommend preparation of an Environmental Assessment.

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Action requires approval by Head of the Field Organization or the SC Director of Field Operations. Recommend preparation of an Environmental Impact Statement.

Comments/limitations if any: _____

NEPA Compliance Officer:

Name: _____

Signature: _____

Date: _____

Optional Additional Narrative: (add additional detail to description to Sections I and II or explanations to responses in Sections 3 and 4.

Little Boars Head NH

NEPA Environmental Evaluation Notification -- Supplement

I. Project Description

A. Proposed Project/Action

The proposed project entails the deployment of an ocean buoy containing a wave energy converter (WEC) prototype. The buoy will be deployed for no more than one year and will be located approximately 2.24 miles offshore of Little Boars Head, New Hampshire. The proponent, Triton Systems Inc., has received a grant from the U.S. Department of Energy (USDOE) to develop a WEC for use on metocean buoys. The low power budgets of existing ocean observing buoys limit the amount of data that can be collected and communicated. As a result, a point-absorber type WEC has been developed and will be integrated into the hull of existing buoy designs to test the doubling of its power budget, which would greatly increase the amount of data available to scientists. This increase will be made possible using the oscillating water column effect produced by the heave motion of the buoy as it rides the waves to drive an electrical generator. The proposed project will produce minimal impacts to the seabed in the location of the anchor. The proposed project will not include any dredging, nor will the project alter the bottom topography. The mooring anchor has been designed to cover 0.6 square meters (approximately 6.5 square feet) of seabed. It weighs approximately 1,500 pounds (in air), which is designed to have minimal adverse effects to the seafloor and marine fisheries habitat. The mooring anchor has been designed to be placed on top of the seafloor instead of being pile driven. This method is anticipated to have little to no impact on the alterations in water circulation or turbidity.

III. Preliminary Questions

B. Is there any potential whatsoever for:

1. Work to be performed outdoors?

Yes. The buoy will be deployed at sea for approximately one year.

6. The presence of any environmentally sensitive resources:

Yes. The U.S. Fish & Wildlife Service's (USFWS) Information for Planning and Conservation (IPaC) tool indicates that the site is in an area known to be used by the roseate tern (*Sterna dougallii dougallii*), a federally endangered species. It is also in an area used by several migrating bird species. The proposed project will sit on the surface of the ocean and will not interfere either with habitat for sensitive bird species or with migratory pathways. The National Oceanic and Atmospheric Administration's (NOAA) Section 7 Consultation Report indicates that there are several species of fish and sea turtles, and the Atlantic right whale, that may use this area as habitat. The buoy will have an anchor that sits on the ocean floor and covers approximately 6.5 square feet. It will be tethered to this anchor by a stretch hose approximately 15 meters (49 feet) long. This configuration is not anticipated to impact any sensitive marine species that could utilize the area as habitat, as the stretch hose will be visible and easy to avoid.

IV. Potential Environmental Effects:

A. Environmentally Sensitive Resources: Could the proposed action potentially result in changes and/or disturbances to any of the following resources:

1. Threatened/Endangered Species and/or Critical Habitats

The IPaC results indicated the following species is (are) potentially present in the project area and, based on responses to the Service's Northeast DKey, the proposed Project will have the following effect determinations:

Roseate Tern (*Sterna dougallii dougallii*), Endangered, No effect

Rufa Red Knot (*Calidris canutus rufa*), Threatened, No effect

2. Other Protected Species (e.g., Burros, Migratory Birds, Pollinators)

The proposed buoy will be deployed in an area that is a known flyway for migrating birds. However, it is such a small device that it is highly unlikely that migratory birds will be affected in any way by the device. It is possible that the buoy could provide a resting spot offshore for migrating birds, which would be a positive disturbance for these species instead of a negative one.

In addition to the species listed above, the following species and/or critical habitats may also occur in project area and are not covered by this conclusion:

Monarch Butterfly *Danaus plexippus* Proposed Threatened

10. Coastal Zones

The proposed project will temporarily impact approximately 0.6 square meters (6.5 square feet) of seabed in the coastal zone. Once the deployment period concludes, the device will be removed from the Ocean. No permanent impacts to the coastal zone are anticipated.

12. Wetlands

No impact anticipated. Due to proximity to shore, a Permit by Notification was required and obtained from New Hampshire Department of Environmental Services.

C. Other Relevant Information: Would the proposed action involve the following:

39. Existing, Modified, or New Federal/State Permits

The project activities will take place in marine navigable waters. The client has submitted a Private Aids to Navigation Application (CG 2554) to the U.S. Coast Guard. This project qualifies for a New Hampshire General Permit 14 (GP 14) Scientific Measurement Devices. As proposed, this project will result in minimal impacts, so is only required to submit self-verification to utilize this permit. An Expedited Minimum Impact (EXP) Wetlands Permit By Notification (PBN) Application was submitted to the New Hampshire Department of Environmental Services (NHDES). This file was closed and identified as meeting the project exemption on May 27, 2025. Closed Wetlands File (RSA 482-A). NHDES File Number: 2025-00250.

US Army Corp of Engineers Permit NAE-2020-01285, held by the University of New Hampshire has been amended to include the Triton Wave Energy Converter.

40. Involvement of Another Federal Agency

Please see line 39. The USACE controls the overarching permit for the deployment location. Proper steps were taken to amend the permit to include the Triton WEC.

Summary Explaining Permit Applicability:

USACE Project Manager completed the required ESA consultation before the issuance of the USACE authorization, as required by law. Under section 7 of the Endangered Species Act (ESA), USACE is required to ensure its actions do not jeopardize listed species or their critical habitat. USACE completed an expedited consultation via the GARFO NLAA proc