Statement of Project Objectives

[Award Number] [Mod Number]

[Recipient Organization Name]

[Project Title]

*The examples in* ***red*** *and instructions in* ***blue*** *text should be removed in the final version of the SOPO*

*All of the information to be included in the SOPO must be consistent with the Application content, and the Funding Opportunity Announcement (FOA) requirements. Specifically, the SOPO must be consistent with the Work Plan portion of the Technical Volume submitted by the Applicant.*

***Do not include*** *the following items in the body of the SOPO:*

|  |  |
| --- | --- |
| * *Dollar amounts* | *This information should be in the budget.* |
| * *Subcontractors, vendors or individuals by name* | *The award is with the prime and, as such, the SOPO should not generally reference the subcontractors.* |
| * *Dates/schedule information in task descriptions* | *This information should be included in the Work Breakdown Structure (WBS) table in Section D of this SOPO.* |

***Include*** *the following important items in the SOPO:*

|  |  |
| --- | --- |
| * *Acronyms* | *Spell out all acronyms* |
| * *Use non-technical language if possible* | *To the extent practicable use language that can be understood by non-technical readers such as the DOE’s environmental oversight team (National Environmental Policy Act (NEPA) compliance review), contractual, and legal personnel.* |
| * *Clarify the scope* | *If this project is building off prior work, make it clear what scope is being performed on this project.* |
| * *Consistent measuring units* | *Consistent use of multiple measuring units (Metric vs Imperial). Use the same units of measurement or include conversions.* |

***Intellectual property (IP) information*** *and other aspects of the project that could be considered proprietary or business confidential should be clearly marked in the SOPO, per original FOA requirements, identifying the specific pages containing confidential, proprietary, or privileged information:*

*Notice of Restriction on Disclosure and Use of Data:*

*Pages [list applicable pages] of this document may contain confidential, proprietary, or privileged information that is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes or in accordance with a financial assistance agreement between the submitter and the Government. The Government may use or disclose any information that is not appropriately marked or otherwise restricted, regardless of source.*

*The header and footer of every page that contains confidential, proprietary, or privileged information must be marked as follows: “Contains Confidential, Proprietary, or Privileged Information Exempt from Public Disclosure.”*

*In addition, every line and paragraph containing proprietary, privileged, or trade secret information must be clearly marked with double brackets or highlighting. [[example]], example*

# Project Objectives

*This content must be consistent with the ‘Project Objectives’ section of the Work Plan submitted by the Applicant. This section should be a high level, executive summary of the entire project. This summary should serve as a stand-alone description of the project and answer the following questions:*

* *What is being done in this project? Describe your product, program, solution, or innovation.*
* *How you plan to achieve the objectives of the FOA? List the relevant FOA objectives and how the outputs of this award will achieve those objectives.*
* *What does success look like for this project? To the extent possible, provide quantitative metrics with associated target values.*

*If the award is to be structured into more than one Budget Period (BP), include the objective(s) for each BP. Only use BPs if the FOA and associated FOA topic or area of interest required them.*

*Include information clarifying what stage the technology will be at by the end of this award in line with the Technology Reediness Level (TRL) referenced in Appendix E of the FOA-0002415.*

*The following text provides example SOPO text for Topic Area (TA) TA1 or TA2 project under FOA-0002415. For TA3 projects, applicants should follow the general format outlined below, but tailor it for TA 3 projects.*

*Example:*

*This project will test the wave energy converter (WEC) [WEC type] system shown in Figure 1 at PacWave South. The objective of this project is to build experience deploying, operating, and maintaining our WEC system in an open-water environment, while gathering measurements and data needed to advance future WEC designs towards commercial viability. Other specific project objectives include:*

* *[Objective 1]*
* *[Objective 2]*

*The WEC system will be tested for [#] months and is expected to produce an annual average power output of [number] kW in the PacWave South wave resource. Testing will focus on quantifying system performance by measuring [QUANTIES THAT WILL BE MEASURED] in order to quantify [SYSTEM PERFORMANCE METRICD] and to estimate the Levelized Cost of Efficiency (LCOE) using the System Advisor Model (SAM) (*[*https://sam.nrel.gov/*](https://sam.nrel.gov/)*) tool. At the end of the project, project team will deliver a comprehensive report that described all relevant project activities, discusses conclusions and lessons learned, and identifies future R&D needs. The WEC proposed in this award is currently in TRL 4, proof of concept. Through scaled testing and finite element analysis including the specification of all main and auxiliary systems the concept WEC will reach TRL level 5 by the end of this award.*

*Figure 1: Schematic of the WEC device that will be tested. Relevant dimensions are shown.*

# Technical Scope Summary

*This content must be consistent with the ‘Technical Scope Summary’ section of the Work Plan submitted by the Applicant. Provide a summary of the work scope and work approach to achieve the project objective(s). Divide the work into discreet Budget Periods, if required by the FOA. Specify the expected end result of each budget period and/or period of performance.*

*Example:*

*In BP1, we will perform preliminary work needed to prepare for system fabrication and deployment activities. No procurement or fabrication activities will be performed during BP1.*

*A Go/No-Go (GNG) meeting will be held (virtually) at the conclusion of BP1 where the project team will present the project goals, progress, and accomplishments to-date to the Water Power Technologies Office (WPTO).*

*In BP2, after receiving appropriate National Environmental Policy Act (NEPA) approvals from DOE, we will deploy and test the system at PacWave South, and then retrieve and decommission the device after all testing activities are complete. Data gathered will be uploaded to the appropriate data portal as described herein.*

# Tasks To Be Performed

*This content must be consistent with the ‘Work Breakdown Structure (WBS) and Task Description Summary’ section of the Work Plan submitted by the Applicant. Describe the planned approach to the project, the specific activities to be conducted over the life of the project. Clearly articulate what work must be accomplished to execute the project scope and meet the established project objectives. Consider these definitions while writing this section:*

* ***(D) Deliverable*** *is an input/output term that refers specifically to the unique and individual products, elements, results, or items that are produced for delivery at the conclusion of a specific project component, or at the conclusion of the project as a whole.*
* ***(M) Milestone*** *is a significant event in a project that occurs at a point in time, with a method of verification specified.**The SOPO should identify appropriate milestones throughout the project to show project progress. A milestone may be either a progress measure (which can be activity based) or a SMART technical milestone. SMART technical milestones should be* ***S****pecific,* ***M****easurable,* ***A****chievable,* ***R****elevant, and* ***T****imely, and must demonstrate a technical achievement rather than simply completing a task. In both cases, the Applicant should indicate how the milestone will be verified. It is up to the recipient to include verification procedures within each milestone or in section D. Project Management and Reporting at the end of the SOPO.*
* ***Go/No-Go (GNG) Decision Points:*** *GNG Decision Points are only applicable for projects with more than one budget period. The SOPO will include a GNG decision points at the end of each budget period if required by the FOA or as directed during negotiations by the DOE project team. A GNG decision point is a risk management tool and a project management best practice to ensure that, for the active budget period technical success is definitively achieved and potential for success in future budget periods is evaluated prior to beginning future budget periods.*
* ***End of Project Goal:*** *The SOPO should include one SMART goal at the end of the project’s period of performance. The Applicant should also provide the means by which the goal will be verified. In addition to describing the end of project goal in the SOPO text, the end of project goal should be listed as a milestone.*

**BUDGET PERIOD 1 [Enter Title]**

**Task 1.0.0:** *Distinctive Title*

***Task Summary:*** *Describe what work is to be accomplished, identify the project objectives/outcomes being addressed and provide a concise statement of the objectives of that task. Indicate the project deliverables, milestones or expected results that this task will help achieve. Reminder, applicant should indicate how milestone will be verified.*

**Milestone 1.0.1** *(add task milestones as needed)*

**Deliverable 1.0.1** *(add task deliverables as needed)*

**Milestone 1.0.2** *(add task milestones as needed)*

**Deliverable 1.0.2** *(add task deliverables as needed)*

**Subtask 1.1.0:** *Distinctive Title*

**Subtask Summary:** *Describe the specific and detailed work efforts that go into achieving the higher-level tasks.*

**Milestone 1.1.1** *(add subtask milestones as needed)*

**Deliverable 1.1.1** *(add subtask deliverables as needed)*

**Milestone 1.1.2** (*add subtask milestones as needed)*

**Deliverable 1.1.2** (*add subtask deliverables as needed)*

*Example:*

***BUDGET PERIOD 1: PROJECT PLANNING***

***Task 1.0.0: Wave Energy Converter (WEC) System Development and Fabrication Planning***

*This task is comprised of developing the WEC systems by completing Finite Element Analysis to further develop Computer Aided Design (CAD) drawings for the WEC system. Drawings will be developed for all system components, including but not limited to the device structure, power take-off system, mooring system, and instrumentation system. All applicable construction standards will be determined, and preliminary non-destructive testing plans will be issued. Work will include collaboration with a marine fabricator and other project partners and subcontractors for the WEC fabrication phase. The expected deliverables and milestones are defined under each subtask. The overall outcome of this task is to advance the current TRL 4 WEC to a TRL level 5. This will enable the project to have a functioning WEC intended to be deployed at the PacWave South test site as describes in Task 2.*

***Subtask 1.1.0******Computer Aided design and Wave Energy Converter (WEC) structural computational analysis***

*The WEC design will be further developed using WecSim and other computational software in order to assess the structural integrity of the WEC. The completion of the WEC software simulations, the CAD drawings will be issued along with the WEC’s Failure Mode Effect Analysis (FMEA) in line with the standards and regulations identified in Task XX.*

***Deliverable 1.1.1:*** *CAD plans complete*

***Deliverable 1.1.2:*** *Standards and Verification plan*

***Milestone 1.1.1:*** *Marine Fabricator Contract Secured (The verification process of the milestone can be described here or covered in section ‘D. Project Management and Reporting’. Applicant to use at their discretion.)*

***Subtask 1.2.0******Fabrication Planning***

*The fabrication plans and procurement process will be negotiated. Fabrication drawings, specifications and construction verification plans will be reviewed by potential marine fabricator and applicable parties. Inspection plans and standards will be discussed and negotiated. The procurement and construction will begin in BP2.*

***Milestone 1.2.1:*** *Marine Fabricator RFP issued.*

***Deliverable 1.2.1:*** *WEC top level drawings, inspection plan, list of applicable engineering/regulatory standards and regulations.*

***Deliverable 1.2.2:*** *PowerPoint presentation to WPTO.*

*(Continue until all BP1 tasks and subtasks are listed)*

***Task 6.0.0: Go/No-Go (GNG) decision point.***

*NOTE: This task is estimated to take three (3) months and includes the following:*

|  |  |
| --- | --- |
| *Applicant submits a Continuation Application for subsequent BP to WPTO* | *Ninety (90) days before end of BP1* |
| *Virtual GNG presentation to WPTO* | *Approximately two weeks after submission of Continuation Application* |
| *WPTO issues GNG decision* | *Approximately two weeks after submission GNG presentation* |
| *Depending on the GNG decision result, WPTO and Applicant negotiate subsequent BP, or proceed to closeout BP1 award* | *Duration of two (2) months remaining before end of BP1* |

*Please include the language in black color below if you will have more than one budget period to your SOPO:*

*EERE intends to conduct a project review upon the completion of BP1.* ***Ninety (90) days before the completion of BP1****, the Recipient will submit to the WPTO Technology Manager/Project Officer a continuation application which includes the information/deliverables listed below.*

*The Recipient will then participate in a Go/No-Go meeting with the WPTO team and present their project to the EERE Project Review committee. Subject matter experts from academia, national laboratories, and industry may be used as reviewers, subject to conflict of interest and non-disclosure considerations. Projects will be evaluated based on the following criteria:*

* *Satisfactory completion of BP1 work scope and deliverables*
* *Likelihood that the project can be completed on schedule and within budget in BP2*
* *Demonstration of financial viability and connection to stakeholder needs*
* *Demonstrate/review all milestones and FOA requirements have been met satisfactorily*

*As a result of the Go/No-Go review, DOE may, at its discretion, authorize the following actions by the Recipient: (1) continue to fund the project, (2) recommend redirection of work under the project; (3) place a hold on the project, pending further supporting data or funding; or (4) cancel the project because of insufficient progress, change in strategic direction, or lack of funding.*

*GNG Deliverable 6.0.1: Continuation application*

*GNG Deliverable 6.0.2: GNG virtual presentation to WPTO*

*GNG Milestone 6.0.1: Go/No-Go Decision Received*

***Subtask 6.1.0: Negotiations of BP2 (or Closeout of BP1) depending on the GNG decision***

**BUDGET PERIOD 2 [Enter Title]**

**Task 7.0.0:** *Distinctive Title*

*(Continue in the format from BP1 above until all tasks, subtasks, milestones and deliverables are listed and described)*

*Example*

**BUDGET PERIOD 2: FABRICATION, DEPLOYMENT, TESTING, AND** **DECOMISSIONING**

***Task 7.0.0******Fabrication***

*Task 2 will detail any changes to all the fabrication, updates to material procurement and inspection plans to assure that the WEC will be built on time and on budget. Task 2 will conclude by having a build WEC.*

***Subtask 7.1.0 Fabrication and Material Procurement***

*With the Marine Fabricator contract in place, the procurement process will begin. Fabrication drawings, specifications and construction verification plans will be reviewed by the marine fabricator and applicable parties to assure its applicability. Any non-conformities and fabrication amendments will be addressed before and throughout the construction phase.*

***Milestone 7.1.1:*** *WEC Fabrication Drawings and plan to address non-conformities. This milestone will be verified thought deliverable 1.1.1 and 1.1.2. (The verification process of the milestone can be covered here or in section ‘D. Project Management and Reporting’. Applicant to use at their discretion.)*

***Deliverable 7.1.1:*** *WEC Statement of Compliance to predetermined standards and verification plans.*

***Deliverable 7.1.2:*** *WEC Fabrication PowerPoint presentation to WPTO.*

***Task 8.0.0: WEC Testing and Deployment***

*After the completion of the fabrication, the WEC will undergo rigorous pre-deployment testing. WEC component, instrumentation, and auxiliary system testing will span in two phases before WEC is deployed and tested in PacWave. Phase 1, Factory Acceptance tests at the fabricators facility to test all components, systems, and instrumentations as far as reasonably practicable. Phase 2, WEC commissioning and Failure Mode and Effect Analysis (FMEA) verification will take place prior to deployment in Pacwave South. After phase one and two have been completed the WEC will go through a final pre-deployment verification in line with PacWave pre-deployment requirements. The goal for this task is to verify all systems are working and the WEC is ready to be tested for 24 continuous months.*

***Subtask 8.1.0:******Phase 1, Factory Acceptance Test***

*The WEC components, systems, and instrumentation will be tested at the marine fabricators facility as far as reasonably practicable and in preparation to the commissioning test. The marine fabricator along with the prime recipient will develop a mutually agreable factory acceptance test.*

***Deliverable 8.1.1:*** *Factory Acceptance Test Report*

***Subtask 8.2.0 Phase 2, Commissioning and Pre-Deployment Tests***

*The WEC designers along with all relevant parties will initiate the WEC Commissioning tests to assure all systems, components and communication are working. The commissioning tests will be carries out in a pre-determined location before the WEC is deployed in PacWave South. The FMEA will be tested as far as reasonably practicable, dockside before being deployed. All mooring equipment and underwater cables will be prepared for the WEC deployment.*

***Deliverable 8.2.1:*** *WEC Commissioning Report*

***Deliverable 8.2.2****: WEC Pre-Deployment Report*

***Deliverable 8.2.3****: Lessons Learned Report*

***Task 9.0.0: NEPA Compliance***

***Deliverable 9.0.1:*** *Submission of Environmental Questionnaire, including summary of receipt and readiness of necessary permitting documentation*

***Task 10.0.0 In-water Deployment***

*After the rigorous pre-deployment and deployment verification tests, the WEC will be ready to be deployed and begin testing for 24 months…*

# Project Management and Reporting

*Briefly describe relevant project management and administrative reporting activities during all budget periods, including any special reporting requirements or deliverables such as submission of a Project Management Plan or Risk Register. Development of the risk management plan and risk register must follow the “Marine and Hydrokinetic Technology Development Risk” risk register template -https://www.nrel.gov/docs/fy15osti/63258.pdf. The risk management plan and risk register must consider risks that could be encountered during a potential device manufacturing, deployment, and testing project. Include a discussion of knowledge dissemination and participation in WPTO’s Peer Review.*

*Example*

***Task 0.0.0: Project Management***

***Deliverable 0.0.1:*** *Project Management Plan*

***Subtask 0.1.0:*** *Risk Management*

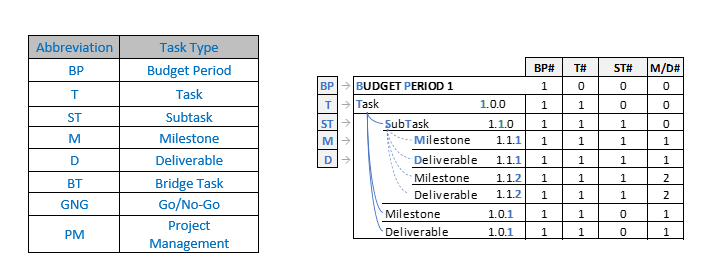
***Deliverable 0.1.1:*** *Risk Management Plan*

Reports and other deliverables will be provided in accordance with the Federal Assistance Reporting Checklist following the instructions included therein.

**Work Breakdown Structure (WBS)**

*During negotiations, WPTO will generate a project schedule and a reporting template based on the WBS table below.*

* *Make sure to have all planned “project month start” column and “project month end/due” column filled out for each row.*
* *The major WBS “task types” are: Task (T), Subtask (ST), Milestone (M), Deliverable (D), and Go/No-Go (GNG) for all topic areas.*
* *Each row in the WBS table shall have a unique combination of task type and numbers.*
* *TIP: Number the milestones and deliverables sequentially regardless of the task, subtask or budget period it falls under. Milestones and Deliverables can have the same last number occur only once. The Task Type will make them unique and easily identifiable. See TIP highlighted yellows in the WBS table.*
* *TIP: Think of the WBS as your table of contents focused on tracking budget periods, tasks, subtasks, milestones and deliverables. Anyone should be able to look at the WBS table to identify what work is being done at any given time of the project and identify what milestone and/or deliverable are associated with that task/subtask.*



***EXAMPLE WBS***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Project Start Date** | | | | | 4/1/2022 | | |
| **Project End Date** | | | | | 3/31/2024 | | |
| **Budget Period #** | **Task Type** | **Task #** | **Subtask #** | **M or D #** | **Description** | **Planned Project Month START** | **Planned Project Month END/DUE** |
| 0 | T | 0 | 0 | 0 | Project Management | 1 |  |
| 0 | D | 0 | 0 | 1 | Project Management Plan | 1 | 1 |
| 0 | ST | 0 | 1 | 0 | Risk Management | 1 | 1 |
| 0 | D | 0 | 1 | 1 | Risk Management Plan | 1 | 1 |
| **1** | **BP** | 0 | 0 | 0 | **PROJECT PLANNING** | **1** | **9** |
| 1 | T | 1 | 0 | 0 | WEC System Development and Fabrication Planning | 1 | 3 |
| 1 | ST | 1 | 1 | 0 | Computer Aided design and WEC structural computational analysis | 2 | 3 |
| 1 | D | 1 | 1 | 1 | TIP: Notice the “M or D #” column have the same number assigned for Milestone 1.1.1 and Deliverable 1.1.1. This is acceptable because they have different Task Types, “M” and “D”. | 3 | 3 |
| 1 | D | 1 | 1 | 2 | 4 | 4 |
| 1 | M | 1 | 1 | 1 | 3 | 3 |
| 1 | ST | 1 | 2 | 0 | Fabrication Planning | 3 | 5 |
| 1 | M | 1 | 2 | 1 | Marine Fabricator RFP issued. | 3 | 3 |
| 1 | D | 1 | 2 | 1 | WEC top level drawings, inspection plan, list of applicable engineering/regulatory standards and regulations. | 3 | 3 |
| 1 | D | 1 | 2 | 2 | PowerPoint presentation to WPTO. | 3 | 3 |
| 1 | T | 3 | 0 | 0 | …example… | 3 | 4 |
| 1 | ST | 3 | 1 | 0 | …example… | 4 | 5 |
| 1 | T | 4 | 0 | 0 | Estimate performance metrics and LCOE | 5 | 6 |
| 1 | ST | 4 | 1 | 0 | ….example… | 5 | 6 |
| 1 | M | 4 | 0 | 1 | TIP: Notice the “M or D #” column have the same number assigned for Milestone 4.0.1 and Deliverable 4.0.1. This is acceptable because they have different Task Types, “M”, and “D”. | 6 | 6 |
| 1 | D | 4 | 0 | 1 | 6 | 6 |
| 1 | GNG | 6 | 0 | 0 | Go/No-Go Decision Point | 6 | 9 |
| 1 | D | 6 | 0 | 1 | Continuation Application including BP1 Report and other BP1 project deliverables identified in Table 3 or 5 of DE-DOA-0002415 | 6 | 6 |
| 1 | D | 6 | 0 | 2 | GNG virtual presentation to WPTO | 7 | 7 |
| 1 | M | 6 | 0 | 1 | GNG decision received, BP2 award negotiated if successful | 7 | 7 |
| 1 | ST | 6 | 1 | 0 | Bridge Task: Negotiations of BP2 (or Closeout of BP1) depending on the GNG decision | 8 | 9 |
| **2** | **BP** | **7** | **0** | **0** | **FABRICATION, DEPLOYMENT, TESTING, AND DECOMISSIONING** | **9** | **39** |
| 2 | T | 7 | 0 | 0 | Fabrication | 9 | 13 |
| 2 | ST | 7 | 1 | 0 | Fabrication and Material Procurement | 10 | 12 |
| 2 | M | 7 | 1 | 1 | WEC Fabrication Drawings and plan to address non-conformities | 12 | 13 |
| 2 | D | 7 | 1 | 1 | WEC Statement of Compliance to predetermined standards and verification plans. | 13 | 13 |
| 2 | D | 7 | 1 | 2 | WEC Fabrication PowerPoint presentation to WPTO. | 13 | 16 |
| 2 | T | 8 | 0 | 0 | WEC Testing and Deployment | 16 | 17 |
| 2 | ST | 8 | 1 | 0 | Phase 1, Factory Acceptance Test | 17 | 18 |
| 2 | D | 8 | 1 | 1 | Factory Acceptance Test Report | 18 | 18 |
| 2 | ST | 8 | 2 | 0 | Phase 2, Commissioning and Pre-Deployment Tests | 19 | 20 |
| 2 | D | 8 | 2 | 1 | WEC Commissioning Report | 20 | 20 |
| 2 | D | 8 | 2 | 2 | WEC Pre-Deployment Report | 21 | 21 |
| 2 | D | 8 | 2 | 3 | Lessons Learned Report | 21 | 21 |
| 2 | T | 9 | 0 | 0 | NEPA Compliance | 21 | 22 |
| 2 | D | 9 | 0 | 0 | Submission of Environmental Questionnaire, including summary of receipt and readiness of necessary permitting documentation | 22 | 22 |
| 2 | T | 10 | 0 | 0 | In-Water Deployment | 23 | 33 |
| 2 | T | 11 | 0 | 0 | Final Report without protected data for immediate public release. | Per Terms and Conditions, Final Deliverables can be submitted within 90 days after Project completion | |
| 2 | D | 11 | 0 | 1 | Delivery of project deliverables identified in Table 3 or 5 of DE-DOA-0002415 |
| 2 | D | 11 | 0 | 2 | Required project data and project metrics data uploaded to the MHKDR |

***Please use the WBS table below for your specific project.***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Target Start Date** | | | | | Click here to enter a date. | | |
| **Project End Date** | | | | | Click here to enter a date. | | |
| **Budget Period #** | **Task Type** | **Task #** | **Subtask #** | **M or D #** | **Description** | **Planned Project Month START** | **Planned Project Month END/DUE** |
| *1…10* | *Select from*  *Drop down Menu* | *0…50* | | *0…n*  *0.0…n* |  | *1…120* | *1…120* |
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|  | ... | 0 | 0 | 0 | *… add rows as needed* |  |  |

# DOE Marine Energy Data Repository Plan

All data collected, as well as key deliverables, should be delivered in accordance with the Federal Assistance Reporting Checklist. Data will be uploaded either to the [EERE Project Management Center (PMC)](https://www.eere-pmc.energy.gov/SubmitReports.aspx), [DOE CODE](https://www.osti.gov/doecode/), Interagency Edison ([iEdison](http://www.iEdison.gov/)), USDOE Scientific and Technical Information management system ([OSTI elink](http://www.osti.gov/elink-2413)), to the relevant WPTO-funded [PRIMRE Knowledge Hubs](https://openei.org/wiki/PRIMRE/Knowledge_Hubs) ([MHKDR](https://mhkdr.openei.org/), [Tethys](https://tethys.pnnl.gov/), [Tethys Engineering](https://tethys-engineering.pnnl.gov/), and [MRE Software](https://openei.org/wiki/PRIMRE/Software)). Data should be uploaded as it is generated, but no later than the end of each reporting quarter in which the data is generated. The data will be made publicly available once it has been submitted, curated, and accepted into the appropriate system. Data submitted to MHKDR that have been identified as protected, or subject to a moratorium, will not be made publicly available until the period of protection is over or the moratorium has expired, and will be held in a secure section of the system. Protected Data will be treated according to the Intellectual Property Provisions of the Award.

Products resulting from WPTO financial assistance should be uploaded to the appropriate PRIMRE Knowledge Hub:

* MHKDR
  + Data; including any modeling outputs, visualizations, schematics, videos, code, software, raw data or other digital assets suitable for public release should be uploaded to DOE Marine and Hydrokinetic Data Repository (<https://mhkdr.openei.org>). For more information, see the MHK Data Repository Training Video online at <https://youtube.com/openei> or access tutorials and frequently asked questions (FAQs) under “Help” at <https://mhkdr.openei.org>.
* Tethys
  + Publications (such as journal articles, technical reports, conference papers, white papers, or as well as other public documents) focused on research, monitoring results, or technology development to assess and mitigate environmental effects of marine energy will be [contributed to Tethys](https://tethys.pnnl.gov/contributing-tethys). (<https://tethys.pnnl.gov/contributing-tethys>). All uploads are carried out by the Tethys team at PNNL.
* Tethys Engineering
  + Publications (such as journal articles, technical reports, conference papers, white papers, or as well as other public documents) focused on technical and engineering information about marine energy will be contributed to Tethys Engineering (<https://tethys-engineering.pnnl.gov/contribute-tethys-engineering>). All uploads are carried out by the Tethys Engineering team at PNNL.
* MRE Software
  + Software developed for marine energy applications should be hosted on the PRIMRE Code Catalog (<https://openei.org/wiki/PRIMRE/Code_Catalog>). Submit software through the MRE Code Submission Form. Open-source software hosted on a public repository will automatically be forked into the GitHub MRE Code Hub (<https://github.com/MRE-Code-Hub>)