

To: Offerors

Date: May 27, 2021

From: Procurement and Partnerships Team, INVEST Project; Implemented by DAI Global LLC

Subject: Request for Proposals (RFP) INVEST-086: USAID/Vietnam Renewable Energy Transaction Assistance Fund Nearshore Wave Power Plant in Ly Son: EIA, Gap Analysis, and Learning Capture

Due: 1:00 PM Eastern Daylight Time (EDT) on **July 1, 2021**

Dear Offerors:

Enclosed is a Request for Proposals (RFP) to support the implementation of DAI's INVEST project funded by the United States Agency for International Development (USAID). DAI invites firms to submit a proposal to support work under the Vietnam Renewable Energy Transaction Assistance Fund for USAID/Vietnam.

- I. RFP Process and deadlines:** This solicitation will result in the award of a firm fixed price subcontract. We anticipate issuing a single subcontract award expected to be up to \$150,000 resulting from the implementation of this agreement.
- a. Submission of Questions – Questions must be submitted no later than **1:00 PM EDT on June 3, 2021** via email to INVEST_Procurement@dai.com.
 - b. Submission of Proposal – Proposal must be submitted no later than **1:00 PM EDT on July 1, 2021** via email to INVEST_Procurement@dai.com, copying Leah_Day@dai.com and Carly_Gorelick@dai.com. The subject line of the email should be your organization name, followed by “Submission under RFP INVEST-086: Vietnam Wave Energy Project.” Please certify in your submission email a validity period of 60 days for the price(s) provided and include your organization's DUNS number. Please limit file submissions to 10 megabytes or less.
- II. Composition of Proposal:** The proposal should comprise the following submission documents. The Technical Proposal and Cost Proposal should be prepared as separate files for independent evaluation, as follows below. Technical proposals should be submitted as a ten (10) slide presentation, using 12-point standard font size. Graphics may be included, so long as text is clearly legible. If text or graphics are of poor resolution, the information provided may be excluded from consideration. Submissions in PowerPoint or PDF are acceptable, although PDF is preferred along with an accompanying PowerPoint document. Please provide a copy of your cost proposal in Excel format; offerors should use the attached cost/budget template.

Part 1 – Technical Proposal

The technical proposal is composed of the following three (3) sections:

1. **Technical Approach** – Offerors will detail their approach to fulfilling the accompanying Statement of Objectives (SOO). The approach will clearly indicate how the proposed activities will result in the successful completion of all deliverables and milestones.
2. **Institutional Capacity** – Offerors should provide details about the experience, expertise, and capacity of their firm (or firms if partners are proposed) to implement the proposed approach and complete the work as described. This should also include past performance information for similar activities.
3. **Management Plan/Staffing Structure** – Offerors should include details of personnel who will be assigned to activities as proposed in the technical approach, as well as a clear management plan in narrative form for the development, review, and submission of all associated deliverables, including a milestone schedule. Offerors are permitted to engage in partnering arrangements if it will aid in providing best value to USAID. If a partnering arrangement is being proposed, please describe the nature of the arrangement, the specific technical value being contributed by each member of the team, and the appropriate management controls to ensure successful delivery.

In addition to the above, please include the following inputs, which will not be counted as part of the 10-slide limit and format may be PDF or Word:

- Two (2) examples of past performance (i.e., case studies) relevant to this activity (limited to two (2) pages per example)
- CV(s) of any individuals proposed in the staffing plan to conduct this activity (limited to two (2) pages per individual).

A cover page will be considered a non-counting page, should offerors choose to include one. No additional annexes or documentation are requested nor should be submitted.

Part 2 – Cost Proposal

The contract type for the presumptive work will be Fixed Price, awarded as a subcontract by DAI Global, LLC. The cost proposal should not exceed \$150,000.

Please include your total proposed fixed price along with details for specific deliverable pricing. Offerors must also include a cost breakdown of the hourly rates for proposed personnel, any other direct costs, indirect costs, and fees if applicable, with a build-up to their total proposed price or include substantiating price reasonableness documentation/justification. Cost breakdowns included will be utilized to determine price reasonableness. Offerors may use the attached cost/budget template, but are not required to as long as the cost criteria is met; please limit file submissions to 10 megabytes or less.

- III. Evaluation of Proposal:** DAI will use best value determination for the award of this Request for Proposals. A best value determination means that, in DAI’s estimation, the

selected offer will provide the greatest overall benefit to USAID in response to the requirements stated in this RFP. DAI may also exclude an offer from consideration if it determines that an Offeror is "not responsible," i.e., that it does not have the management and financial capabilities required to perform the work required. DAI reserves the right to check the past performance, references, and other pertinent offeror information in making award decisions. Proposals will be evaluated against a stated number of factors including: the overall proposed approach, past performance, specific qualifications in the identified approach and sectors, and other evidence substantiating the bidder's ability to deliver, including budget and time frame considerations.

1. **Technical Proposal:** The Technical Proposal will be scored and evaluated separately from the cost proposal. Technical panel reviewers will evaluate offerors on the following factors, consistent with the offerors' technical proposal. The Technical Proposal will be evaluated against the following criteria:
 - a. **Technical Approach (30 Points):** Points for this section will be awarded based on the information presented in the technical approach. The offeror will be scored based on its presentation of a clear approach which reflects the requirements of this specific activity but also incorporates the offeror's competencies. The technical approach should clearly demonstrate how offerors will, by the end of the calendar year 2021, conduct the EIA in accordance with Vietnamese law, undertake the gap analysis, and develop the learning component. Offerors should include an outline of what will include in the learning report.
 - b. **Institutional Capacity (45 Points):** Points for this section will be awarded based on information presented in the corresponding section and any submitted case studies (i.e., example of past performance). Preference will be given to firms and/or consortia that have past performance in timely and successful delivery of similar services and/or relevant experience in-country as well as experience and local presence in Vietnam. Offerors should clearly demonstrate experience conducting environmental impact assessments in Vietnam. Offerors should demonstrate any knowledge and technical experience that will support their ability to perform the requirements of the SOO in an efficient and effective manner.
 - c. **Management Plan/Staffing Structure (25 Points):** Points for this section will be awarded based on the qualifications of proposed staff, clear delineation of the roles and responsibilities of each proposed staff and each proposed firm (if firms are partnering), and the demonstrated efficacy and clarity of the management plan. Proposals should provide a clear management plan in narrative form for the development, review, and submission of all associated deliverables, including a proposed milestone schedule. If the offeror is submitting a proposal with partners, the proposal should describe the nature of the arrangement (i.e. added technical value), the division of labor among the partners, and the appropriate management controls to ensure successful delivery. Offerors should clearly demonstrate that they can work in Vietnam physically. The Management Plan should

clearly outline where staff are located and, if any portion of the team or consortium will be remote, offerors should demonstrate how they will effectively supplement the work on the ground. Offerors or at least one partner in their consortium should demonstrate a physical presence in Vietnam, and include proposed staff already located in Vietnam.

2. **Cost Proposal:** Cost and associated cost build-up will be evaluated separately from the technical approach, with due consideration for realism, price reasonableness, and allowability consistent with U.S. government cost principles. Evaluation for this section will be dependent upon all information presented by the Offeror in their deliverable table and supporting cost information, as well as its alignment with the proposed technical approach.
- IV. Offeror's Agreement with Terms and Conditions:** The completion of all RFP requirements in accordance with the instructions in this RFP and submission to DAI of the technical and price proposals will constitute an offer and indicate the Offeror's agreement to the terms and conditions in this RFP and any attachments hereto. DAI is not required to accept and/or evaluate proposals that do not conform to the instructions of the RFP, and additionally, DAI may reject all proposals and not award a subcontract for this RFP. DAI reserves the right to award a subcontract without discussion and/or negotiation; however, DAI also reserves the right to conduct discussions and/or negotiations, which among other things may require an Offeror(s) to revise its proposal (technical and/or price). By submitting an offer, Offerors agree to comply with the general terms and conditions for an award, including [Representations and Certifications](#) compliance. Offerors must provide full, accurate, and complete information in response to this solicitation. By submitting an offer, Offerors certify that they have not/will not attempt to bribe or make any payment to DAI employees in return for preference. Issuance of this RFP in no way obligates DAI to award a subcontract, nor does it commit DAI to pay any costs incurred by the Offeror in preparing and submitting the proposal. DAI reserves the right to award a subcontract to one organization or to issue multiple awards to different organizations based on the results of our evaluation.

Thank you,
DAI INVEST Procurement and Partnerships Team
INVEST_Procurement@dai.com

**Statement of Objectives under RFP INVEST-086:
USAID/Vietnam Renewable Energy Transaction Assistance Fund
Nearshore Wave Power Plant in Ly Son: EIA, Gap Analysis, and Learning Capture**

Introduction

In 2017, the U.S. Agency for International Development (USAID) awarded DAI Global LLC to implement the INVEST project. The successful offeror to this Request for Proposal will be subcontracted by DAI Global LLC.

Through INVEST, USAID seeks to unlock the potential of foreign direct investment to drive high value job creation. Increasingly, multinational companies are looking to new emerging markets for relocation and new market opportunities. Encouraging investment in high-impact areas requires new forms of collaboration between USAID and the international investment community. Specifically, USAID can leverage its resources—grants, technical assistance, and convening power—to help raise awareness of investment opportunities, lower transaction costs, and mitigate the risk of investments that generate positive social, economic, and environmental impact.

Through INVEST’s flexible buy-in mechanism, USAID Missions and Operating Units can access an unprecedented network of firms and individuals that have the range of technical expertise needed to identify opportunities and effectively mobilize private capital toward development priorities. Using a lean approach tailored to high potential opportunities, relevant parts of the network will come together to research, develop, and build specific solutions that align private capital with development needs.

Background

USAID Vietnam engaged INVEST to explore and facilitate private investments in the renewable energy sector through the Renewable Energy Transaction Assistance Fund. The Renewable Energy Transaction Assistance Fund is designed to offset transaction costs and reduce the risk profiles of renewable energy projects for firms who are hesitant to invest or unable to secure investment in the current climate. USAID and INVEST believe that with the right incentives and support, renewable energy companies will be more likely to invest in renewable energy projects to help Vietnam meet its energy needs via sustainable sources.

Under INVEST solicitation *INVEST EOI-002: Vietnam Renewable Energy Transaction Assistance Fund*, interested firms were requested to submit an Expressions of Interest (i.e., concept note) detailing the proposed renewable energy projects for which they seek support and their ideas for assistance from USAID/Vietnam. With these concept notes, USAID/Vietnam and INVEST shortlisted proposals for support from the Vietnam Renewable Energy Transaction Assistance Fund and developed scopes of work that detail the discrete tasks and services to be subcontracted by INVEST with service providers on the successful respondents’ behalf.

Renewable Energy Transaction Assistance Fund: Recipient and Project Details

Based on a competitive evaluation process of Expressions of Interest submitted by firms under the *INVEST EOI-002: Vietnam Renewable Energy Transaction Assistance Fund*, Vietnam INVEST selected **Inginer Pacific**¹, to receive services that further advance their renewable energy project: **Nearshore wave power plant located on Ly Son (An Binh) island.**

¹ <https://inginer.co.kr/en/>

The wave power plant is part of an initiative to make the An Binh Island carbon-free between five stakeholders/memorandum of understanding (MOU)² signatories:

- Vietnam's Quang Ngai provincial government
- Doosan Heavy Industries – to provide repair and maintenance services for the desalination plant
- Vietnamese company VinGroup – to donate environmentally friendly electric scooters and build charging stations on the island
- SK innovation – to offer its plastic recycling technology
- INGINE – to build the wave-power station

INGINE Ly Son 1 Wave Power Plant is a pilot project currently in its development phase. Ingene Pacific has selected the site—based on various elements including wave resources and other natural aspects, the local energy demand, potential social impact, and the state of infrastructure—screened the initial risks and identified potential impacts.

Table 1: Wave Power Plant Project Details

INGINE Ly Son 1 Wave Power Plant	
Type of Project	Nearshore wave power plant
Location	An Binh islet, Ly Son district, Quang Ngai province, Vietnam (not connected to national grid)
Development Stage	Plan to start commissioning from Q4 2022.
Estimated Timeline to Completion	<ul style="list-style-type: none"> • July 2021 – December 2021: Environmental Impact Assessment • July 2022 – September 2022: Construction • October 2022: Commissioning
Technology	INWave™ Nearshore Wave Energy Converter (WEC) ³ . Multi-directional harvesting for high-performance coastal waves absorption. Does not require any underwater cable.
Anticipated Total Investment	US\$ 500,000
Estimated power generation:	67.7 MWh/year

Objectives and Activities

Under this scope of work, the successful offeror will work closely with Ingene Pacific to conduct an Environmental Impact Assessment (EIA) in line with Vietnamese regulations that will move the wave energy plant project forward and extract/document lessons learned.

Environmental Impact Assessment (EIA)

The successful offeror will prepare a full EIA of the INGINE Ly Son 1 wave power plant in accordance with Vietnamese law. As the project is located in a marine protected area (MPA), a full EIA is required by the Government Decree No.18/2015/ND-CP dated February 14, 2015. Once completed by the successful offeror, the EIA Report will be submitted by Ingene Pacific to the Department of Natural

² [Vietnam Plus, “Initiative to help Quang Ngai build carbon-free islands”](#)

³ [Concept Animation](#)

Resources and Environment for appraisal. The successful offeror will support Ingene Pacific during the EIA submission and appraisal process by participating in calls and meetings with Ingene Pacific, as needed, and revising the EIA Report as requested by the government authorities.

The EIA report will help Ingene Pacific define and de-risk potential interruptions to project execution and operation, optimize project management for more efficient and cost-effective operation, and maximize local development benefits and encourage the practice of good corporate citizenship. The successful offeror will incorporate into the EIA Report all sections required by applicable Vietnamese regulations (e.g. Law on Environmental Protection No.55/2014/QH13, Decree No. 18/2015/ND-CP, Decree No.40/2019/ND-CP, Decision No.18/2017/QD-UBND of Quang Ngai Provincial People's Committee) including the following:

- Project background
- Assessment of current status of natural and socio-economics environment
- Estimate and projection of impacts
- Measures to manage, treat, and mitigate impacts
- Environmental management and monitoring program
- Consultation results
- Cost estimate for construction of environmental protection works and implementation of measures to minimize environmental impacts

Gap Analysis and Learning Component

As wave energy is new to the renewables sector, this pilot project provides an opportunity for broader learning for the international development community, potential investors, and renewable energy stakeholders. The successful offeror will detail outcomes/impact and highlight innovations of the wave power plant, capturing lessons learned, process recommendations, and other learnings related to wave technology, off-grid solutions, and scalability potential, among other noteworthy results.

Additionally, the successful offeror will undertake a gap analysis to assess and compare the differences and gaps in requirements between an EIA meeting the requirements under Vietnam law and ESIA's applying international standards⁴. This gap analysis will contribute to the learning agenda and help inform Ingene Pacific and others in this field understand the application of international standards for the benefit of their projects.

Deliverables

The selected offeror will propose deliverables based on their technical approach that will result in the successful delivery of the above described services. The successful offeror will submit deliverables in both English and Vietnamese. The resulting deliverables will likely be:

- Work Plan
- Environmental Impact Assessment
- Wave Energy Case Study and Learning Report
- Gap Analysis

Period and Place of Performance

⁴ [IFC Performance Standards](#)

The engagement is anticipated to commence in July or August 2021 taking place over a period of 6-9 months. The EIA is expected to be completed by the end of calendar year 2021, with possible revisions being requested in early 2022 once reviewed by the government authorities.

Work for this activity is expected to take place primarily in Vietnam with remote work supplementing the on the ground implementation if necessary. Given the global Covid-19 pandemic and impacts on travel, offerors should propose at least one partner of their consortium with a physical presence in Vietnam and include proposed staff already located in Vietnam. The successful offeror will demonstrate that they can work in Vietnam physically and will demonstrate how any remote portions of work will supplement the on the ground implementation.

Role of INVEST

INVEST will work closely with the selected offeror(s) during all stages of this work. DAI will subcontract the selected offeror directly and provide review and oversight throughout the life of the activity. The INVEST team will administer periodic check-ins, reporting, deliverable review prior to client presentation and approval, and manage an ongoing monitoring, evaluation, and learning (MEL) framework.

- *Subcontractor Onboarding:* INVEST will provide the successful offeror(s) with all necessary context, and work with the successful offeror(s) to develop the work plan.
- *Project Implementation:* The successful offeror(s) will implement the work as prescribed by the work plan(s). INVEST will provide management support and ensure periodic check-ins/reporting.
- *Ongoing Monitoring, Evaluation, and Learning:* INVEST will define indicators during the subcontracting process, collect and review M&E data from subcontractors for requisite reporting to USAID and will conduct data quality assessments as necessary.

Q&A

RFP INVEST-086: USAID/Vietnam Renewable Energy Transaction Assistance Fund Nearshore Wave Power Plant in Ly Son: EIA, Gap Analysis, and Learning Capture

- 1. Section titled ‘Role of INVEST’ states: “INVEST will define indicators during the subcontracting process”. Is it possible to provide example performance indicators typically used by INVEST in similar arrangements?**

Answer: The INVEST team will discuss any potential indicators and reporting details with the successful offeror. Example performance indicators used by INVEST include the following:

- Number of projected megawatts (MW) from transactions that have achieved financial closure
- Number of private sector enterprises supported by USG assistance
- Number of laws, policies, regulations, or standards to enhance health, energy or infrastructure sector governance formally proposed, adopted, or implemented as supported by USG assistance
- Number of transactions supported

- 2. Can INVEST/DAI provide further information with regards to the wave energy concept proposed?**

Answer: An INWave™ module is composed of a floating buoy, which harnesses multi-directional wave movements, and a wave energy converter (“WEC”) platform, which generates energy and distributes to the local grid. The technology's ability to collect energy from the entire range of wave movements enables its application in shallow coastal waters. Wave power collected by the floating unit is transferred to the power generating unit using mechanical ropes - as opposed to conventional subsea cables. The generated energy is then distributed to the grid or to captive networks. This system can be combined with other renewable energy sources and energy storage solutions.

The basic principles of nearshore wave generation consist of 5 steps as follows:

- (1) Wave energy absorbing → (2) Energy transforming → (3) Power conversion → (4) Power generation and storage → (5) Remote monitoring

Concept Video: <https://www.youtube.com/watch?v=ToMSRri8Pzo>

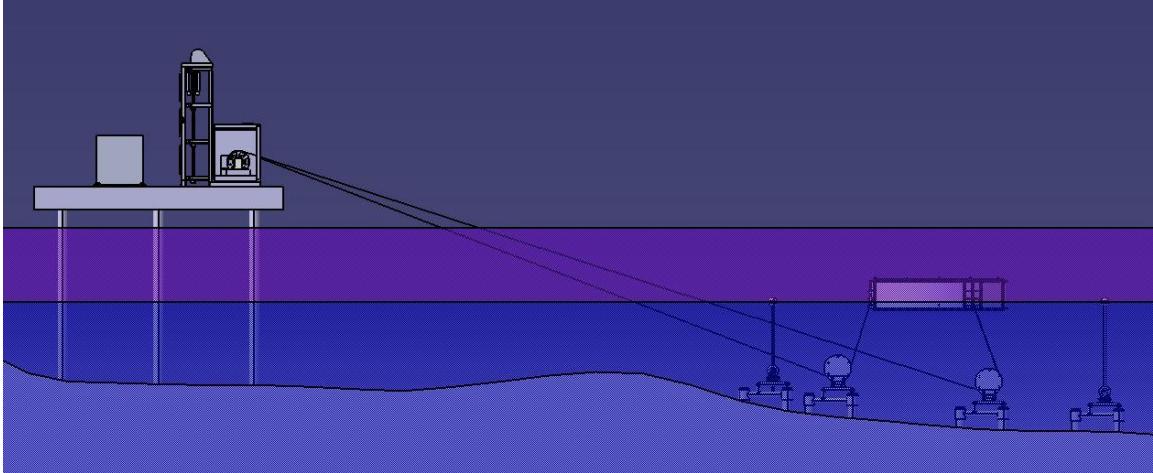


Figure 1. Longitudinal Section

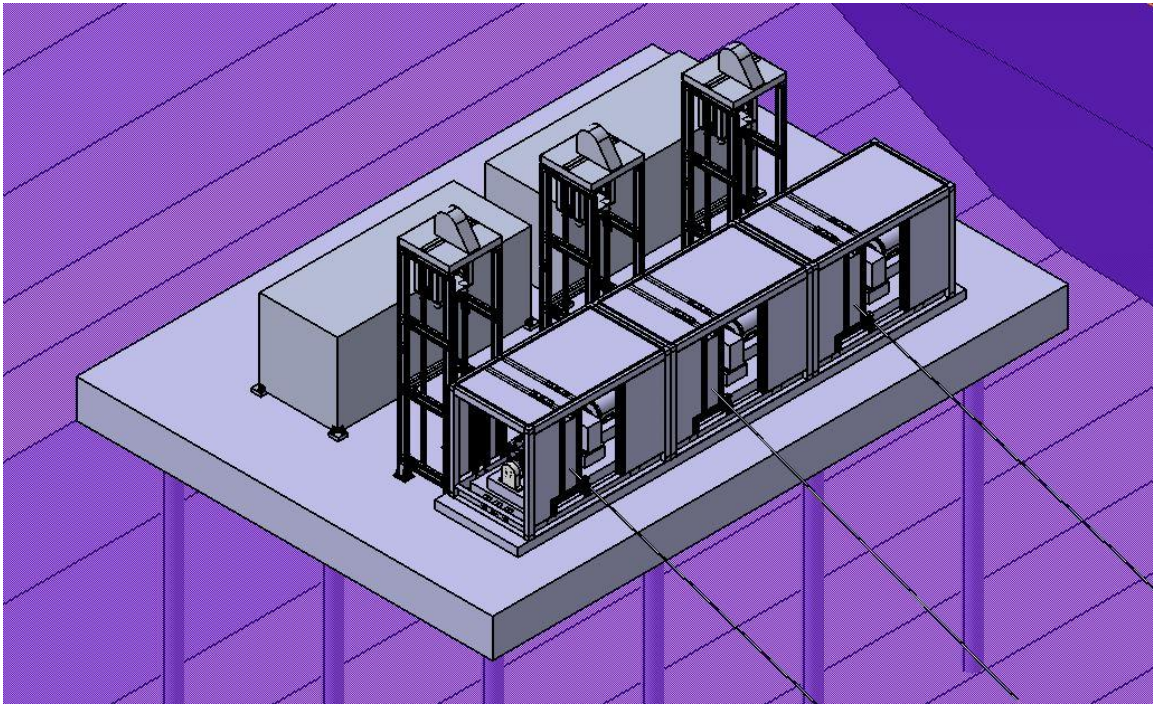


Figure 2. 3D View

- 3. It is noted that the EIA is to be completed within 6 months (deliverable due end Dec 2021). We would like to flag that depending on the sensitivity/presence of receptors at the deployment site, seasonal surveys may be required. A 6-month window will not provide sufficient time to capture the relevant season.**

Answer: Given the relevant EIA framework, it is anticipated that 6 months will be sufficient to achieve the objectives of the SOO. Should unforeseen factors delay the project, potential modifications to extend the period of performance will be discussed with USAID/INVEST.

4. How far from shore is the floating buoy (if any)? Is it within the boundary of 3 nautical miles from shore? And how many buoy planned to be installed?

Answer:

- The WEC platform is located about 90 meters from the shoreline.
- The buoy is located about 140m from the shoreline.
- Only one buoy will be installed.

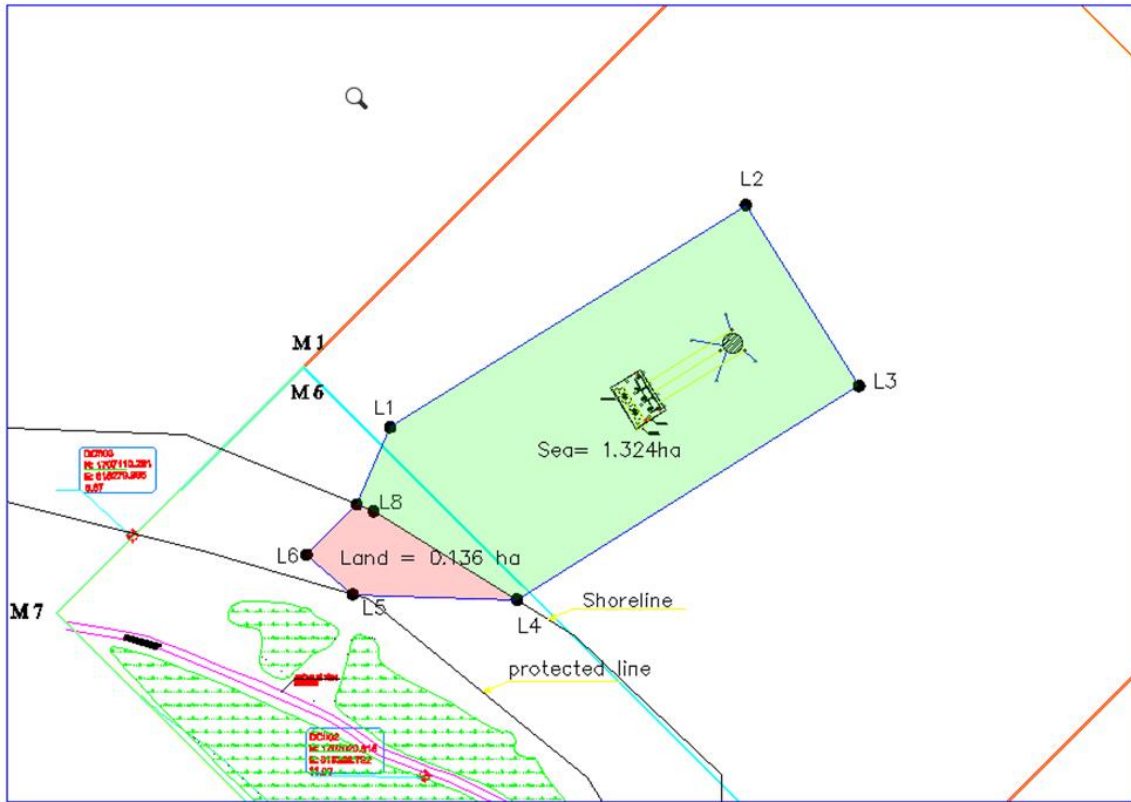


Figure 3. Survey Area

5. What is the total area of the project? (please provide both survey area and use area)

Answer:

	Survey Area	Power Plant (Use) Area
Land	0.136 ha (1360.2 m ²)	(Mainly to install the utility poles)
Sea water surface	1.32 ha (13240.4 m ²)	WEC Platform: 13m x 18 m= 234 m Buoy diameter: 7m

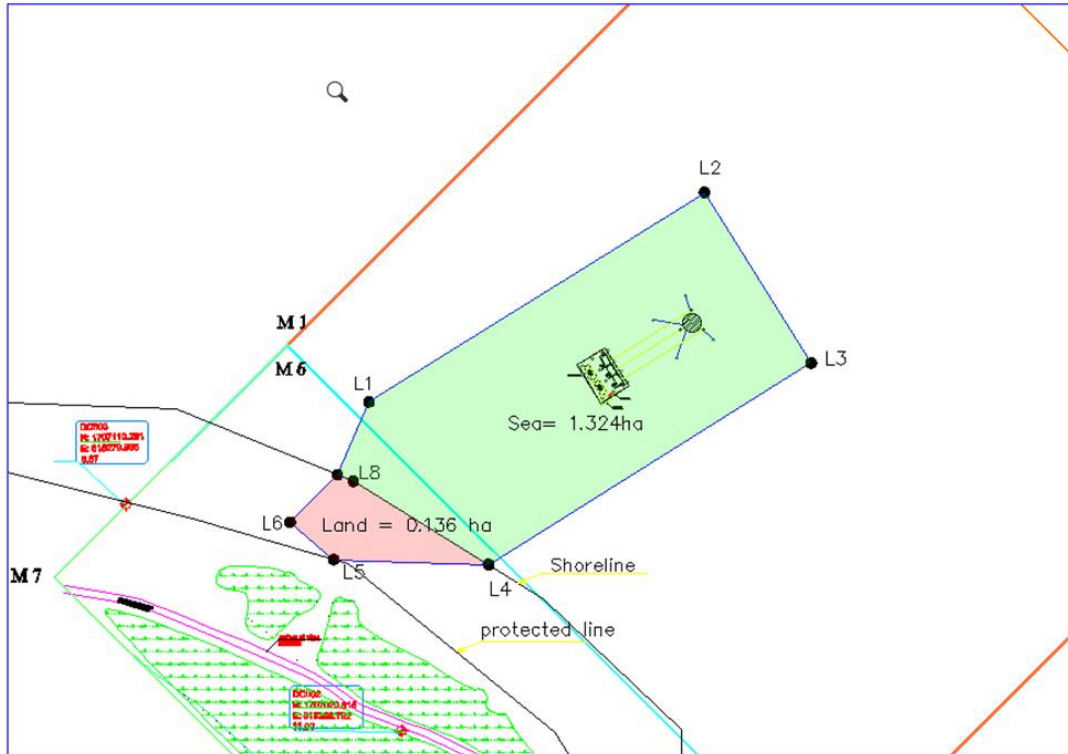


Figure 4. Survey Area

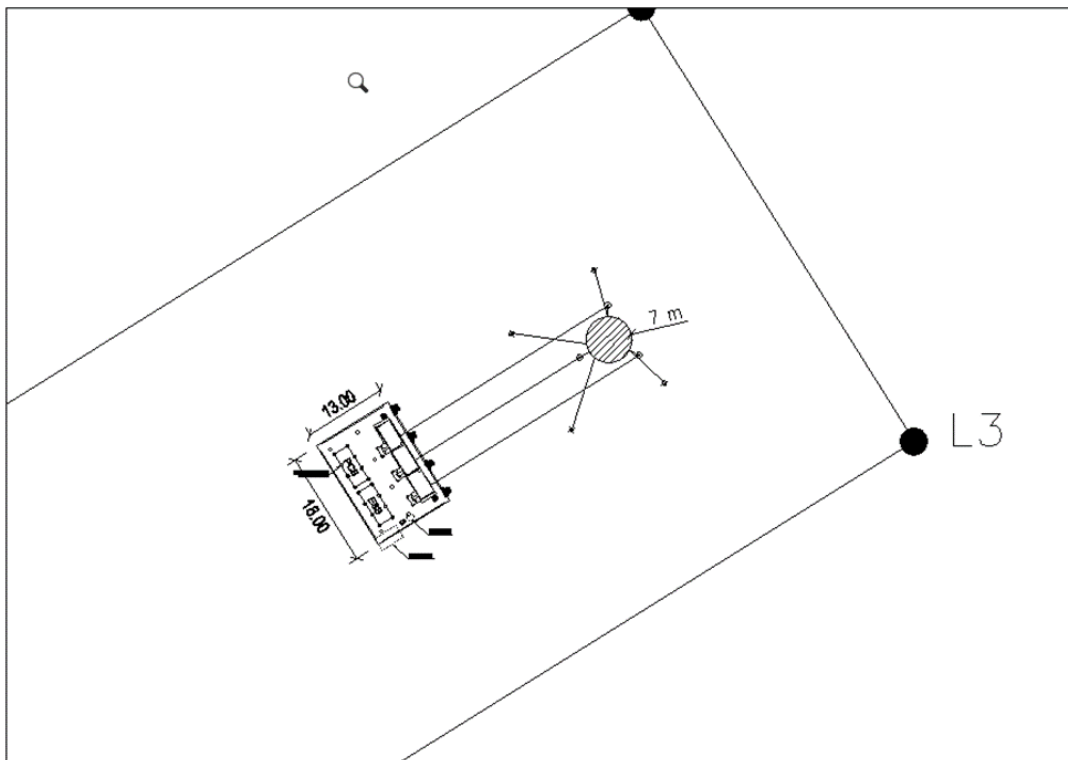


Figure 5. Power Plant (Use) Area

6. Is there any other work (substation and/or transmission line)? Please state clear if any.

Answer: The island is currently using electricity from diesel generators and solar system through a local grid. For this project, a transmission line will be built from the wave power plant and will be divided into 2 parts.

- Part 1 (Blue line): There will be 5 utility poles (one pole will be installed on the WEC platform) from the WEC platform to the existing road. The precise information of these utility poles will be provided to the successful offeror.
- Part 2 (Yellow line): Transmission line from the existing road to the existing grid connection point.

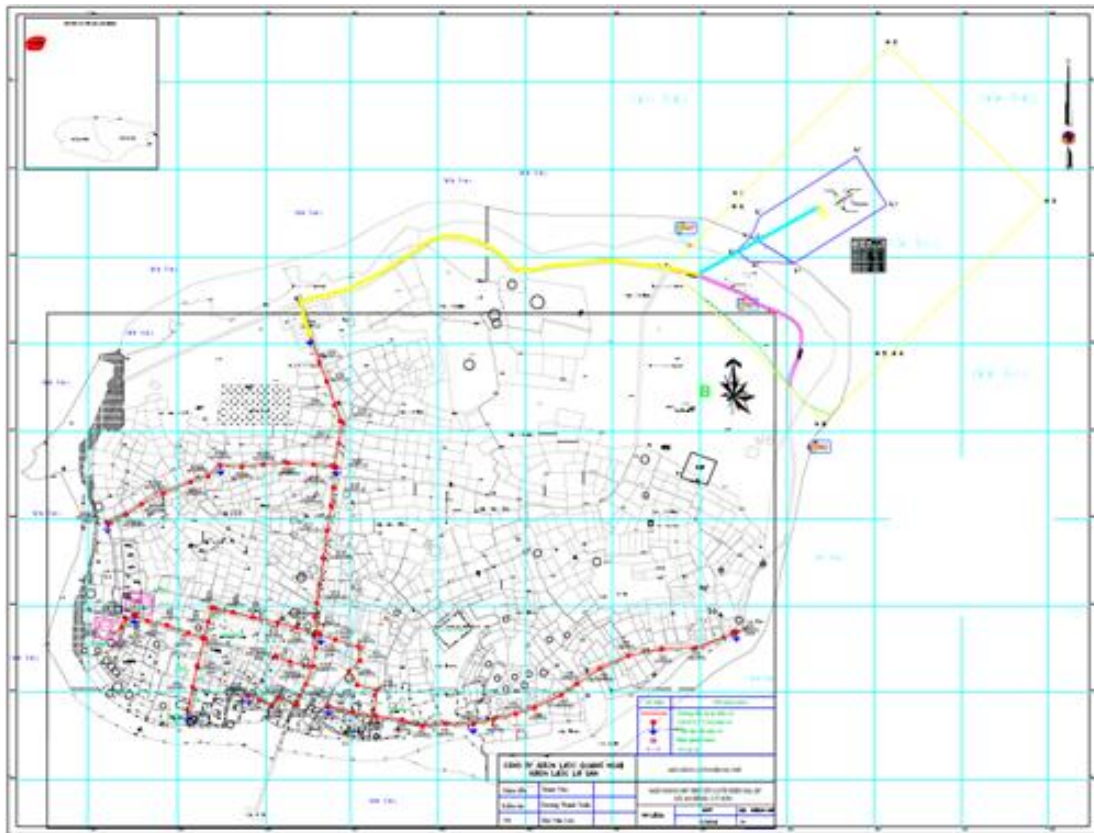


Figure 6. Electricity system on the island

7. What is the current legal status of the project?

Answer: ENGINE PACIFIC applied for the Decision on Investment Policy. We were expected to receive the Decision on Investment Policy by February 2021. However, as certain local regulatory procedures have changed, the expected schedule was revised. We are waiting for the inclusion of the project into the annual land use plan to obtain the decision on investment policy. Ly Son People's Committee received ENGINE PACIFIC's request for verification of demand of land use and is waiting for Quang Ngai People's Committee to approve the adjustment of land use plan. This process is expected to be completed by August 2021. Meanwhile, the project

obtained approval from the Ministry of Public Security and the Ministry of National Defense in October 2020.

8. Does the project possess any, not limited to the following, legal documents: Survey License, Project Investment Certificate?

Answer: ENGINE PACIFIC applied for the Decision on Investment Policy. We were expected to receive the Decision on Investment Policy by February 2021. However, as certain local regulatory procedures have changed, the expected schedule was revised. We are waiting for the inclusion of the project into the annual land use plan to obtain the decision on investment policy. Ly Son People's Committee received ENGINE PACIFIC's request for verification of demand of land use and is waiting for Quang Ngai People's Committee to approve the adjustment of land use plan. This process is expected to be completed by August 2021. Meanwhile, the project obtained approval from the Ministry of Public Security and the Ministry of National Defense in October 2020.

9. Referring to Wave Energy Case Study and Learning Report, we assume that only environmental outcomes/impact is expected, rather than full report with technical, financial and other project aspects. Is this correct?

Answer: It is envisioned that the Wave Energy Case Study and Learning Report will include outcomes/impact and highlight innovations of the wave power plant, as well as capture lessons learned from conducting EIA on a wave energy process, and provide any process recommendations and other learnings related to wave technology, off-grid solutions, and scalability potential, among other noteworthy results from the EIA and gap analysis. Additional technical or financial information is not necessarily required; however, offerors should explain how they will develop the learning component and include an outline of what will be included in the learning report.

10. Please provide some technical information of the project – Basic design of the project.

Answer: An INWave™ module is composed of a floating buoy, which harnesses multi-directional wave movements, and a wave energy converter (“WEC”) platform, which generates energy and distributes to the local grid. The technology's ability to collect energy from the entire range of wave movements enables its application in shallow coastal waters. Wave power collected by the floating unit is transferred to the power generating unit using mechanical ropes - as opposed to conventional subsea cables. The generated energy is then distributed to the grid or to captive networks. This system can be combined with other renewable energy sources and energy storage solutions.

The basic principles of nearshore wave generation consist of 5 steps as follows:

- (1) Wave energy absorbing → (2) Energy transforming → (3) Power conversion →
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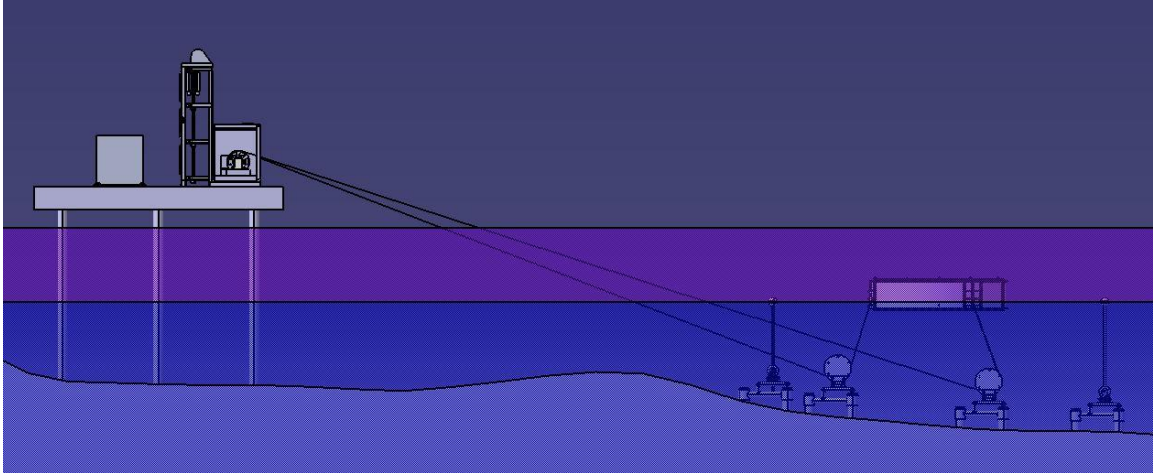


Figure 7. Longitudinal Section

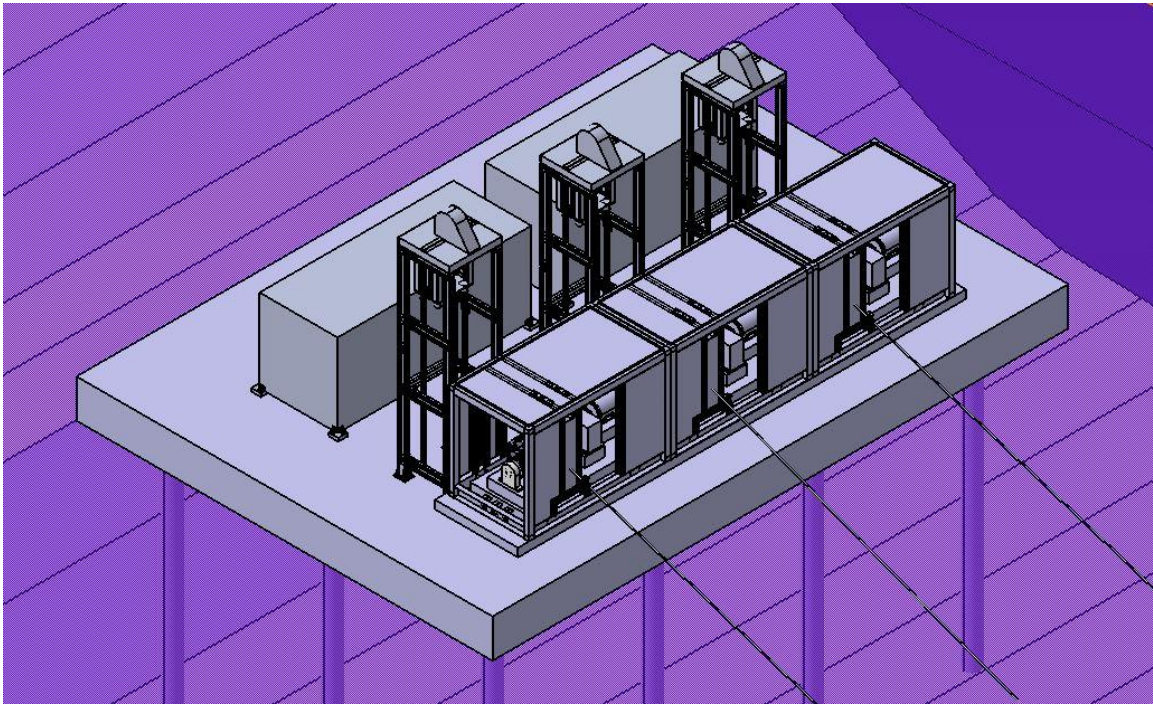


Figure 8. 3D View

11. Is there any sensitive area around the project area, such as coral reef, sea turtle?

Answer: Based on Ingene's survey in September 2019, site investigation (geotechnical survey, metocean survey, topographic survey) from September to October 2020, and Ingene's discussion with Quang Ngai authorities, there are some coral reefs scattered in the project area. We are not sure about sea turtles.

12. No MW capacity for the project pilot has been provided – is it a full commercial scale demo and was there a MW threshold that triggered the need for EIA?

Answer: The installed capacity is 50kW and the expected electricity generated is 67.7MWh. The pilot project is a full-scale power plant. This project requires an EIA because it is located in a Marine Protected Area.

13. Is the demo in a test area and if so has any partial EIA components been already undertaken?

Answer: No, it is not in a test area.

14. Has a risk register been established that might help identify potential environment impacts and/or key stakeholders that may have already been contacted?

Answer: The risk register is expected to be completed early in the summer and will be sent to the successful offeror.

15. How is the electricity generated being managed and is there an existing infrastructure for this?

Answer: The island is currently using electricity from diesel generators and solar system through a local grid. For this project, a transmission line will be built from the wave power plant and will be divided into 2 parts.

- Part 1 (Blue line): There will be 5 utility poles (one pole will be installed on the WEC platform) from the WEC platform to the existing road. The precise information of these utility poles will be provided to the successful offeror.
- Part 2 (Yellow line): Transmission line from the existing road to the existing grid connection point.

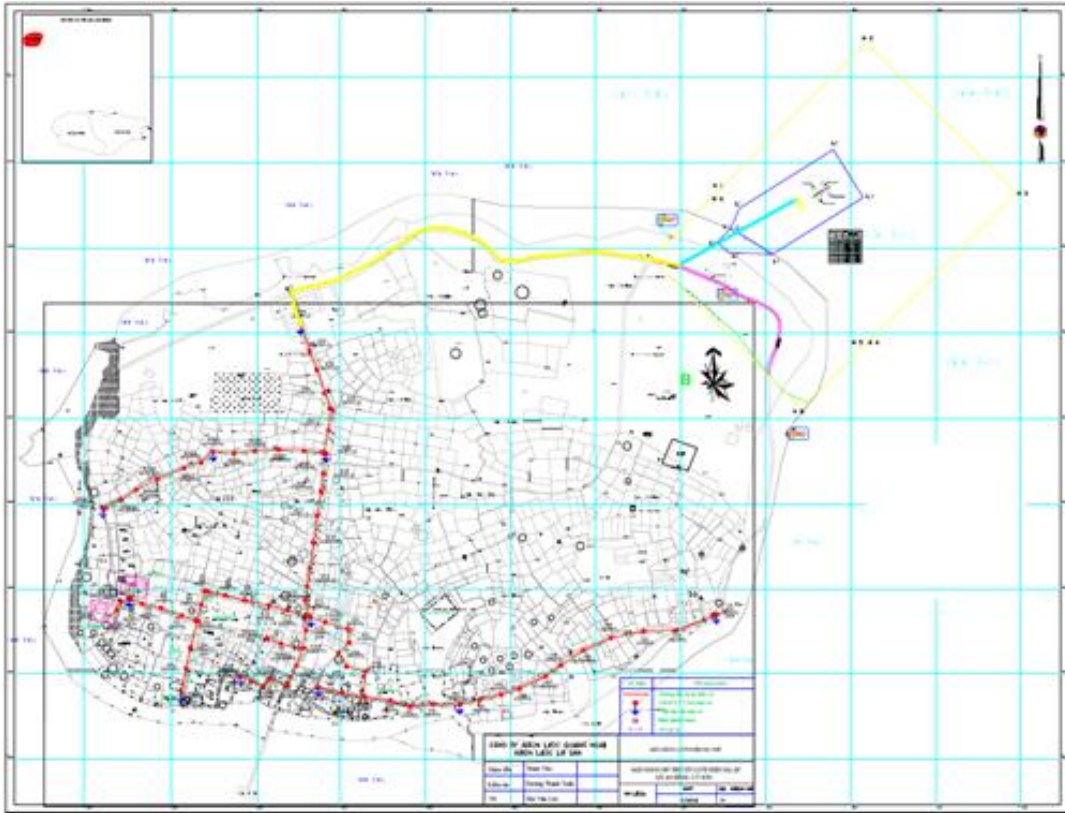


Figure 9. Electricity system on the island

16. How large and in water depth will the wave devices be deployed?

Answer:

	WEC Platform	Buoy
Size	13m x 18 m= 234 m	7m
Water depth	From 5.31 m to 5.83 m	About 7.62 m

17. In storms or exceptionally high waves, will devices be removed from the water?

Answer: The floating device (buoy) will be removed in storms or exceptionally high waves. Inge's system has a survival mode for different environmental conditions. The buoy can be removed to protect the system during extreme environmental conditions such as very strong storms or tsunamis.

18. Will full specifications of the device be provided?

Answer: The specifications of the device will be provided to the successful offeror.

19. Please describe a bit more details on the main components of the project.

Answer:

- Buoy: Floating device that absorbs the wave energy and converts it into kinetic energy
- Rope: Twisted fibre string that transfers the energy absorbed from buoy to the WEC platform
- Power Take Off ("PTO"): Machine that generates electric power using the energy transmitted through the rope from the floating device.
- Power Conversion System ("PCS") Unit: Machine that maximizes the power generation by adjusting the generator and tension of the rope, and distributes the generated power to the grid.
- Mooring: System that prevents loss of the buoy in extreme environments

20. Please provide information of the estimated total area, area of land use and area of sea water surface use; and the length of the transmission line (if it is a part of the project).

Answer:

	Survey area	Use area
Land	0.136 ha (1360.2 m ²)	(Mainly to install the utility poles)
Sea water surface	1.32 ha (13240.4 m ²)	WEC Platform: 13m x 18 m= 234 m Buoy diameter: 7m

The island is currently using electricity from diesel generators and solar system through a local grid. For this project, a transmission line will be built from the wave power plant and will be divided into 2 parts.

- 250m of Part 1 (Blue line): There will be 5 utility poles (one pole will be installed on the WEC platform) from WEC platform to the existing road. The precise information of these utility poles will be provided to the successful offeror.
- 600m of Part 2 (Yellow line): Transmission line from the existing road to the existing grid connection point.

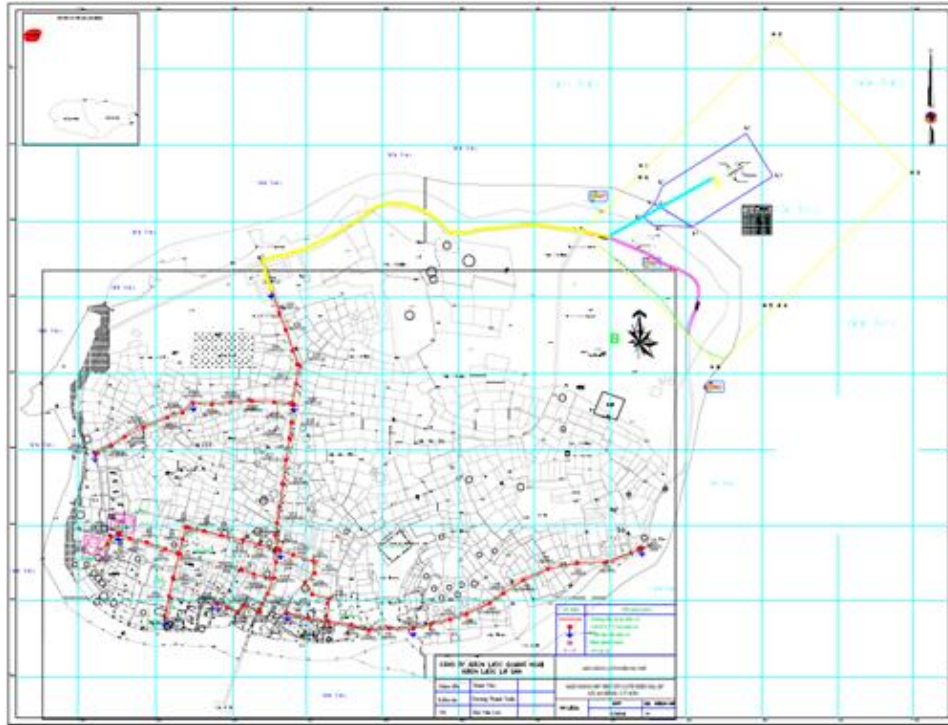


Figure 10. Electricity system on the island

21. Is there any mathematical simulation expected for the EIA? (for example, water quality modelling, air quality modelling, noise modelling, etc.).

Answer: The material provided below is a chart outlining the criteria to perform an EIA.

Table 4. Environmental impacts of WECs. Each impact is assessed as significant (yellow) and insignificant (green). 1=compatible, 2=moderate, 3=severe level of impact (Bald et al., 2010).

		Installation/Construction	Operation	Decommissioning
Physical factors	Water quality	1	1	1
	Hydrodynamics	1	1	1
	Sediments	1	3	1
	Changes in Benthos	2	3	2
Biological factors	Ichthyofauna	2	2	2
	Marine mammals	3	2	2
	Seabirds	2	2	2

(Luigia, Caterina, Arianna, & Diego, 2015)

Table 5. Monitoring topics at WECs sites: EMEC, Scotland; Pico Plant, Portugal; Galway Bay, Ireland; Sem-Rev, France; Lysekil, Sweden; Wave Dragon, Denmark/Wales; Wave Hub, England; Wave Roller, Portugal; Pelamis, UK/Scotland.

Monitoring Topic	EMEC	Pico Plant	Galway Bay	SemRev	Lysekil	Wave Dragon	Wave Hub	Wave Roller	Pelamis
Device Type	C	D	B	D	B	E	B	C	A
Scale	FS	FS	MS	MS	FS	FS	FS	FS	FS
1. Benthos									
Seabed species	x		x	x	x	x	x	x	x
Biofouling of devices					x			x	x
2. Sea birds									
Sea bird diversity	x		x				x		x
3. Fish & fish habitats									
Fish diversity							x		
Fish behaviour					x				x
FAD/artificial reef effects					x				
4. Marine mammals									
Cetacean distribution	x		x				x		
Cetacean behaviour							x		x
5. Other marine vertebrates									
Sharks							x		
Turtles			x						
6. Physical oceanographic									
Wave characteristics	x		x	x			x		x
Current monitoring	x			x		x	x		x
Beach/coastal processes							x	x	x
Water variables				x			x		
Plankton							x		
Bathymetry				x		x			
Seabed habitats/sediment			x	x		x	x		
Weather variables	x		x						
7. Acoustics									
Noise underwater	x	x			x	x	x	x	x
8. Terrestrial habitats									
Littoral/intertidal fauna&flora						x	x		

*Sources of data other than questionnaires: Rusu et al., 2013; Marine Milestones, Scottish Renewable 2013/2014; Lepper et al. 2012; AQUAFAC International Services, 2010; D'Olier and Daruvala, 2009; Boehlert & Gill, 2008; SWRDA, 2006; Wavedragon Ltd., 2007; Maunsell & Metoc, 2007; Willstead, 2008.

22. What is the basis for project implementation? Has this project been approved by the authorities?

Answer: ENGINE PACIFIC applied for the Decision on Investment Policy. We were expected to receive the Decision on Investment Policy by February 2021. However, as certain local regulatory procedures have changed, the expected schedule was revised. We are waiting for the inclusion of the project into the annual land use plan to obtain the decision on investment policy. Ly Son People's Committee received ENGINE PACIFIC's request for verification of demand of land use and is waiting for Quang Ngai People's Committee to approve the adjustment of land use plan. This process is expected to be completed by August 2021. Meanwhile, the project obtained approval from the Ministry of Public Security and the Ministry of National Defense in October 2020.

23. What is the scale and capacity of the project?

Answer: The installed capacity is 50kW and the expected electricity generated is 67.7MWh. The pilot project is a full-scale power plant.

24. Provide information on the scope, land use area, and general layout of the project.

Answer:

	Survey area	Use area
Land	0.136 ha (1360.2 m ²)	(Mainly to install the utility poles)
Sea water surface	1.32 ha (13240.4 m ²)	WEC Platform: 13m x 18 m= 234 m Buoy diameter: 7m

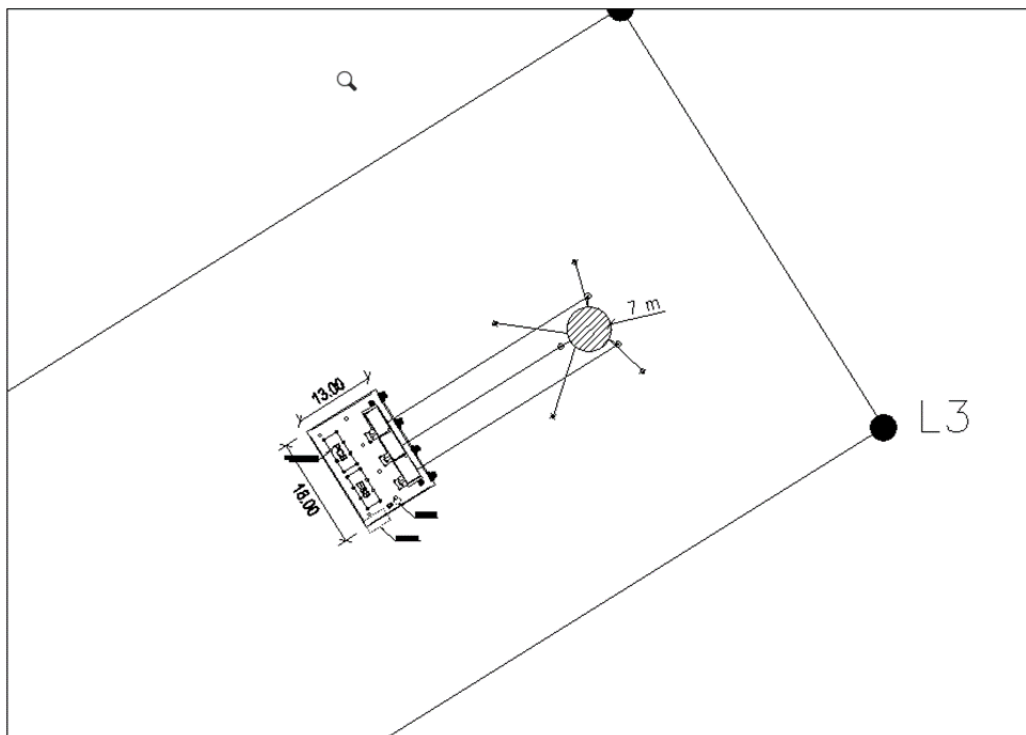


Figure 1. General Layout of the Project

25. We realize that the project area belongs to Ly Son marine reserve, which is an environmentally sensitive area. Therefore, we need to identify the relevant information:
- The scope, land use area and general layout of the project?
 - Wave technology to be applied in the project? Besides, regarding the desktop study Report, we would like you to provide specific information about the oceanography that you require such as waves, wind, tides, ocean currents....

Answer:

a.

	Survey area	Use area
Land	0.136 ha (1360.2 m ²)	(Mainly to install the utility poles)
Sea water surface	1.32 ha (13240.4 m ²)	WEC Platform: 13m x 18 m= 234 m Buoy diameter: 7m

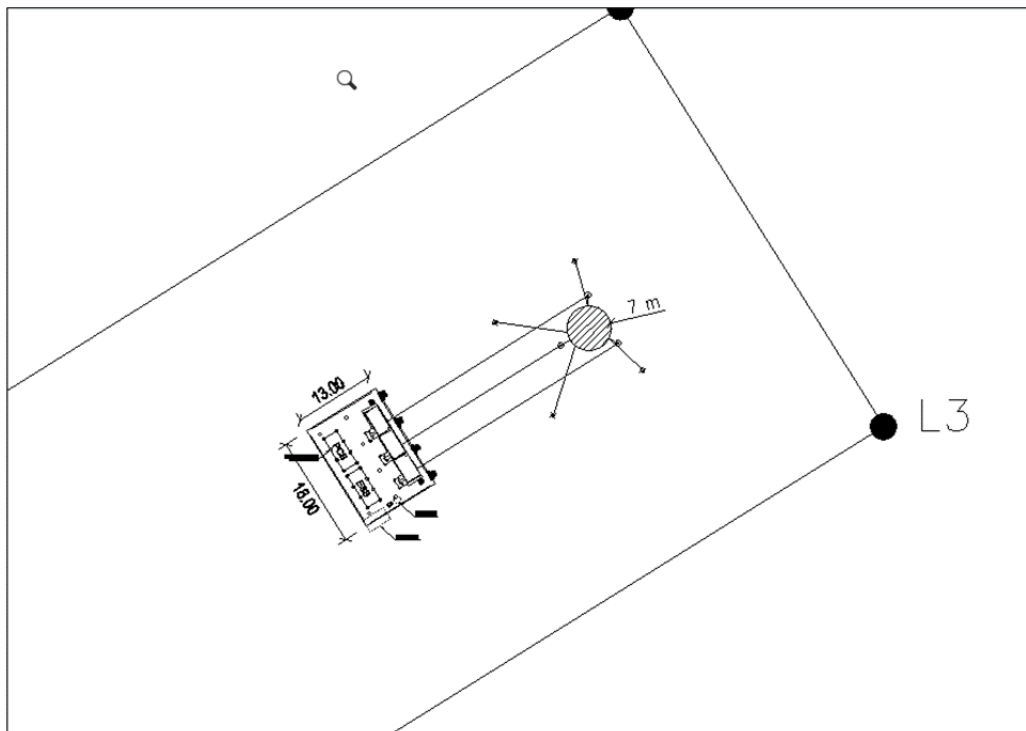


Figure 2. General Layout of the Project

b.

An INWave™ module is composed of a floating buoy, which harnesses multi-directional wave movements, and a wave energy converter (“WEC”) platform, which generates energy and distributes to the local grid. The technology's ability to collect energy from the entire range of wave movements enables its application in shallow coastal waters. Wave power collected by the floating unit is transferred to the power generating unit using mechanical ropes - as opposed to conventional subsea cables. The generated energy is then distributed to the grid or to captive networks. This system can be combined with other renewable energy sources and energy storage solutions.

The basic principles of nearshore wave generation consist of 5 steps as follows:

- (1) Wave energy absorbing → (2) Energy transforming → (3) Power conversion →
- (4) Power generation and storage → (5) Remote monitoring

Concept Video: <https://www.youtube.com/watch?v=ToMSRri8Pzo>

The specific information about metocean data (flow direction, water level, and temperature, tide, wave, fog, storm, etc.), geotechnical, and topography survey will be provided to the successful offeror.

26. Provide information about wave technology to be applied in the project?

Answer: An INWave™ module is composed of a floating buoy nearshore, which harnesses multi-directional wave movements, and a power generating unit onshore/nearshore. The technology's ability to collect energy from the entire range of wave movements enables its application in shallow coastal waters. Wave power collected by the floating unit is transferred to the power generating unit using mechanical ropes - as opposed to conventional subsea cables. The generated energy is then distributed to the grid or to captive networks. This system can be combined with other renewable energy sources and energy storage solutions.

The basic principles of nearshore wave generation consist of 5 steps as follows:

- (1) Wave energy absorbing → (2) Energy transforming → (3) Power conversion →
- (4) Power generation and storage → (5) Remote monitoring

Concept Video: <https://www.youtube.com/watch?v=ToMSRri8Pzo>

27. Could the detailed project location be provided at this stage?

Answer: The project is located in the Northeast of An Binh island. The detailed coordinates will be provided to the successful offeror.

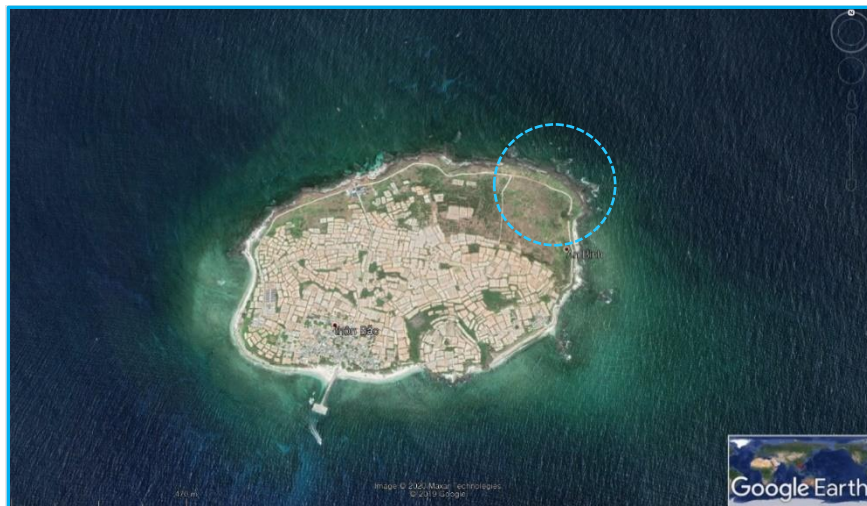


Figure 3. Map of An Binh Island and the Project Location

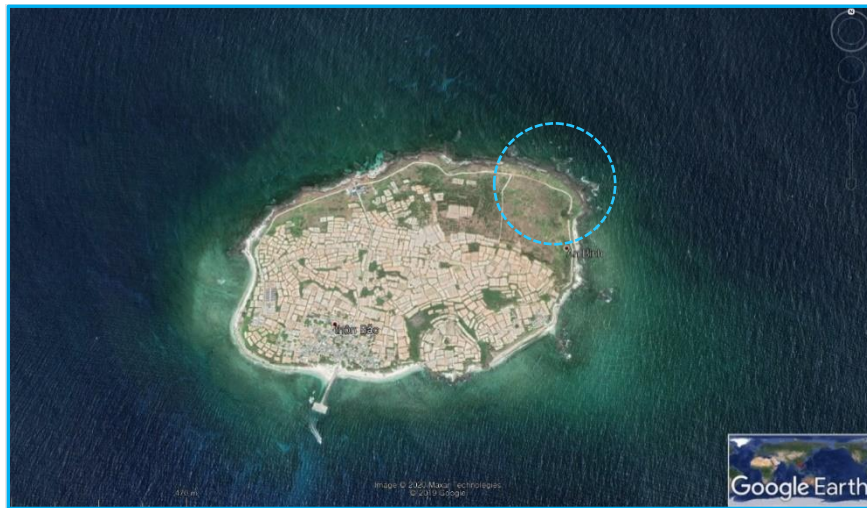
28. Could further details of the project components (power generation component, substation, transmission line, and other key components) be provided?

Answer:

- Buoy: Floating device that absorbs the wave energy and converts it into kinetic energy
- Rope: Twisted fibre string that transfers the energy absorbed from buoy to the WEC platform
- Power Take Off (“PTO”): Machine that generates electric power using the energy transmitted through the rope from the floating device.
- Power Conversion System (“PCS”) Unit: Machine that maximizes the power generation by adjusting the generator and tension of the rope, and distributes the generated power to the grid.
- Mooring: System that prevents loss of the buoy in extreme environments
- Aerial transmission line

29. According to the RfP, we assume that a Feasibility Study or some other forms of screening, review might have been conducted. Is it possible to know if key sensitive receptors have been identified, such as coral reef, local fishing communities, or any other ecosystem services? If yes, could RINA be provided with this information?

Answer: There are some coral reefs scattered in the project area. However, as the Project is far from the residential area, the impact on local fishing communities and other residents on the island is negligible.



30. For the regulatory EIA, has the Project been confirmed to which extent the EIA will need to be implemented (e.g. subject to local authority, or the central government’s approval?)

Answer: Since the Project is located in a marine protected area, the Project will need the central government’s approval.

- 31. Extract 1:** *“Under this scope of work the successful offeror will work closely with Ingine Pacific to conduct an EIA in line with Vietnamese regulations that will move the wave energy plant project forward and extract / document lessons learnt.”* This extract suggests the learning component is directly related to the EIA and EIA gap analysis and thus would imply that we should document any lessons learnt from going through the EIA / EIA gap analysis process.

Extract 2: *“The successful offeror will detail outcomes/impact and highlight innovations of the wave Power Plant capturing lessons learnt, process recommendations and other learnings related to wave technology, off-grid solutions and scalability potential among other noteworthy results.”* However, this extract suggests a potential broader scope (‘and highlight innovations of the wave Power Plant’...’ and other learnings related to wave technology, off-grid solutions and scalability potential’) for the learning component in addition to just focusing on documenting what is learnt from the EIA / EIA gap analysis process?

Could you clarify if the intention for the learning component of this scope is to focus on what is learnt from the EIA/ EIA gap analysis process (as per Extract 1) or whether a more general review / engineering assessment of the wave technology under consideration is also requested and / or a broader comparison of this particular technology to other wave generation technologies / off grid solutions etc is required (as suggested in Extract 2). If required, should we base this broader assessment only on the information provided for the EIA or is additional research anticipated?

Answer: It is envisioned that the learning component of this scope will be directly related to the EIA and gap analysis and should capture lessons learned from conducting EIA on a wave energy project. Additional research or a broader assessment is not required, however, offerors should explain how they will develop the learning component and include an outline of what will be included in the learning report. Please also see answer to Question 9.

- 32. We are wondering whether the hourly rates mentioned in Part 2 – Cost Proposal should be all inclusive or we should build our management fees/overhead costs as a separate budget line of % on top of the total project costs?**

Answer: INVEST confirms that at the proposal stage, Offerors are able to provide loaded or unloaded rates, travel, and ODCs as indicated in in the budget template. Upon award the successful offeror(s) would be required to provide documentation to substantiate the loaded rates as market rates for the Offeror. This requirement can be met through breaking out base rates and indirect rates and substantiating the base rates and indirect rates; or by providing examples of other contracts (redacted if necessary) that include the same or higher loaded rates for the same positions. This type of substantiation documentation does not need to be submitted at the proposal stage. INVEST will work with the successful offeror(s) upon award to work through these requirements.