
**Guidelines on International idea
competition for the design of monitoring
house of a large-scale offshore wind
turbine test**

January 29, 2021

**Industry–Academic Cooperation Foundation
at Kunsan National University**

1. Competition Title : International idea competition for the design of monitoring house of a large-scale offshore wind turbine test

2. Objective

The international idea competition is aimed at establishing an integrated monitoring center that will perform comprehensive monitoring functions and roles; provide educational and promotional programs on offshore wind power generation; support coexistence with local residents by regenerating Maldo island; and become a new attraction of Gunsan with improved landscape and opportunities for visitors to learn about offshore wind power and Gogunsan islands.

3. Qualification for Participation

- 1) Any individuals or groups from home and abroad
- 2) Entry by an individual or a group (with 1 PIN) is limited to one idea only
(Joint entry not allowed)

4. Awards

Classification	No. of Awardee	Details	
Grand Prize	1	20 million won	Award certificate
Top Prize	2	5 million won	Award certificate
Excellence Award	Many	-	Award certificate

5. Schedules

- 1) Competition opening announcement : November 18 (Wed.), 2020
- 2) Field briefing : No separate briefing to be given. Refer to the guidelines.
- 3) Q&A : December 07 (Mon.), 2020 - March 11 (Thu.), 2021
 ※ Submit the inquiry on the website (<http://www.offshorewind.kr>)
 FAX number : 82-063-251-6048
- 4) Idea submission : March 8 (Mon.), 2021 – March 13 (Sat.), 2021
- 5) Results announcement : March 26 (Fri.), 2021

6. Accepted Languages & Units

- 1) Korean, English / SI System (metric system)
- 2) Submitted materials and inquiries shall be in Korean or English (or both). When

there are conflicting interpretations between the two languages, Korean shall be given priority.

7. Inquiry Submission & Answers

- 1) Submission : December 07 (Mon.), 2020 - March 11 (Thu.), 2021
- 2) Inquiries can be made on the website according to the prescribed procedures. No inquiries shall be made via an e-mail or phone calls.
- 3) Only inquiries submitted in Korean or English following the prescribed procedures shall be deemed valid and one can make multiple inquiries.
- 4) Answers to the inquiries will be provided on the website in Korean or English and can be seen by all applicants.
- 5) Any change in the schedules shall be announced on the website.
- 6) Answers for the inquiries shall be considered an addition to or revision of the competition rules and guidelines.

8. Idea Submission

The idea (design plan) shall be submitted on the website using a pdf format only. (Face-to-face submission not allowed)

9. Award Ceremony & Announcement

- 1) Date : There will be no award ceremony. The awardees will be announced on the website within fourteen days after the end of submission period.
- 2) Award certificates and prize money shall be individually granted.

10. Other

- 1) Copyright
 - ① Copyrights for all awarded ideas (design plans) shall belong to the organizing institution.
 - ② All awarded ideas (design plans) can be printed, published and distributed by the organizing institution.
 - ③ When the idea (design plan) is determined to have been submitted to other competitions or previously published by others, the award and prize money shall be revoked.
- 2) The schedules and award details are subject to changes considering the circumstances of the organizing institution.
- 3) When there are different opinions on interpretations, our (the organizing

institution's) interpretation shall be used.

11. Organizing Institution

- 1) Industry-Academic Cooperation Foundation at Kunsan National University

12. Judging Committee

- 1) The committee shall be composed of seven domestic jury members: five professionals and two local residents.
- 2) One reserve juror shall be selected.
Professional jurors: 000 (000), 000 (0000)
Resident jurors: 000 (000), 000 (000)
Reserve juror: 0000 (0000)
- 3) The committee meeting shall be held with attendance of more than five people including the jury members and/or a reserve juror.
- 4) The committee chair shall be elected among the jury members during the first meeting.
- 5) The committee chair can make judging criteria based on rules and guidelines of the competition and determine specific items needed for the judging process with the consent of the judging committee.
- 6) The committee chair shall submit to the organizing institution the judging reports explaining the judging process, details and reasons for selecting the awarded works.
- 7) Works subjected to the following shall be disqualified in accordance with the committee's decision. When works are disqualified after the conclusion of judging process, the award can be cancelled according to the decision of the competition steering committee.
 - A. When more than two works are submitted
 - B. When the submitted work is or is similar to other works published by the applicant or others.
- 8) When all submitted works are deemed failing to meet the objective of the competition or to have markedly poor quality, the award- and prize-winners may not be selected.
- 9) The applicants can make an objection to the competition results.
- 10) The judging period can change considering the number of works submitted. In this case, an announcement shall be made on the website.
※ To ensure transparency and fairness, major judging processes shall be recorded in pictures and videos or tape-recorded and be submitted as

evidence in case a problem occurs.

- ※ Upon the end of judging process, related data such as submitted works, score sheets shall be disclosed to the public.
- ※ When the judging committee is selected, it will be announced later through the website.

13. Design Guidelines

1) General information

The target site is Maldo island, which sits on the end of Gogunsan Archipelago (32 Maldo-ri, Okdo-myeon, Gunsan-si). The island is home to more than 40 people and has the Maldo lighthouse, the largest lighthouse of Gogunsan Archipelago.

The island is popular among visitors for its scenic landscape including magnificent folded strata formed during pre-Cambrian and Paleozoic era, thick forests and trails and abundant fish resources.

When the construction of the bridge connecting Bangchukdo island, Myeongdo island, and Maldo island is completed, more tourists are expected to visit the region for tracking. The target site is a significant place in the region because a dock right in front of it makes the village accessible to visitors, naturally connecting the sea, the village and the mountains behind it.

2) Design scope & target site

- Location of Maldo-ri monitoring center (Marked by red lines)



[Fig 1-1] Target site area (2559m²)

- The monitoring center shall be located between the sea, the village and hills.
- The center shall be designed considering connection to the road linking the dock and the village.
- Refer to the below for design scope for the competition.

[Table 1-1] Design scope

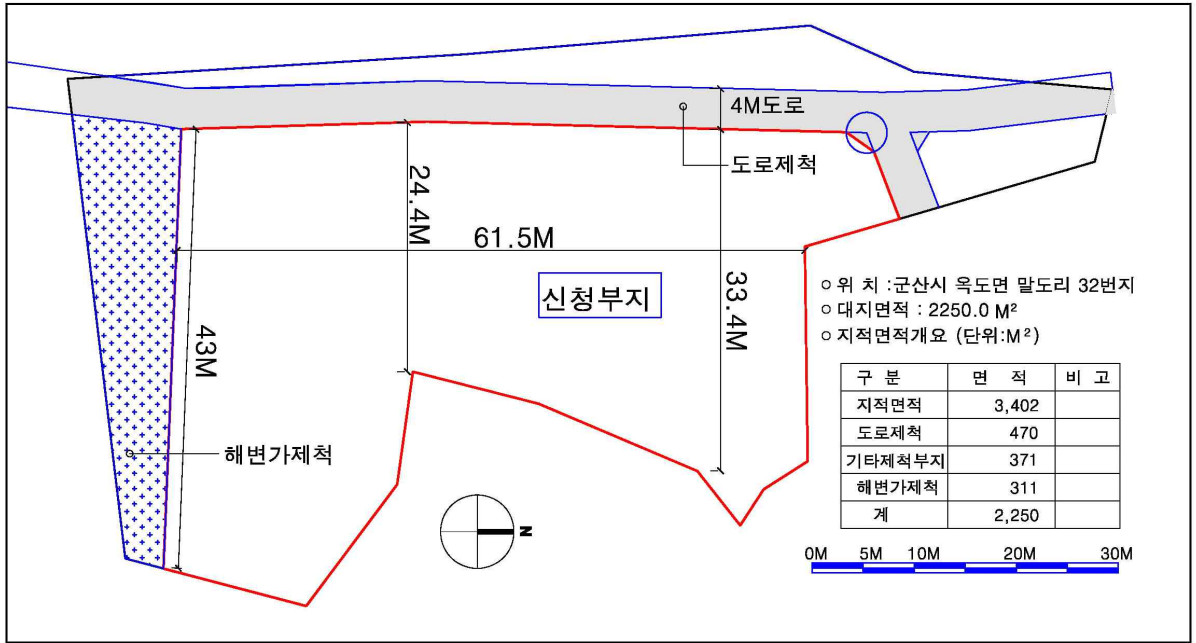
Facility Types and Specifications	Total building floor area : 700 m ² (Adjustable total floor area : Less than -10%)		
Monitoring Center Facilities	Business facility	Office & Monitoring Room	Office for up to 5 employees including a monitoring room and a management/administration office
	Accommodation	Dormitory	Dormitory for up to 5 permanent tenants including room and board and convenient facilities.
Public Engagement Facilities	Promotion Facility	Experience Center	Wind power generation experience center (maximum occupancy of 50)
		Data Center	Multimedia library
Others	Public facilities such as tourism facility, resident participation facility, etc.		

3) Target site status

- General status

[Table 1-2] General status

Location	Between the beach and the village of Maldo island, which sits on the end of Gogunsan Archipelago
Land use plan	Planned management area, livestock farming inhibited zone (farming of all livestock species are inhibited)
Ownership status	Target site : Government-owned land (administrative property) Status of buildings : 2 buildings within the target site (administrative properties belonging to Kunsan National University) Surrounding spaces : Some are government-owned and others are privately-owned



해변가 제척=Beach excluded
 신청부지=Applied site
 4M 도로= Road (width: 4m)
 도로제척= Road excluded

위치: 군산시 옥도면 말도리 32번지
 Location: 32 Mado-ri, Okdo-myeon, Gunsan-si

대지면적= Site area

지적면적개요 (단위:)= Cadastral information (unit:)

구분/면적/비고= Classification/ Area/ Remarks

지적면적= Cadastral area

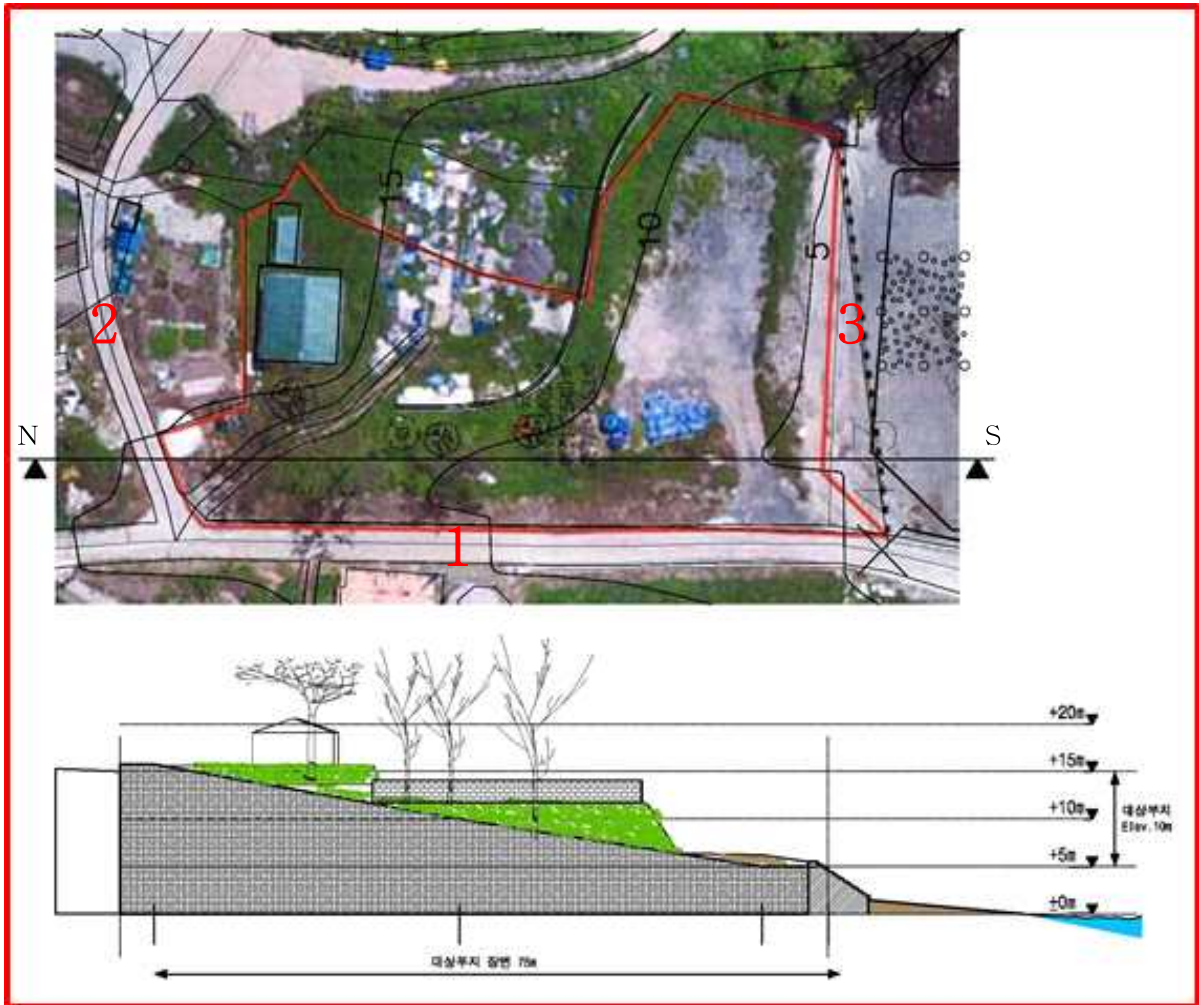
도로제척= Road excluded

기타제척부지= Other excluded sites

해변가제척= Beach excluded

계=Total

[Fig. 1-2] Cadastral map



대상부지 = Target site
 대상부지 장변 = Long side of target site

[Fig. 1-3] Topographical map

- Target site & surroundings status

1. Facilities to be preserved

- The target site is located between the dock and the village.
- The road connecting the dock and the village is on the west side of the target site extending from north to south. The north side of the target site has a small road as well, stretching from east to west. Applicants shall make sure the functions and traffic of the roads①② are preserved without interference.
- Stepped seawalls③ preventing the loss and erosion of soil shall be preserved as well.
- Refer to [Fig. 1-4] for the location and types of facilities to be preserved.



[Fig. 1-4] Facilities to be preserved

- Accessibility & movement within the island

- Maldo island is 40km southwest of the Gunsan Passenger Ship Terminal. It takes 1 hour and 50 minutes from the terminal to the island by a ship (Gogunsan Car-ferry Ship). The island is 30 minutes away from Jangjado island.

Departure from Gunsan → Jangjado island → Gwanlido island → Bangchukdo island → Myeongdo island → Maldo island.

Village dock or lighthouse dock may be used depending on tidal times (a five-minute walk)

- The island has no transportation means, allowing movement on foot only within the island.

4) Design guidelines

1) General considerations

Sea currents of the target site (Maldo island) mostly flow towards northeast although the currents flow towards east on the southern part of the island due to the land shape. The directions are opposite for the ebb currents.

The average sea level for morning and evening around the Maldo island is 3.29m (Spring rise: 6.0m, Neap rise 4.5m). The tide times are 15 minutes faster than that of Gunsan outer harbor.

- A design plan shall ensure that all facilities of the monitoring center such as electrical panels, the monitoring room and dormitory have enough areas to perform their unique functions.
- The plan shall ensure appropriate conditions for such facilities in terms of civil engineering, landspace, structure and eco-friendly as well.
- The plan shall go well with the surrounding village and the nature. In particular, the right to a view of the existing village shall not be infringed.
- The plan shall include good traffic plans to create a satisfying environment for both employees and visitors.
- The plan shall ensure a safe and convenient environment for all users including the disabled, regardless of their age and gender.
- The plan shall include ideas for construction methods and materials to minimize construction and management costs, considering special construction conditions for an island and the geographical features of coastal areas.
- All facilities shall secure safe areas considering sea levels. (Refer to the topographical map)

[Table 1-3] (Reference) Weather conditions

Year	Maximum temperature (°C)	Average minimum temperature (°C)	Maximum instantaneous wind velocity (m/s)	Wind direction of maximum instantaneous wind velocity (eg)	Total rainfall (mm)
2019	34	-4.7	35	190.5	828

2) Functions & programs

- Facilities to serve the role of a monitoring center.
- Facilities to support all activities of monitoring center employees.
- Facilities for promotion and public engagement shall be easily accessible.

[Table 1-4] Programs

Classification	Uses	Total facility area (m ²)
Business facility	Monitoring, business, convenience, night duty	approx. 500
Publicity facility (Public Engagement Facility)	Experience center, data center, etc.	approx. 200
Other facilities	<ul style="list-style-type: none"> • Public facility (i.e. convenient facility for locals) • Adjustable within the range of 10% 	

3) Layout

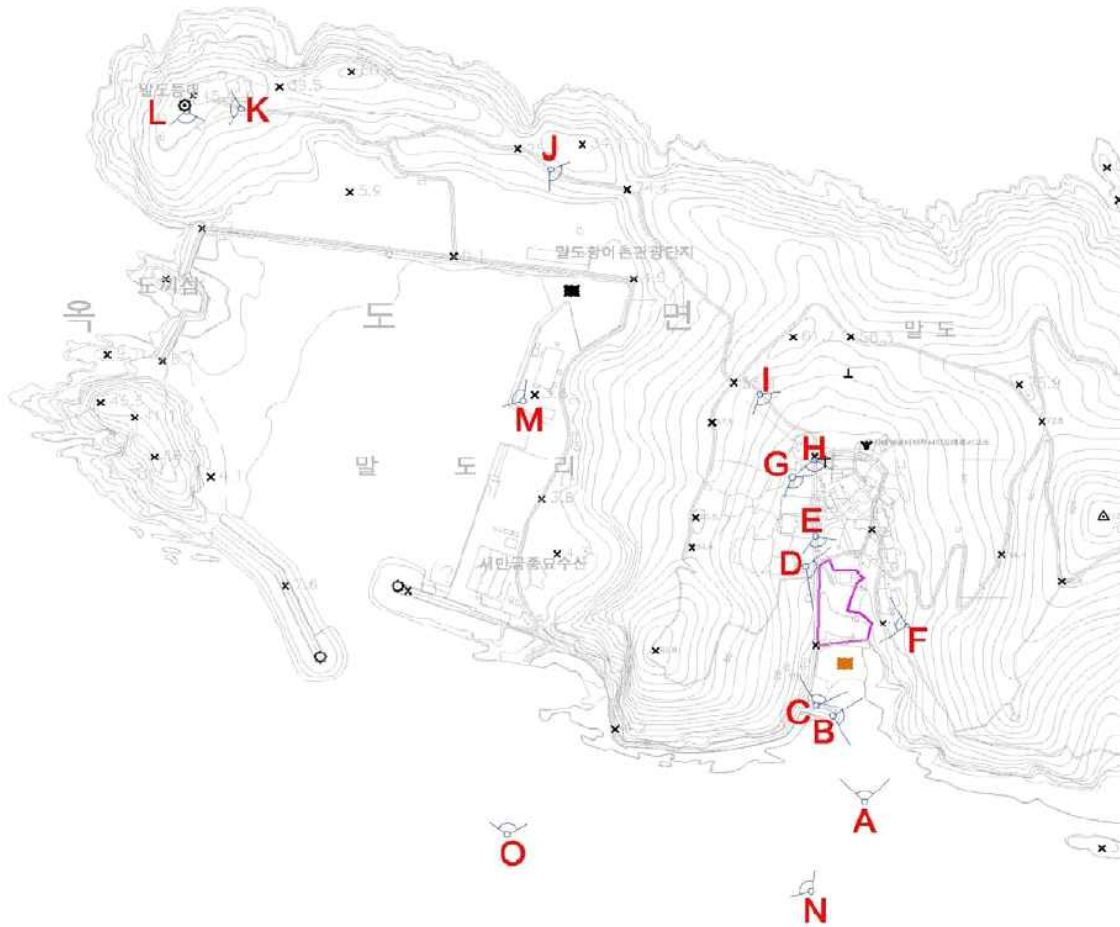
- The monitoring center shall be designed considering functions, scalability in the future, and connection to other facilities. It shall also consider the traffic of employees, village residents and tourists within the island.
- All spaces shall be designed in compliance with the laws and enforcement rules concerning maintenance and safety management. Traffic flows for fire-fighting and emergency evacuation shall be planned.
- The layout plan shall consider the following items.
 - a) Cable lead-in from electrical panel room
 - The space shall be a closed room with ventilation system for the safety reasons such as noise and fire.
 - The access from the management room shall be easy.
 - b) Office, management room
 - Single-story or two-story buildings. A three-story building on the low land can be allowed.
 - The space shall accommodate up to five all-time staff members and support meetings for about 10 people.
 - Manager dormitory
 - The space shall accommodate up to five all-time staff members.
 - Rest/convenient facilities (for sleeping, cooking, and eating after work hours) shall be included.
 - c) Promotion center
 - The center shall accommodate up to 50 visitors at a time.

4) Civil engineering

- Preventive plans against sea wind, wave and flood (Refer to [Table 1-3] Weather conditions)

5) Construction materials

- Materials for building structure and finish shall be planned considering construction costs and ease of maintenance.
- 6) Surroundings



[Fig. 1-5] Information map for surroundings



[Fig. 1-6] Picture of Spot A



[Fig. 1-7] Picture of Spot B



[Fig. 1-8] Picture of Spot C



[Fig. 1-9] Picture of Spot D



[Fig. 1-10] Picture of Spot E



[Fig. 1-11] Picture of Spot F



[Fig.1-12] Picture of Spot G



[Fig. 1-13] Surroundings
(Folded strata: registered as natural treasure no. 501)

The design plan shall use a structure and materials with no harm to the surrounding nature including lands, rocks, folded strata, animals and plants.

14. Required Documents

1) General

- The submitted documents shall be in Korean or English (or both). The measurement shall be written in Arabic numbers with the metric system.
- Scale and bearing (direction) shall be accurately written in each drawing.
- The submitted documents can include all necessary expressions such as diverse colors and photos.
- The submitted documents cannot be added, revised, changed, or supplemented.
- The design plan shall include the following.
 - Cover (Form 2)
 - 2D and 3D images if necessary (3D images can be generated by SketchUp or hand-drawing)
 - Area table, design overview, concept description
 - Major drawings such as layout plan, floor plan, elevation, etc.
- The design plan shall be prepared in 3 sheets of A3 paper (Width: 420mm and Length: 297mm). (The cover page is excluded from the number of sheets)
- The cover shall use the provided form.

15. Submission

1) Online submission

Applicants shall submit the work on the website (<http://www.offshorewind.kr>).

- Online submission: **09:00, Mar. 08 (Mon.), 2021 - 17:00, Mar. 13 (Sat.), 2021**
(Korea Standard Time)
- For submission: Login → Maldo project → Enter required information and upload all files in the given storage
- Data files for the design plan shall be submitted without compression.
- Files shall be in a PDF format (high quality print).
- Name of the file shall be "PIN Number_Document Name"

2) Notes

- Check all information including public announcement and notes on the website before submitting the plan.
- The application is completed when all related documents including the

"International Idea Competition Entry Form" (Form 1) are submitted online.

- Each applicant can submit one work only.
- Applicants can check the website to see if the submission is completed.

3) Principle of anonymity

The principle of keeping anonymity of submitted documents shall be adhered throughout the entire period of the design competition (until the moment of award announcement) with following measures.

- All submitted documents shall have the PIN number only, which is automatically granted by computer upon membership subscription.
- All submitted documents shall not have any symbol, mark or secret code that can reveal or help recognize the identity of the applicant.

4) PIN number on all documents

- All submitted works shall remain anonymous until the final results are out. To that end, applicants shall mark all submitted documents the PIN number (one alphabet letter and three or four Arabic numerals) granted on the website upon participation registration. The PIN number is used from participation registration throughout the deadline and cannot be changed.

[Form 1]

International Idea Competition Entry Form				
※ PIN No.				
※ Registration No.		(Empty space)		
Applicant	Name		Affiliation (Business, group)	(When necessary)
	Birthdate		Tel.	
	E-mail			
	Address			
<p>I (We) apply for the International idea competition for the design of monitoring house of a large-scale offshore wind turbine test hosted by Industry-Academic Cooperation Foundation at Kunsan National University in compliance with its announcement and guidelines.</p> <p style="text-align: center; margin-top: 100px;">Date:</p> <p style="text-align: center; margin-top: 100px;">Applicant : (signature)</p> <p style="text-align: center; margin-top: 100px;">To: Industry-Academic Cooperation Foundation at Kunsan National University</p>				

[Form 2]

Maldo-ri Offshore Wind Turbine Monitoring Center

. . 2021

PIN :

Submission : Industry-Academic Cooperation Foundation at Kunsan National University