NEWS RELEASE

ENEOS Renewable Energy

November 21, 2025

ENEOS Renewable Energy Corporation

Testing of a Cellulose-Based Technique for Seaweed Bed Generation Shows Effectiveness in Chiba

ENEOS Renewable Energy Corporation (headquarters: Minato-ku, Tokyo; President and CEO: Yasushi Onoda; hereinafter "ERE") has recently confirmed the effectiveness of its method of generating seaweed beds by spraying a mixture of a cellulose-based polymer solution mixed with zoospores of kelp in warm waters into the sea. Evidence came from a demonstration of this method of seaweed bed generation using a polymer solution based on cellulose and other materials that began in Chiba Prefecture in 2023[1].

The demonstration of this method, which employed *Ecklonia cava* and *Eisenia bicyclis* kelp zoospores, was conducted multiple times in the Uchibo area of Chiba Prefecture. In August 2025, when a follow-up check was conducted on bedrock in waters roughly 3 meters deep that had been sprayed in October 2024, the concentration of *Eisenia* kelp per square meter in the targeted area was found to be quite high: 1.78 to 6.4 times higher than in areas where the polymer solution had not been sprayed. Given that this species of kelp was also found in areas surrounding the sprayed site, it can be inferred that some of the kelp was of natural origin and was unrelated to the treatment, but even so, the spraying method can be considered to have been effective.

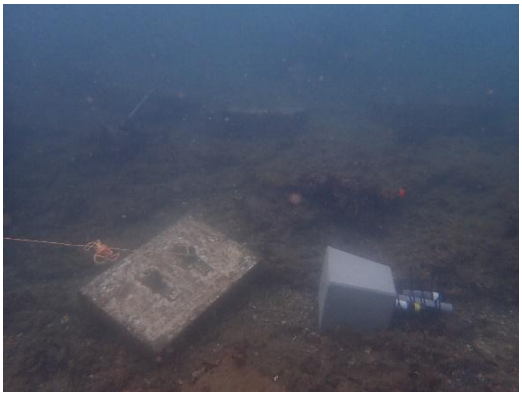
ERE commissioned Hokkaido University, which has experience in working on kelp beds in Hokkaido, and OKABE Co., Ltd. to carry out this demonstration of its method as one facet of initiatives to combat sea desertification (the loss of seaweed beds) in the Uchibo area.

As a developer of offshore wind power, ERE has been considering a variety of such initiatives that it can take to improve marine environments. It aims to utilize the success of this demonstration in future efforts to generate seaweed beds and thus improve marine environments, help restore fishery resources, and generate blue carbon[2], which absorbs carbon dioxide in the ocean. In these ways, it can contribute to fisheries and localities and support efforts to prevent global warming from the ocean.

ENEOS Renewable Energy Corporation
Corporate Communications & CSR Team, Azabudai Hills Mori JP Tower, 1-3-1 Azabudai, Minato-ku, Tokyo, 106-0041, Japan
TEL +81-3-6455-4905 pr@eneos-re.com

[1] Testing of a Cellulose-Based Technique for Seaweed Bed Generation Begins in Chiba (Release dated November 28, 2023)

[2] "Blue carbon" refers to carbon that is stored by marine ecosystems (mangroves, kelp, seaweed and so on) as they take in carbon dioxide in the process of growth. It has gained a great deal of attention around the world in recent years as a new means of absorbing carbon dioxide. A variety of initiatives, including the conservation and generation of these ecosystems, are also underway in Japan.

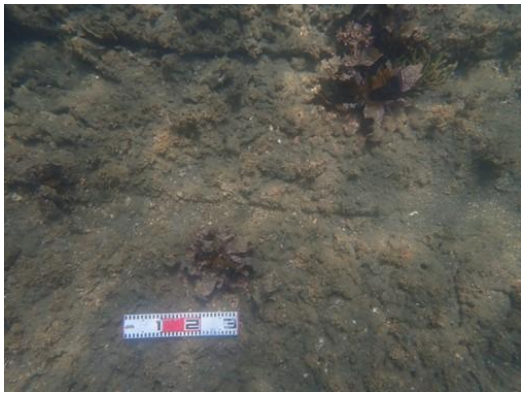


October 2024 Targeted area at time of spraying

March 2025 Area after spraying

August 2025 Area after spraying: 32 plants/m^2

August 2025 Unsprayed area: 18 plants/m^2



August 2025 Unsprayed area: 5 plants/m^2

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