

## Ocean Resources

The Hawaii Natural Energy Institute (HNEI) has a long history of research and development in ocean resources technology. Two current programs involve: 1) exploring the energy potential of methane hydrates found on the ocean floor, and 2) the establishment of the Hawaii National Renewable Marine Energy Center.

Methane Hydrates: [Methane hydrates](#) <sup>[1]</sup>, vast hydrocarbon deposits found in deep waters, are being studied as a potential new energy resource. [Hydrate research](#) <sup>[2]</sup> is underway, and international collaborations have been established with researchers in Japan, Korea, and Norway. HNEI researchers have constructed an experimental facility, named the [Ocean Resources and Applications Laboratory](#) <sup>[3]</sup>, to conduct studies of methane hydrate stability. For more information on this work, see the [Methane Hydrates Overview](#) <sup>[4]</sup> section of our website.

HNEI was selected by the US Department of Energy to establish one of only two National Marine Renewable Energy Centers. The Hawaii National Marine Renewable Energy Center was established to facilitate commercialization of Wave Energy Conversion devices and to accelerate development and testing of Ocean Thermal Energy Conversion (OTEC) technologies. For details about OTEC, see the [Ocean Thermal Energy Conversion Overview](#) <sup>[5]</sup> section of our website. The Center has a separate website located at: <http://hinmrec.hnei.hawaii.edu/> <sup>[6]</sup>.

Earlier work relating to ocean resources included the curbing of greenhouse gases via carbon dioxide (CO<sub>2</sub>) sequestration. HNEI was a major partner in a landmark [carbon dioxide ocean sequestration](#) <sup>[7]</sup> field experiment that provided critical data on changes to sea water chemistry in the deep ocean and the effects on benthic biota resulting from CO<sub>2</sub> injection.

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**Source URL:** <http://www.hnei.hawaii.edu/research/ocean-resources>

### Links:

[1] <http://www.hnei.hawaii.edu/research/ocean-researches/methane-hydrates>

[2] <http://www.hnei.hawaii.edu/research/ocean-researches/hydrate-research>

[3] <http://www.hnei.hawaii.edu/facilities/deep-ocean>

[4] <http://www.hnei.hawaii.edu/projects/methane-hydrates-overview>

[5] <http://www.hnei.hawaii.edu/projects/ocean-thermal-energy-conversion-overview>

[6] <http://hinmrec.hnei.hawaii.edu/>

[7] <http://www.hnei.hawaii.edu/research/ocean-researches/carbon-dioxide-mitigation>