PROJECT IKKAKU

SERVICE GUIDE

Converting marine debris into alternative fuels Autonomous decentralized energy systems

TEAM

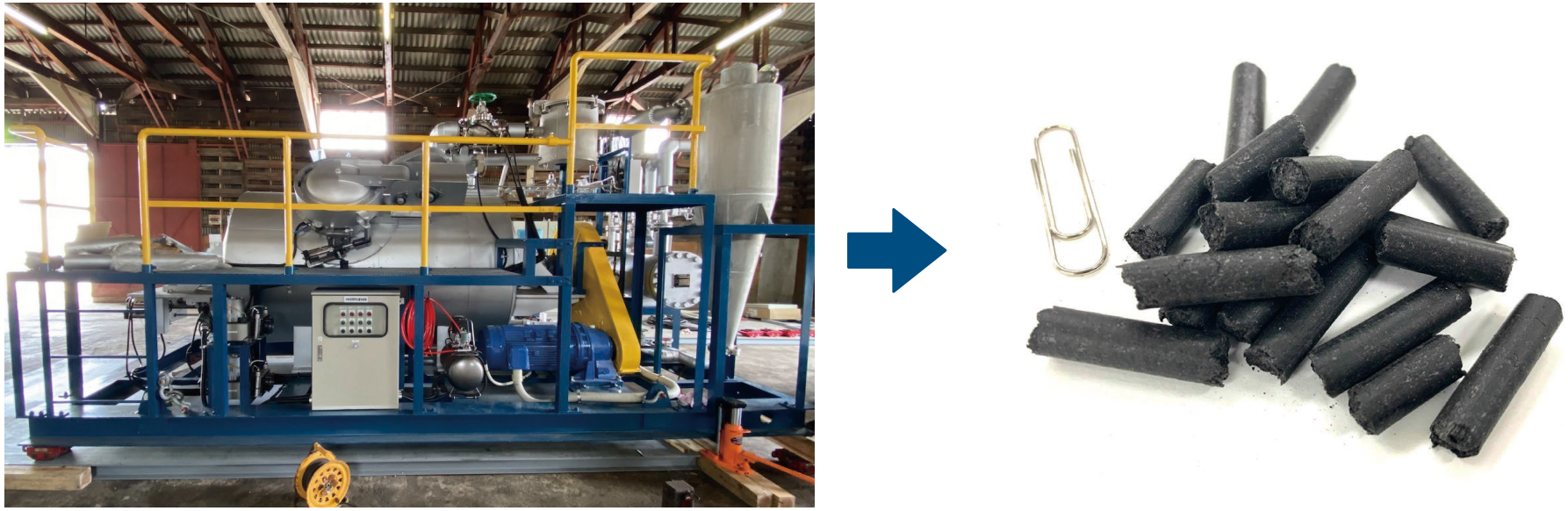
Sustainable Energy Inc.

SERVICE VISION

At the root of the marine litter problem is the difficulty that there is "no economic incentive" to solve it. In order to realize the concept of creating energy from marine debris, this service has focused on subcritical water treatment equipment that can treat general waste such as household garbage with little or no sorting work due to the strong hydrolytic resolution power of high-temperature, high-pressure water. We aim to develop a compact and mobile device and build a new circular model to produce alternative fuel to coal from the products of this treatment, thereby realizing a world where marine litter recovery is economically feasible.

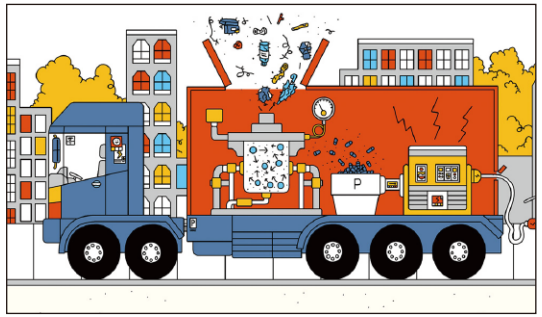
SERVICE FEATURES

By installing a compact and mobile subcritical water treatment system at the site where marine debris is generated, an autonomous decentralized “energy generation from marine debris" system will be constructed.



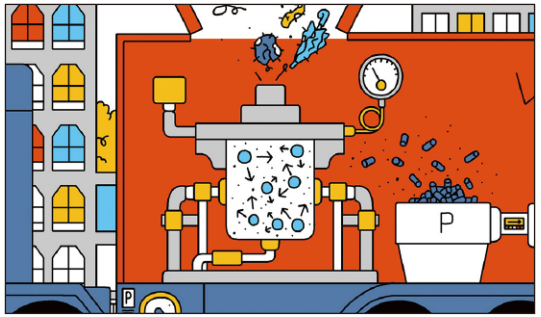
Small subcritical water treatment unit (left) and coal substitute fuel that can be produced from the treated product (right)

SERVICE OVERVIEW



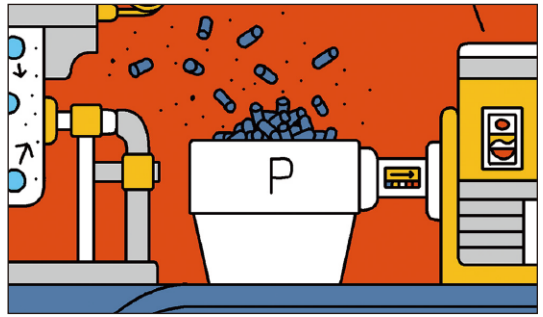
Installation of subcritical water treatment facilities

A 100 L boiler-less subcritical water treatment facility (including pre-process crushing and mixing equipment) will be installed, which can be mounted on a 20-foot container or converted to a 10-ton truck.



Waste treatment by subcritical water treatment system

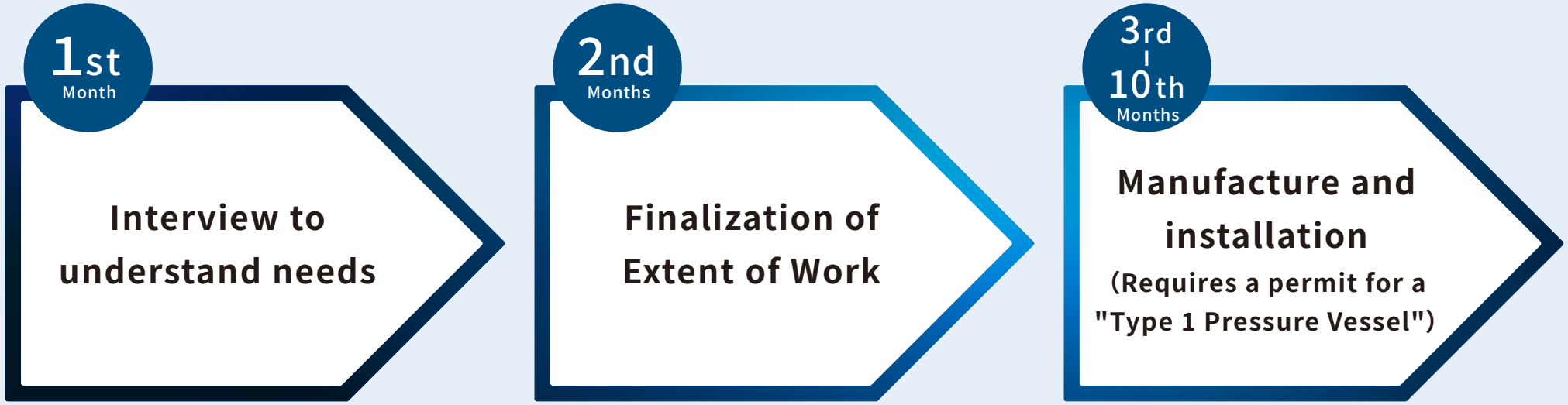
The powerful hydrolytic resolution power of subcritical water produces material sources of energy with uniform properties that have little need for separation of materials to be processed.



Fuel pellet production

Coal substitute fuel is produced from the treated material produced by subcritical water treatment. It can also be utilized as a raw material for methane fermentation.

PROCESS and SCHEDULE



COST Reference price ▶ 30 million JPY

As of March 2022

TEAM

Sustainable Energy Inc.

Location：3-10-11, Chuo, Aoba-ku, Sendai-shi, Miyagi, Japan

Representative：Masahiro Mitsuyama, CEO

Website：https://sustainable-energy.co.jp

Business Description

- Design, construction and monitoring of facilities for power generation and fuel conversion from renewable energy sources, etc.
- Production and sale of fuels, heat energy products, and fertilizers using biomass resources.

Inquiries about this service

Project Ikkaku Secretariat (in Leave a Nest)

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Web site is here.

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https://ikkaku.lne.st/

ABOUT PROJECT IKKAKU

Project Ikkaku was launched in 2019 by the Nippon Foundation, JASTO, and Leave a Nest with the goal of realizing businesses that reduce marine waste in society.
The project adopts a process that promotes the development and commercialization of innovative technologies through the collaboration of "hyper-interdisciplinary teams" including venture companies with new technologies and unconventional ideas, as well as academic institutions, town factories, large corporations, and small and medium-sized businesses. With support from the Nippon Foundation, a number of services have been developed over a three-year period through 2021.
From April 2022, we will continue to work with the participating teams as a stand-alone project to promote the social implementation of businesses that reduce marine waste.

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