



Jan. 23rd. 2017

For implementing a new vertical dry methane fermentation plant

[NEDO's a regional independence system project of the biomass energy]

NEDO aided Fuji Clean in the system project.

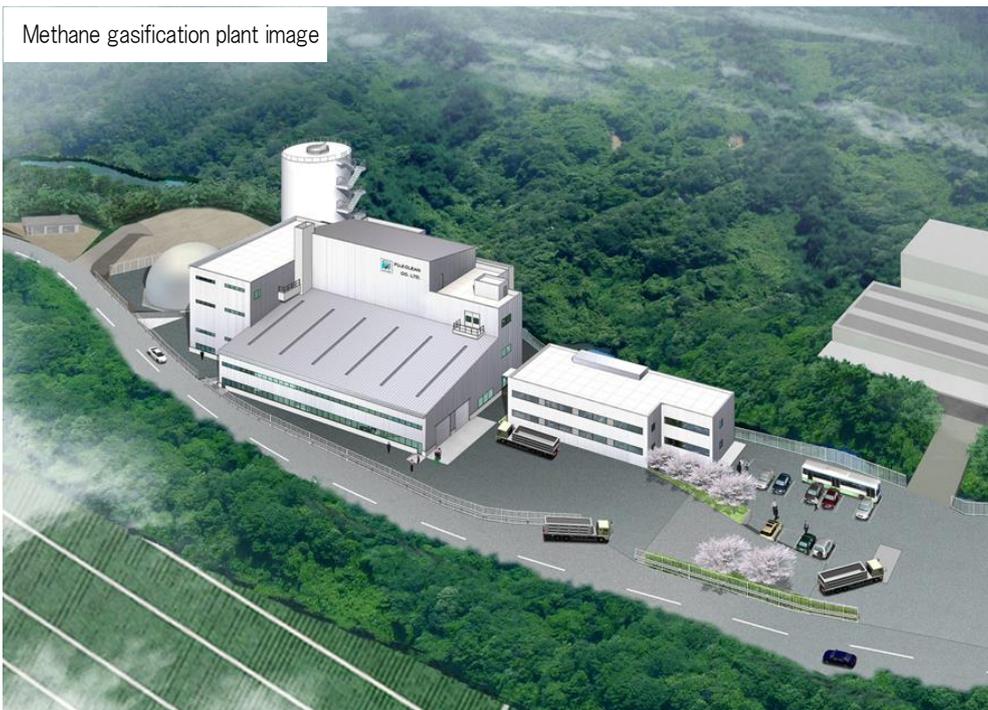
Fuji Clean Co was aided in the regional independence system project of the biomass energy by NEDO. The plant obtained a cutting-edge system in Japan that the plant assorted an advanced drum-type sorting equipment, bio gasification equipment, and gas engine conversion equipment.

The advanced drum-type sorting equipment is able to separate household garbage compared to conventional sorting machine. Also, the sorted biomass feedstock is disposed in the vertical dry methane fermenter (3000m³). In fact, the generating methane gas is about 9500 Nm³/day. The generated gas is utilized as an electric power and boiler fuels. After the methane fermentation, a mixture of the methane fermentation residue was the problem on the total recycling system, but we found a breakthrough method that the mixture of the methane fermentation residue is utilized instead of fossil fuels at our existing incineration facility. Also, the new bio-mass plant is able to accept different types of industrial waste.

NEDO has been leading the new energy research and the development in Japan. The problem is there is not a perfect business standards that must be sustainable and stable in Japanese society. All of the system must be related to several relational positions such as the government, educational organs, and citizens. The might be the most important point to sustain the business model as long as possible in the society.

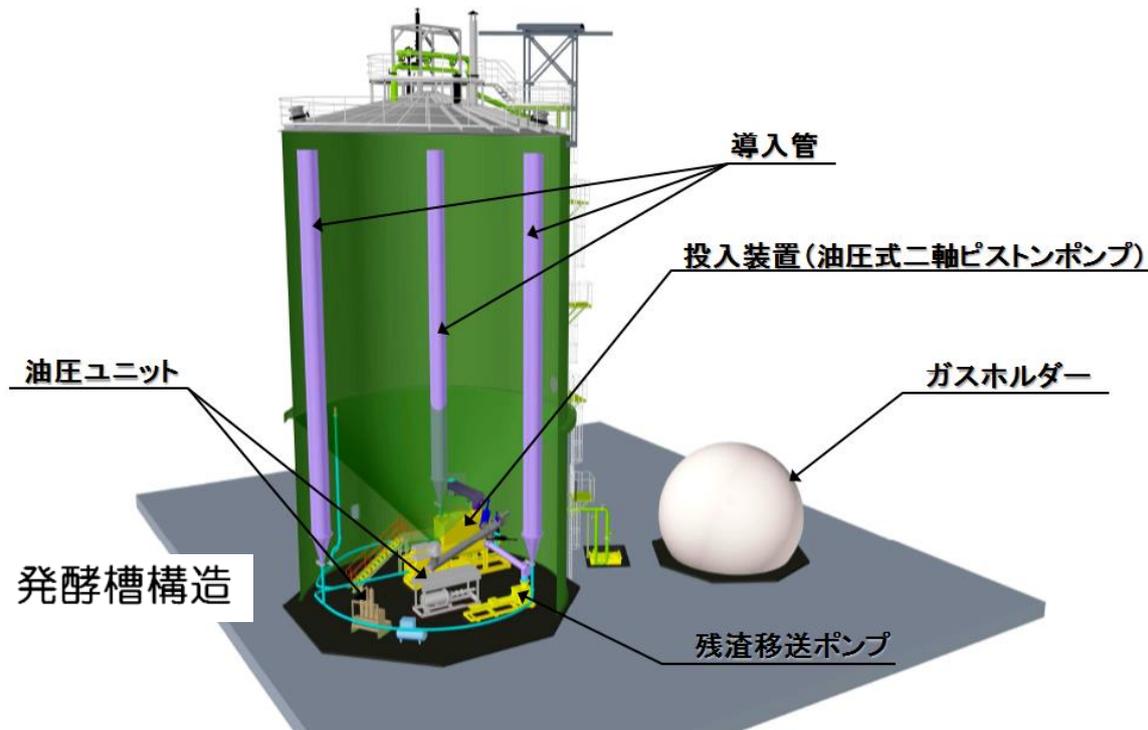
On this project, it does not need a water treatment facility. Also, we selected an advanced drum-type sorting equipment that the new sorting equipment will improve the sorting competence, and the new sorting equipment will reduce unnecessary maintenance costs. Furthermore, our biomass facility will be able to dispose household waste, food waste, livestock waste, sewage sludge, and difficult-to-process used paper. The new biogas plant will target several types of the industrial waste, and it positively impact the amount of the recovered energy, and the economies of scale.

Methane gasification plant image



Our advanced biomass plant will be able to decrease greenhouse gas, and it is able to improve a percentage of the recycling. Also, the appropriate energy solution system will change renewable energy of power component ratio. As the result, our biomass plant will lead widespread use of biomass plants in the world.

On our project, we feel that the most important point is having the project together with you and your regional people. The localized spirit will be able to change the recycling resources and necessity of renewable energy. Also, the plant can be able to participate in earthquake. When a social power supply is down, the new plant can generate energy into the society. We will contribute to the regional people and the government.



* The result of the research is taken by NEDO's commissioned business.

Overview of the regional independence project

Processing object: 76t/day treatment method of composite waste

Pretreatment facility: Mechanical screening equipment and crusher

Bio-gasification facility: Vertical dry process methane fermentation equipment

Greenhouse gas reduction effect: about 10,000t/year

Energy conversion facility: 370kw (two gas engine boilers)

Proof period: Aug. 2016 to Mar. 2021 (prearranged)

Schedule: Construction starts on Feb. 2016

Machinery set-up on Aug. 2017

Construction will be completed on Mar. 2018

Test-run will be completed on Oct. 2018

➤ Vertical dry methane fermentation technology [KURITA DRANCO PROCESS®]

- It will be able to gasify stably from food waste, paper, livestock waste, and several glasses. The gasified renewable energy will be utilized as electricity, and heater
- It will be able to sort inappropriate waste by pretreatment facility
- The vertical fermentation tank will minimize the space of the plant, and the simple solution can avoid stirring device and heating system. In fact, the maintenance costs will be retrenched
- Fermentation residual is dry. In fact, it does not need water treatment facility

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