



## **Tomakomai Smart-Agriculture Plant Starts Operation of Biomass Boiler System**

– Japan's first use of heat and CO<sub>2</sub> from wood chip fuel for greenhouse culture –

JFE Engineering Corporation (President and CEO: Hisanori Kanou; Head Office: Chiyoda-ku, Tokyo) recently completed the construction of a biomass boiler system at its Smart-Agriculture Plant in Tomakomai City, Hokkaido, and began verification of its ability to supply heat and CO<sub>2</sub> to the greenhouse.

JFE Engineering constructed the Smart-Agriculture Plant, which is equipped with a gas engine tri-generation system, in Tomakomai City. J Farm Tomakomai Co., Ltd. (President: Koichi Kimura; Head Office: Tomakomai City, Hokkaido), JFE Engineering affiliate, has been producing tomatoes and baby leaf products in the plant and marketing at various retail stores in Hokkaido since August 2014.

The company plans to expand the plant by the end of November this year, and will start cultivation of high-value-added vegetables such as the high-sugar content tomato with the brand name “Smart Ruby,” which is being developed at a test greenhouse at its Yokohama Head Office.\*

As part of this project, JFE Engineering also constructed a new biomass boiler system to verify the use of various heat sources for plants. The system uses wood chips made from waste wood as fuel to supply heat and CO<sub>2</sub> to plants, thus effectively utilizing wood biomass resources that exist in abundance in plant location areas.

Until now, biomass combustion gas had not been supplied to greenhouses because it contains a larger amount of contaminant than combustion gas such as LPG. JFE Engineering developed an original purification system enabling the use of CO<sub>2</sub> emitted from biomass boilers for greenhouse culture for the first time in Japan. Amount of CO<sub>2</sub> supply is more than doubled compare to LPG combustion.

As an economic benefit of this type of combined CO<sub>2</sub> supply-type biomass boiler system, JFE Engineering estimates its fuel cost can be reduced to about 30% from that of general LPG combustion-type heaters.

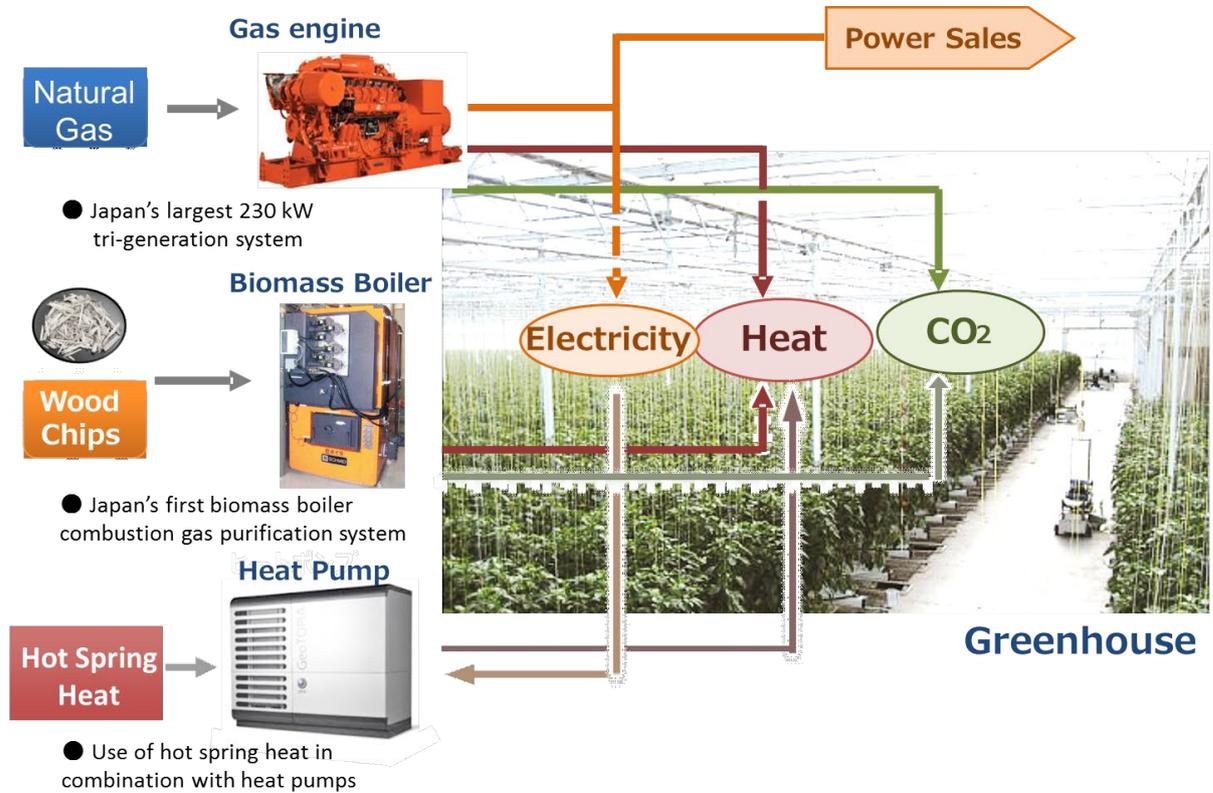
JFE Engineering will verify the effectiveness of energy use with natural gas and biomass at its Tomakomai Smart-Agriculture Plant, and also plans to study the use of hot spring heat\* in the demonstration starting from the end of November this year, with the aim of establishing the optimum plant models for individual plant location areas.

JFE Engineering intends to make technical proposals on the smart-agriculture plants best suited to individual plant location areas on a nationwide scale, facilitating the development of new agricultural business.

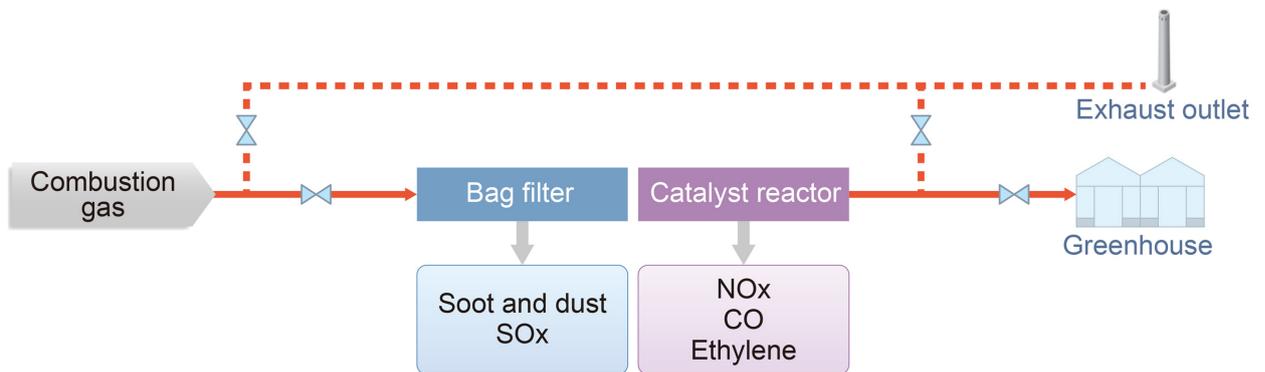
Note:

\* Already published on January 30, 2015. Please refer to the following web site:  
<http://www.jfe-eng.co.jp/news/2015/20150130.html>

■ Use of diverse energy sources best suited to the characteristics of individual areas



■ Flow of combustion gas purification system



For inquiries regarding this news release, please contact JFE Engineering at the following:  
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