Biomass Industrial City

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Biomass Industrial City in Japan



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Municipalities develop "Biomass Industrial City" vision which creates industry utilizing local biomass and builds local circular economy

With an eye to economic efficiency, Biomass Industrial City plan is evaluated by technical/financial experts in view of:

- 1) leading model,
- 2) feasibility,
- 3) regional spillover effect, and
- 4) implementation scheme;

and then, selected by the relevant Ministries

90 municipalities have been selected as of 2019 (started from 2013)

(Reference) Selection of biomass industrial cities (90 municipalities)

Hokkaido region (35 municipalities)

Tokachi area (19 municipalities): Shimokawacho, Bekkaicho <2013(1)>, Kushiro, Okoppecho <2013(2)> Biratoricho <2015>, Shiriuchicho, Otoineppumura, Nishiokoppemura, Shibechacho <2016> Takinouecho, Nakashibetsucho, Tsuruimura <2017>, Wakkanai, Hamatonbetsucho, Horonobecho <2018> Yakumocho<2019>

Hokuriku region (4 municipalities)

Niigata Pref .: Niigata <2013 (1)>, Tokamachi <2016> Toyama Pref.: Imizu <2014>, Nanto <2016>

Kinki region (5 municipalities)

Kyoto Pref.: Nantan <2015>, Kyotanbacho <2016>, Kyoto <2017> Hyogo Pref.: Sumoto <2014>, Yabu <2018>

Chugoku & Shikoku region

(10 municipalities)

Tottori Pref.: Hokueicho <2018> Shimane Pref.: Okuizumocho <2013(2)> Okinoshimacho <2014> linancho <2015> Okavama Pref.: Maniwa<2013(2)> Nishiawakurason <2013(2)> Tsuyama <2015> Hiroshima Pref.: Higashihiroshima <2017> Yamaguchi Pref.: Ube <2017> Kagawa Pref.: Mitoyo <2013(1)>

Number of selected municipalities by year

Number of selected municipalities by year (
2013		2044	2045	2046	2047	2040	2040	55
primary	secondary	2014	2015	2010	2017	2010	2019	
26	8	6	11	16	11	5	7	

Tohoku region (11 municipalities)

Aomori Pref.: Hirakawa <2016>, Nishimeyamura <2017> Iwate Pref .: Ichinoseki <2016>, Karumaicho<2019> Miyagi Pref.: Higashimatsushima <2013(1)> Minamisanrikucho <2013(2)> Osaki <2015>, Kamimachi <2016> Shikamacho <2017> Yamagata Pref.: Mogamimachi <2015>, lidemachi <2017>

Kanto region (9 municipalities)

Ibaraki Pref.: Ushiku <2013(1)> Tochigi Pref.: Motegimachi <2015>, Ootawara <2017>, Sakura<2019> Gunma Pref .: Uenomura <2017> Yamamashi Pref.: Kai <2015> Shizuoka Pref.: Hamamatsu <2013②>, Kakegawa <2016> Nagano Pref.: Nakano <2019>

Tokai region (3 municipalities)

Aichi Pref.: Obu <2013(1)>, Handa <2016> Mie Pref.: Tsu <2013(2)>

Kyushu region (13 municipalities)

Fukuoka Pref.: Miyama <2014>, Munakata <2015>, Itoshima <2016>, Asakura<2019> Saga Pref.: Saga <2014>, Genkaicho<2019> Oita Pref.: Saiki <2014>, Usuki <2015>, Kunisaki <2016>, Takeda<2019> Miyazaki Pref.: Kobayashi <2015> Kagoshima Pref.: Satsumasendai, Nagashimacho <2016>

* Figures in <> indicate the year of selection. (1): primary selection, 2): secondary selection)

CASE 1 : Hokkaido Tokachi area ~Relation of a biogas plant and the agriculture ~





Summary

• The Tokachi region in Hokkaido is known as Japan's food base. It produces an abundance of agricultural products.

• In Tokachi, the regional economic zone policy "Food Valley Tokachi" has been implemented with agriculture as its core industry. Biomass has taken an important role in the "Food Valley Tokachi".

• Traditionally, agriculture and livestock have developed in cooperation with each other.

However, with the expansion of dairy farming, the treatment of livestock waste has become real problems

The installation of biogas plants is the most effective solution to this problem. The installation of biogas plants has strengthened and sustained cooperation between agriculture and livestock production.

Livestock waste treated by methan fermentations is returned to farmland. There's more. The electricity and heat produced by the biogas plant are also used in various ways in the Tokachi area.

CASE 2 : Maniwa City, Okayama Prefecture ~Utilization of woody biomass~



The five key words are "Nature," "Cooperation," "Interaction," "Circulation," and "Collaboration. Utilization of woody biomass is our core business. Promotion of material and energy use with abundant and diverse biomass. Aiming to improve the local brand by promoting industrial tourism and learning through biomass.



CASE 3 : Saga City ~ Carbon Capture and Utilization(CCU) Plant ~



Saga City is promoting the utilization of CO2 from incineration of raw garbage for agriculture and algae cultivation with the aim of building a resource circular economy.

As algae contain necessary nutrients, components helping to store fat that are necessary for human organisms, as well as ingredients for cosmetics and pharmaceutical products, it is attracting attention as a raw material for a variety of products in Japan, where resources are scarce. Besides requiring water, light, CO2 and mineral nutrients, algae cultivation needs appropriate facilities and numerous processing steps, so that industrial expansion is expected through the development of projects for each production step.

