Press release on October 5, 2016

Kawasaki City to conduct feasibility study on advanced resource recycling using IoT following adoption of Ministry of the Environment's Eco-town low-carbon promotion program

In coordination with businesses and other participants, Kawasaki City will **carry out a feasibility study to achieve advanced resource recycling using IoT in Kawasaki Eco-Town**[*1] following the adoption of the Ministry of the Environment's 2016 low-carbon waste treatment support subsidy (Eco-town low-carbon promotion program).[*2]

This project is **a pioneering low-carbon initiative using IoT in the waste treatment and recycling industries.** It also aims to be **a role model that leads to the fourth industrial revolution**, making the most of the infrastructure of Kawasaki Eco-Town.

***1. Kawasaki Eco-Town**

In 1997, the entire coastal area of Kawasaki City became the first Eco-Town approved by the government of Japan. Since then, the city has started initiatives in resource recycling and revitalizing industries.

***2. The 2016 low-carbon waste treatment support subsidy (Eco-town low-carbon promotion program)**

This subsidy is given to projects that conduct a feasibility study (FS) and make plans to promote advanced resource recycling and reduction in carbon emissions to contribute to the preservation of global environmental conservation and Sound Material-Cycle Societies.

Outline of the study

(See the attachment for the outline)

1. Period of the study (scheduled)

2016 to 2017

(The subsidy qualification is examined each fiscal year.)

2. Content of the study (main research and study items)

(1) Optimization of IoT-based collection and transportation systems for industrial waste, etc.
(2) Advanced resource recycling from industrial waste and reduction in carbon emissions
(3) Examination on how to use IoT for industrial waste treatment
(4) Verification of the effects of reduced carbon emissions in Kawasaki Eco-Town overall
(5) Verification of the effects of regional revitalization by creating environmental industries, etc.

3. Venue

The incineration facilities of Nakasho Ōgimachi CR Center (5-15 Ōgimachi, Kawasaki, Kawasaki) have been selected as a model case to verify the effects on the entire Kawasaki Eco-Town area (Kawasaki coastal area).

4. Implementation structure (Member organizations)

(1) Kawasaki City: Main entity
(2) NEC Corporation: Verification of the implementation of IoT technologies
(3) Nakasho, Inc.: Provision of the advanced resource recycling venue
(4) Resource Circulation Network (general incorporated association): Verification of the overall effects

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Outline of the feasibility study (FS)of an advanced resource recycling system using IoT in Kawasaki Eco-Town

Attachment

Background

◎ In 1997, **the coastal area of Kawasaki City became the first Eco-Town in Japan,** approved by the Ministry of Economy, Trade and Industry (then the Ministry of International Trade and Industry).

◎ Since then, as a cluster region of the recycling industry, the area has accumulated technologies, knowhow, etc. and developed high- value -added and efficient recycling businesses.

◎ For further-advanced and lower-carbon recycling businesses in Kawasaki Eco-Town, a **FS has been started in cooperation with companies in the city, and aim to apply IoT technologies to the recycling industry.**

◎ Today, **IoT technologies are expected to be used in various industries as technologies leading to the forth industrial revolution (Industry 4.0).**

◎ Through this study, **the study examines potential business models and promote the wide use of these technologies focusing on not only the recycle industry but also other industries.**

Outline of FS

- **Period of the study:** 2016 to 2017
  (The subsidy qualification is examined each fiscal year by the Ministry of the Environment.)
- **Main entity:** Kawasaki City
- **Member organizations:**
  NEC Corporation → (Verification of the implementation of IoT technologies)
  Nakasho, Inc. → (Provision of the advanced resource recycling venue)
  Resource Circulation Network (general incorporated association)
  → (Verification of the overall effects)
- **Main issues**
  (1) Optimization of IoT-based collection and transportation systems for industrial waste, etc.
  (2) Advanced resource recycling from industrial waste and reduction in carbon emissions
  (3) Examination on how to use IoT for industrial waste treatment
  (4) Verification of the low-carbon effects considering the ripple effects on the entire Kawasaki Eco-Town
  (5) Verification of the effects of regional revitalization from the viewpoint of creating environmental technologies, environmental industries, etc.

Effects of the project

◎ Advanced waste treatment and reduction in carbon emissions of the companies in Kawasaki Eco-Town
◎ Advanced resource recycling and development of environmental industries in Kawasaki Eco-Town
◎ Promotion of Kawasaki Green Innovation using new technologies like IoT

1st step

Image of the future

1st step (2016 to 2017)

◎ Verification of optimization of IoT-based collection and transportation systems for industrial waste, etc.
◎ Examination of advanced resource recycling from industrial waste and reduction in carbon emissions
◎ Examination on how to use IoT for waste treatment

2nd step (2018 to 2019)

◎ Disseminating information for achievement of IoT-based advanced waste treatment and reduction in carbon emissions in Kawasaki Eco-Town
◎ Promotion of the use of IoT systems for local industrial waste disposers

3rd step (From 2020)

◎ Prevalence of the IoT-based effective recycling business practice in Kawasaki Eco-Town.
◎ Promotion of the Kawasaki method to other Eco-Towns and overseas
◎ Expansion of the application of IoT systems to fields other than waste treatment