Two Demonstration Project Systems Start Operation in Lyon, France
—Displaying Home Energy Consumption Data on Tablets and
Collection of Real-time Data for a Large Urban Area—

Grand Lyon and NEDO have started operation of two systems for the Lyon Smart Community Demonstration Project in the Lyon Confluence of France. The project is being carried out with financial support provided by Japan’s Ministry of Economy, Trade and Industry. The systems are a home energy monitoring system to display energy consumption data for residential buildings and a community management system (CMS) to collect and analyze real-time energy data for the Lyon Confluence district.

The home energy monitoring system is a system to display energy consumption data on ConsoTab tablets which have been supplied to approximately 200 households living in existing buildings in the Lyon Confluence. It is expected that the system will promote energy saving behavior among local residents.

The CMS will collect real-time data on energy use in the Lyon Confluence district during the demonstration project. The data will then be used for an energy consumption index which measures the performance of energy systems. The index will serve as an energy analyzing platform which is expected to realize a smart community.

Before launching the two systems, an inauguration ceremony was held in Lyon on June 14, 2014.
1. Overview
   Realizing a sustainable community having a high level of energy efficiency requires the introduction of renewable energy for power generation, the capability to identify energy consumption of end users such as households, buildings and neighborhoods, and establishment of a system to effectively use energy. In addition to improving energy supply and demand, it is also necessary to enhance various systems, including urban transportation, in order to upgrade community infrastructure. Moreover, older communities need to be updated to a modern smart grid infrastructure while new communities also need to be established.

Based on the above, Grand Lyon and NEDO undertook the Lyon Smart Community Demonstration Project with financial support provided by Japan’s Ministry of Economy, Trade and Industry. The project is recognized as a core project in the urban revitalization plan being conducted by Grand Lyon. The goal of the project is to establish a smart grid infrastructure for the Lyon Confluence by utilizing Japanese technologies.

This is the first demonstration project undertaken by NEDO that aims toward developing an entire urban infrastructure as a smart community, and it is also a good opportunity for Japanese companies to introduce their technologies in Europe.

The demonstration project consists of the following four tasks:
- Task 1: Construct positive energy buildings (PEB) to generate more energy than energy consumption by actively introducing renewable energies, storage batteries, etc.
- Task 2: Introduce an electric vehicle (EV) management system and EV car sharing system utilizing PV power generation
- Task 3: Promote energy-saving behavior among residents by introducing a system to monitor electricity use in existing homes using ConsoTab tablets
- Task 4: Demonstrate a community management system (CMS) that collects data on energy use in the Lyon Confluence in Tasks 1, 2 and 3 for an energy consumption index.

Grand Lyon and NEDO are now carrying out Tasks 3 and 4. These tasks will be carried out closely together with Task 2, which was launched on October 14, 2013. Task 1 has already been started and will be completed in the future.

1.1 Promotion of energy-saving behavior by introducing a system for monitoring electricity use in existing homes

In Europe, there are a number of buildings in older communities which are difficult to renovate. Promoting energy-saving activities on a community-scale requires not only the installation of leading-edge equipment in new buildings but also improved energy efficiency of existing buildings.

In Task 3, ConsoTab tablets will be used to monitor, identify and display data on the consumption of electricity, gas and water used by residents of existing public buildings. In addition, the tablets will promote energy saving behavior among residents by sounding an energy consumption alert and displaying energy saving measures based on energy consumption data.
1.2 Collection and analysis of energy data of the entire Lyon Confluence district

A community management system (CMS) will be used to understand energy trends within the entire Lyon Confluence district and to analyze variable factors of energy trends.

The system collects and analyzes real-time energy data from Tasks 1, 2 and 3, including data concerning buildings in the Lyon Confluence district and energy storage data for the EV car sharing system. As a result, the system can provide Grand Lyon, the city of Lyon and others a useful energy consumption index to evaluate and formulate energy policies.

In the demonstration project, Grand Lyon will demonstrate that the energy consumption index is useful for realizing a smart grid infrastructure, such as for city planning and establishing environmental and energy policies. This will enable Grand Lyon to find appropriate measures to become a sustainable city with high energy efficiency.
2. Inauguration Ceremony
An inauguration ceremony to launch the home energy monitoring and data collection systems for the Lyon Smart Community Demonstration Project was held on June 14, 2014. The ceremony was attended by Mr. Gérard Collomb, Senator-Mayor of Lyon and President of Grand Lyon, and Mr. Kazuo Furukawa, Chairman of NEDO. Approximately 200 people, including executives of the French project participants, residents of the Lyon Confluence as well as executives of NEDO’s entrusted companies Toshiba Corporation and Toshiba Solutions Corporation also participated in the ceremony.

The results of the operation of the two systems are expected to demonstrate Japan’s technological capability, promote mutual collaboration between France and Japan and also introduce Japan’s advanced technology in France and other countries.

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