－News Release－

13 December 2012

Japan Asia Group Limited

Construction Begins at Tagonishi Eco-town

A Major Step towards Japan Asia Group's Vision of *Green Communities*

The Japan Asia Group (CEO and President: Sandra Wu, Wen-Hsiu; HQ: Chiyoda, Tokyo; TOPIX Code: 3751) is moving closer to achieving its vision of *Green Communities*[1] through the public-private partnership Tagonishi Eco-town Project in Sendai City by group company Kokusai Kogyo Co., Ltd. (President: Osamu Nakahara; HQ: Chiyoda, Tokyo).

Tagonishi Eco-town（Image）

Tagonishi Eco-town Project, started in 2009, is being undertaken by Kokusai Kogyo, lead contractor of Tagonishi Land Readjustment Works, in collaboration with Sendai Tagonishi Land Readjustment Association, Miyagi Prefecture, Sendai City, Tohoku University and various stakeholder companies, and is focused on advancing three main concepts, *reducing energy consumption*, setting the stage for *safe, secure and comfortable living*, and *harmony with nature*.

Since the 2011 Great East Japan Earthquake and Tsunami, and based the lessons learnt from it together with the group's already strong disaster risk reduction capacity, another development concept was added, *disaster resilient urban infrastructure.* This has enabled Tagonishi to gain funding under various schemes[2], further speeding up progress.

Construction is starting this financial year on the some houses in the Smart Village and the Tsunami Relocation Public Housing that will have energy management systems and solar photovoltaic generation systems. These two housing areas will be interconnected by an energy visualization system and a fully-operational (namely, moving beyond the current norm of developmental/testing-stage systems) community energy supply and management system[3].

With the reconstruction in Tohoku receiving international attention, there are high expectations on this project as a symbol of the recovery, and it has been selected as a model eco-town under Sendai City's Earthquake Disaster Reconstruction Plan. Moreover, it has been singled out by the United Nations office for disaster risk reduction (UNISDR), being introduced as an example of disaster resilient urban development in The Asia-Pacific Disaster Report 2012 and at various other UNISDR-sponsored conferences.

1. Infrastructure that supports safe and secure living through urban planning for a people and environmentally friendly future.
2. Model Projects for Sustainable City Redevelopment Promotion, Ministry of Environment (2011), Project for Promotion of Smart Community Concept, Ministry of Economy, Trade and Industry (2011), and the Smart Grid Telecommunications Interface Promotion Fund by Sendai City (2012)
3. Individual houses will be fitted with home energy management systems (HEMS), and the energy supply and management of the entire community will be controlled by a community energy management system (CEMS).

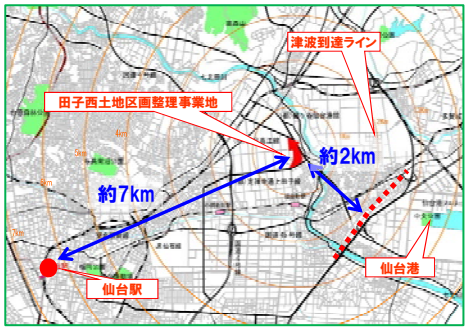
Kokusai Kogyo wishes to make a valuable contribution to the Tohoku recovery through its Tagonishi Eco-town Project. This urban planning model – efficient use of energy throughout the community and a backup power supply system that kicks-in in the event of a natural disaster – can be replicated in other devastated coastal areas in Iwate, Miyagi and Fukushima prefectures.

For this to happen it will be vital to work closely with communities, prefectures, cities and companies. Kokusai Kogyo will work as an overall coordinator for urban development utilizing the experience and technology it has built up in developing and planning social infrastructure and in urban and renewable energy developments both in Japan and overseas. The Japan Asia Group will provide urban development solutions, specialized to local conditions, using its fundamental technologies to ensure that urban planning is both low carbon and safe and secure to meet the needs of future generations.

＜Background information＞

■ Project Outline

Tagonishi area is about 7km from the center of Sendai City. It is about 1km from Fukudamachi Station on the JR Senseki Line, and is about 3km from the Sendai North interchange, with access to both the Sanriku Expressway and Sendai East Highway. The tsunami triggered by the 2011 Great East Japan Earthquake reached approximately 2km from Tagonishi, however, fortunately, there was no damage by the tsunami or by liquefaction. Currently Tagonishi is included in Sendai City's Earthquake Disaster Reconstruction Plan as a model town.



This project got underway in 2009 as the Sendai Tagonishi Land Readjustment Project. Before this the site was mostly rice paddy fields with an area of approximately 16.32 hectares. Initially most of the land was allocated to residential and commercial purposes. However, after the 2011 earthquake the plan was revised to include tsunami relocation public housing (176 units) in the northern section, with the residential housing in the center and the commercial area along the main roads. The plan is for a town of approximately 1,000 residents.

The construction of relocation public housing and some of the stand-alone houses will start in FY 2012, according to project plans and Sendai City's policy. Within the residential zone will be the Smart Village, born out of a new urban planning concept that integrates the latest technology with architectural design, which is being undertaken in collaboration with Tohoku University. In FY 2013 construction will start in the rest of the residential area and in the commercial zone.

● Tsunami Relocation Public Housing

The relocation housing construction is now underway and residents are scheduled to start moving in in FY 2013. Sendai City purchased 16,000 ㎡ of land in Tagonishi Eco-town to build a total of 176 apartments. There will be four mid-rise apartment blocks, around a central courtyard (public space), that are linked with pathways and greenery. It will also have an energy management system using solar photovoltaic power and storage batteries that can be used at the community center (come evacuation center) in the event of an emergency or power cut, as well as a demand-response system.

● Smart Village

The Smart Village is part of the residential area and will consist of 16 smart houses, including the pilot smart houses to be used for testing and research by Tohoku University and Kokusai Kogyo. These will be energy independent houses with solar PV systems, stand-alone cogeneration systems and storage batteries. There will also be communal spaces (parks) that can be used freely by residents. Moreover, it will be spatially designed with community bond building in mind, and the buildings will be positioned so as to ensure optimal wind flows and paths will mark property boundaries.

Energy supply and energy management system（ＥＭＳ）

The Smart Village and the Tsunami Relocation Public Housing will be connected by an energy visualization system and an energy supply and management system. This will be developed by the Sendai Green Community Association, which is chaired by Kokusai Kogyo, and includes NTT Facilities and NTT East Japan Co., Ltd. The relocation housing will have solar PV systems, gas cogeneration systems, storage batteries, smart meters, and each apartment will have a tablet device to visualize their energy consumption. Additionally, the energy management system will efficiently use a mix of different energy sources such as solar PV.

The stand-alone houses will have an integrated energy management system that combines solar photovoltaic systems, fuel-cell batteries, electric vehicle recharging stations (or permanent storage batteries) fitted with dual converters, and home energy management systems (HEMS).

Each device will be connected through a bidirectional telecommunications interface to a computer server for efficient energy management.

Town Management (from FY 2013)

In order for Tagonishi to have excellent energy management and a sustainable framework for operation and management of the system, the O&M of the entire eco-town will be considered carefully. In addition to general operation and maintenance of buildings, a unique town management model will be developed for Tagonishi that incorporates energy management of the entire town and aspects of risk management to maintain a minimum of functions in the event of a disaster.

Various other initiatives will be undertaken besides those started in FY 2012, and will be announced at a later date. Some of which include:

Area	Initiative
Residential area (excl. Smart Village)	【Energy generation】solar PV, solar thermal conversion, stand-alone cogeneration systems 【Energy saving】Town mobility (electric bicycles and vehicles (EV)), promotion of energy saving appliances etc. 【Storage】Storage batteries, vehicle-to-home systems (V2H) 【Energy management】smart meters, controlling appliances with HEMS
Commercial area	【Energy generation】solar PV, solar thermal conversion 【Energy saving】Energy saving devices such as LED lights and heat pumps 【Storage】Storage batteries 【Energy management】smart meters, BEMS 【Other】Heat exchange between buildings, rapid EV chargers
Other, entire town	・Expansion of energy visualization area ・Town mobility ・Pilot project for energy sharing