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Hokushu Housing Co., Ltd./Seiyo Housing Co., Ltd.
Sekisui Housing Co., Ltd./Sumitomo Forestry Co., Ltd.
Tsuchiya Home Tohoku Co., Ltd./Canada House Group
Wells Home Co., Ltd./Kyowa Home Co., Ltd.
Tohoku University
Sendai Green Community Association
Kokusai Kogyo Co., Ltd.

Construction Begins on Smart Village at Tagonishi Eco-town

— *Rebuilding for a New Future* —

The Tagonishi Eco-town Project, started in 2009 as a public-private partnership by Kokusai Kogyo (HQ: Chiyoda, Tokyo; President: Osamu Nakahara), the lead contractor of the Tagonishi Land Readjustment Works, in collaboration with the Sendai Tagonishi Land Readjustment Association, Miyagi Prefecture, Sendai City, Tohoku University and various stakeholder companies, was initially focused on advancing three main concepts, *reducing energy consumption*, setting the stage for *safe, secure and comfortable living*, and *harmony with nature*. In the wake of the 2011 Great East Japan Earthquake and Tsunami, with the integration of another concept, *disaster resilient urban infrastructure*, it was included in Sendai City's Earthquake Disaster Reconstruction Plan and has received funding from the national government.

The Smart Village Project now getting underway is included in the residential area of the Tagonishi Eco-town and will consist of 16 smart houses.

The smart houses, expected to be completed by the spring of 2014, are being constructed by seven companies: local company Hokushu Housing, Seiyo Housing, Sekisui Housing, Sumitomo Forestry, Tsuchiya Home Tohoku, and Canada House Group.

This eco-town is aiming for a new paradigm in urban design by integrating three concepts, *design, technology* and *community*, thanks to the cooperation of Tohoku University, Architecture Department Professor Yasuaki Onoda, and two architects, Ippei Takahashi and Takashi Fujino. Under the leadership of this architectural team model smart buildings are being planned by a team led by professors Kazuyuki Taji and Ryuuzou Yoshikawa of Tohoku University's Environmental Science Research Department.



Tagonishi Eco-town (within red line) and the Smart Village (green dotted line)

The spatial design of the eco-town is striving to ensure the entire community represents the core concepts such as by setting a unified design code amongst the companies, having communal areas that can be used freely by residents to strengthen community bonds, spacing buildings to ensure wind flows as well as footpaths for free access to communal areas, and keeping a high level of visibility with no hedges and so on along boundaries that will also help prevent crime.

This eco-town will bring energy efficiency to a new level through 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) to provide residents with their energy needs. This system and its various components will be implemented by the Sendai Green Community Association, which is chaired by Kokusai Kogyo, with funding by Sendai City under its Smart Grid Telecommunications Interface Promotion Fund.

The Tagonishi Eco-town Project, and the smart village to be completed next spring, is an important milestone on Sendai City's path to a full recovery from the 2011 tsunami and a brighter future.