Itochu Enex Co., Ltd. Kanden Energy Solution Co., Inc.

Itochu Enex Announces Start of Construction on Coal-fired Thermal Power Plant at the Sendai Port

Sendai Power Station Co., Ltd. (headquartered in Minato-ku, Tokyo; Mikio Matsumura, President; "Sendai PS" hereafter), a joint venture corporation involving JEN Holdings Co., Ltd., a 100% subsidiary of Itochu Enex Co., Ltd., and Kanden Energy Solution Co., Inc., a 100% subsidiary of The Kansai Electric Power Co., Inc., has begun construction on a coal-fired thermal power plant located at the Sendai Port in Sendai City, Miyagi.

The project goal is to establish a low-cost stable power supply by building a 112,000 kW coal-fired thermal power plant on the vacant site of a factory that collapsed in the Great East Japan Earthquake. The facility is slated to become operational in October 2017.

In advance of the plant's opening, Sendai PS has signed a pollution control agreement^{*2} with the Seven Sen-en Area Local Authorities Pollution Control Committee,^{*1} a body comprised of related local authorities.

Moving forward, Sendai PS will continue to work to win the understanding and support of all stakeholders and to contribute to both local development and stable power supply.

- *1 Composed of Miyagi Prefecture, Sendai City, Shiogama City, Natori City, Tagajo City, Shichigahama-machi, and Rifu-cho, the committee concludes pollution control agreements with businesses located in the Sendai Port Pollution Control Area, around the Sendai Port.
- *2 The agreement finalizes measures to be taken by businesses to preserve the living environment based on the Miyagi Prefectural Ordinance on the Prevention of Pollution (Miyagi Prefectural Ordinance No. 12 of 1971).

Itochu Enex Group Initiatives to Reduce Environmental Burdens Imposed by Power Generation and Supply

In its role as a power generation corporate entity, the group has set the following goals as critical societal imperatives: 1) providing stable power; 2) concern for the environment; and 3) harmonious coexistence with the local community.

<u>1. Proactive Renewable Energy Initiatives</u>

Renewable energy sources such as wind and hydroelectric comprise approximately 29%, i.e., 52 MW of the group's total self-generated power of 182 MW.

We will continue to strive to achieve a balanced power generation profile that accounts for economic efficiency and environmental and local issues.



2. Reducing CO₂ Emissions Through Power and Steam Cogeneration

The group seeks to generate thermal electric power through highly efficient cogeneration system operation, making use of both electricity and steam arising from the power generation process. This increases overall heat efficiency and reduces the amount of excess CO₂, thereby reducing environmental impact. The Ministry of Economy, Trade and Industry has established a Thermal Power Generation Review Working Group^{*1} that considers how to make thermal power generation more efficient. This group is currently discussing benchmark values^{*2} for thermal power generation efficiency. The group is committed to continuing to work to save energy to meet these targets.

3. Reducing CO2 Through Local Heat Supply

Tokyo Toshi Service Co., Ltd.,^{*3} a group company of Itochu Enex, is currently engaged in local heat supply business projects that supply cool and warm water as a package for air conditioning purposes to multiple buildings, mainly in the Greater Tokyo area (18 locations in Greater Tokyo, including Ginza, Harumi, and Makuhari). These projects use untapped heat energy from rivers, treated waste water, underground water, and substation waste heat via highly efficient heat pumping systems, resulting in an average of approximately 35% ^{*5} energy savings (CO₂ reductions) compared to heat source systems for individual buildings.^{*4} The projects have won high praise among a wide spectrum of observers for the environmental awareness they demonstrate.

(Recent Awards)

Award Name	Awarding Agency	Date of Award
2014 Director-General's Excellent Energy Management Business Award	Kanto Regional Bureau of Economy, Trade and Industry, METI	February 26, 2015
Grand Prize of 2nd Carbon-Neutral Awards	Japan Association of Building Mechanical and Electrical Engineers	June 13, 2014
16th Environmental Burden Alleviation Device/System Award (METI Agency for Natural Resources and Energy Director-General Award)	Agency for Natural Resources and Energy, METI	June 5, 2014

In conclusion, the group will continue to strive to achieve project management that leads to the stable provision of energy and reduces environmental impact while working to achieve harmonious coexistence with local communities.

- *1 In July 2015, the government set a target of reducing greenhouse gas emissions by 26% of 2013 levels by 2030. The working group was established to review standards set forth in the Energy Saving Act and to promote more efficient thermal power generation by power producers to meet this target.
- *2 To promote more efficient power generation of existing thermal power plants, these benchmarks refer to the degrees of attainment of target values for power generation efficiency by fuel type.
- *3 66.6% financed by Itochu Enex. Operates 18 local heat supply bases in the Kanto area.
- *4 Data source of individual heat source systems: 2011 Basic Survey on the Introduction and Progression of New Energy, etc.; Research Project on the Promotion of Effective Heat Energy Utilization by Mitsubishi Research Institute, Inc.
- *5 2014 results for Tokyo Toshi Service Co., Ltd.

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