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AEON CO., LTD.  
OSAKA GAS Co., Ltd.

## Aeon and Osaka Gas Collaborate in Building a Disaster Resistant and Resilient Store

*Aeon Mall Osaka Dome City becomes the first Smart Aeon store with disaster preparedness capabilities.*

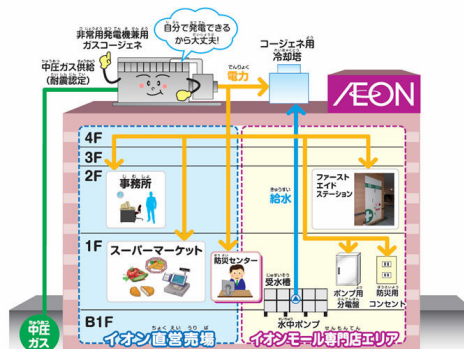
Aeon Co., Ltd. ("Aeon") and Osaka Gas Co., Ltd. ("Osaka Gas") will collaborate in the operation of the energy system for Aeon Mall Osaka Dome City, which will officially open Friday, May 31, 2013. The energy system performs two functions: a disaster recovery center for the local community and an eco-friendly facility. Regarding the function as a disaster recovery center, the power-generation facilities developed by Osaka Gas will provide power supply even in the event of an emergency. In addition, learning from the Great East Japan Earthquake and other major disasters, the shopping mall building has strong resistance to disaster. As to the eco-friendly feature, the new shopping mall adopts energy-saving features, which enable efficient energy use. It is aimed that CO<sub>2</sub> emissions from the store operation will be reduced by 40 percent from the emissions from an average existing store.

### <Main features of Aeon Mall Osaka Dome City, achieved by collaboration with Osaka Gas>

#### **Disaster Preparedness**

◆ The mall has an emergency power generation and gas cogeneration system, which uses mid-pressure quake-resistant pipes. The gas cogeneration system supplies about one-thirds of the total electricity consumed in the mall and it can ensure the power supply to key functions of the mall, such as the food department and the disaster recovery center, even during a blackout caused by a natural disaster.

\* Gas cogeneration system: The system generates electricity by using natural gas and recovers exhaust heat from the electricity generation process. The heat recovered is used to warm water and control the air conditions in the shopping mall. Using a "clean" energy source of natural gas, the system is environmentally friendly and energy efficient. Even if a blackout occurs, the emergency power generation and gas cogeneration system can generate electricity by using batteries and other equipment.



#### **Eco-friendliness**

◆ Aiming for efficient use of energy, the shopping mall uses the exhaust gas produced by the operation of the gas cogeneration system as the energy source for its air conditioners. Part of the exhaust gas is also supplied to energy plants of Osaka Gas and then used as the heating source of local air conditioning systems.

◆ The shopping mall became the first commercial facility in Japan that introduced "Solar Link Excel," which has combined functions of solar power generation system and gas-powered heat pump air conditioner with a function of power generation. The system enables stable power supply regardless weather conditions. On cloudy days, electricity generated by the gas-powered heat pump air conditioners in the mall will supplement the shortfall of power generation by the solar power generation.

As described above, the new shopping mall features the state-of-the-art facilities of Osaka Gas and incorporates disaster response know-how that Aeon has developed through its efforts to respond to the Great East Japan Earthquake. Leveraging its experience for the mall, Aeon will continue to strive to ensure emergency power supply, energy efficiency, and CO<sub>2</sub> reductions in its commercial facilities and thereby contribute to creating a sustainable society.

Based on its extensive experience and expertise in the provision of solutions for optimal use of electricity and heat energy, Osaka Gas will continue to endeavor to improve energy security, promote diversified energy systems, and in turn create a low-carbon society.