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Press Release

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FOR IMMEDIATE RELEASE

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Toshiba Signs Agreement to Develop Next Generation Thermal Power System with NET Power, Shaw and Exelon

- To develop an innovative thermal power system that eliminates NOx emissions and captures CO_2 -

TOKYO--Toshiba Corporation (TOKYO: 6502) today announced that it has entered into an agreement to develop a next-generation thermal power system, NET Power, with three leading United States companies: NET Power LLC, a power technology commercialization company and the owner and initial developer of the NET Power system; Shaw Group Inc., a leading global engineering and construction provider; and Exelon Corporation, a leading U.S. electric utility. The four companies aim to demonstrate NET Power's low-cost, high efficiency power generation cycle that produces little to no air emissions by commissioning a 25MW natural gas plant by 2014 and a 250MW full-scale natural gas commercial plant by 2017.

The companies are developing a system that produces a supercritical pressured carbon dioxide (CO_2) stream to drive a turbine generator. The system eliminates the emission of nitrogen oxides (NOx) by burning a mixture of natural gas with oxygen instead of nitrogen-rich air and separates and collects pressurized CO_2 without adding on a carbon capture system. Such CO2 can be subsequently used for enhanced oil recovery (EOR), a decades-old process that increases the amount of crude oil production from oil fields, or for underground sequestration.,.

Toshiba will develop the innovative system's high temperature and high pressure turbine and combustor, the key equipment in thermal power plants, by making best use of its material, combustion and cooling technology. NET Power and Shaw will work on overall plant engineering and Exelon will support development and operation of the 25MW plant, such as selecting the site, obtaining permits and commissioning the facility. By working jointly with Exelon, one of the leading U.S. electric utilities, and Shaw, who has rich experiences in power plant construction, the companies aim to achieve early verification of the system.

Going forward, Toshiba will promote sales of the system globally but with a particular focus on the U.S. and the Middle East, where the companies expect to see strong demand for EOR. The development of this system will contribute to the improvement and optimization of power generation efficiency and to the mitigation of climate change

by supplying environmentally friendly power generation system.

Outline of New Thermal Power Plant System

The new plant burns a mixture of natural gas and oxygen combined with CO_2 to produce a working fluid comprised mainly of CO_2 and H_2O that is used to drive the turbine generator. The working fluid is then cooled through a heat exchanger, and H_2O is separated from it to create a CO_2 stream. The CO_2 stream is pressurized and a major part of this flow is fed back to the combustor to begin the cycle anew. The remaining part of the CO_2 flow can be collected and sent into a pipeline.

Conceptual Image of New Thermal Power Plant System