

# DEVELOPMENT OF A HIGH PERFORMANCE GAS TURBINE WITH DIRECT AIR COOLING SYSTEM

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## < A b s t r a c t >

Based on our experience in the heat supply business, we as a TEPCO group company have developed the inlet air cooling system that contributes to solving the issues in the electricity utility industry (ensuring stable supply with inexpensive price, CO<sub>2</sub> reduction and environment improvement).

Meanwhile, in order to commercialize this system, we established a project team comprising of the members including academic experts, system designers and manufacturing companies. The project team conducted installation testing of actual systems during the hottest seasons over 2 years in the sites where GTs were in use. As expected, it is confirmed that the weakness of GT (the decrease of power output by 15 to 20 % during the hottest season) can be improved.