

Preventing major power disruptions

Registration No.	Number 00319		
Registration Date	September 14, 2021	Registration Category	Category 2

Name (Model, etc.)	Boso area step out prevention relay system
Location	Kisarazu-shi, Chiba
	TEPCO Power Grid, Inc.
Owner (Custodian)	TEPCO Power Grid, Inc.
Manufacturer (Company)	Toshiba Corporation
Year Manufactured	2007
Year first appeared	System operational from 2007
Reason For Selection	This power system Special Protection System (SPS), designed to prevent large scale power outage, is accompanied by a number of hard-copy documents. There are many thermal power plants along the Tokyo Bay coastline in Chiba Prefecture. This system prevents large-scale power outages caused by the instability of the entire power system due to the step-out of many generators, such as due to a nearby transmission line fault. When many generators drop out of the power system and the frequency drops significantly, a simple load-shedding method may cause widespread power outages as exemplified by the 2018 blackout in Hokkaido. This SPS, on the other hand, uses a combination of highly advanced network analysis and communications systems and protection relays to monitor the operational status of the transmission network including transmission lines and power flow. In the event of an incident, the system uses pre-screening to isolate load from the network, tailored to the scale of the incident, so as to prevent any wider impact. Similar to Boso area step out prevention system, various SPSs have been installed in the power system of the Tokyo metro-politan area and pumped storage power plants, and are operating while enhancing functions and updating hardware and software due to changes in the power system. It is important as a technology that supports the social infrastructure.
Registration Standard	2-A (Played a notable role in improving people's way of life and creating new ways of living.)

Open/Closed to Public	Closed to Public
Photo	
Other useful information	