Research on the principle of emergency energy storage of italian power

How can OSeMOSYS improve long-term planning of the Italian power sector?
In this work, an updated version of the OSeMOSYS tool is used to perform an optimal long-term planning of the Italian power sector. A time series clustering approach is applied, considering time varying input data, such as the time series related to VRES capacity factors and electricity demand.

What is a simplified model of the Italian power sector?
A simplified model of the Italian power sector is implemented with only batteriesas new energy storage option. Moreover,the model period is set from 2021 to 2040. These two simplifications have been made to limit the model's complexity and avoid excessive computational effort.

What is the average intensity of natural gas-fired power plants in Italy?
This compares with the current average intensity of natural gas-fired power plants in Italy of 357 g CO2/kWh. The first two auctions took place in November 2021 for deliveries in 2022 and 2023,and the auction for 2024 took place in February 2022.

What emergency scenarios are outlined in Italy's risk preparedness plan?
The scenarios and corresponding response measures are outlined in Italy's Risk Preparedness Plan. The emergency scenarios outlined in the Risk Preparedness Plan include cyberattacks, weather and climate-related events, and physical attacks on electricity infrastructure.

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