

Proportion of energy storage in Italian power plants



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10 years
warranty



Overview

The analyzed data reveals that 83% of the total connected capacity is associated with photovoltaic plants, with 82% of that being storage systems under 50 kWh. Does Italy need electricity storage?

As Italy's energy mix is increasingly composed of variable renewable energy sources, electricity storage will be needed to integrate power generated by renewables into the national grid and make it available when sun and wind energy are not accessible.

How much does energy storage cost in Italy?

From ESS News The results of Italy's main grid capacity market auction for 2025, published by Terna, show that energy storage represented 51.1% of the 174 MW of new capacity assigned. Thermoelectric plants made up the balance, with the new capacity secured for €67,500 (\$72,900)/MW per year, for a total cost of €11.75 million.

Why is energy storage important in Italy?

In addition, electricity storage is critical to avoid congestion in the power grid since most of the renewable production originates in Southern Italy but is consumed mostly in the north. Therefore, PNIEC also provides for the installation of new energy storage infrastructure with the aim of reaching 22.5 GW of installed storage capacity by 2030.

Are battery energy storage systems needed in Italy?

Therefore, battery energy storage systems (BESS) are needed in Italy. The Italian market for BESS is growing rapidly and currently amounts to 2.3 GW but it almost exclusively consists of residential scale systems, associated with small scale solar plants, having a capacity of less than 20 kWh.

How will Italy invest in electricity storage?

Italy will promote investments in utility scale electricity storage to reach at



least 70 GWh, and worth over Euro 17 bn, in the next ten years. The new storage capacity will be acquired through tenders published by Terna, the manager of Italy's high voltage grid. The next tender will be released in 2024.

How many storage systems are there in Italy?

More in detail, 311,189 storage systems were present in Italy in mid- 2023, with a total power of 2,329 MW and a maximum capacity of 3,946 MWh. Terna (the high voltage grid operator) also holds systems totaling 60 MW in power and 250 MWh in capacity.



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[Italian Power Storage Applications: A Surge Fueled by Policy and](#)

Let's unpack this electrifying trend: Italy added a staggering 1.05 GW/2.63 GWh of energy storage systems in the first half of 2024 alone, marking a 24.6% year-on-year growth in ...

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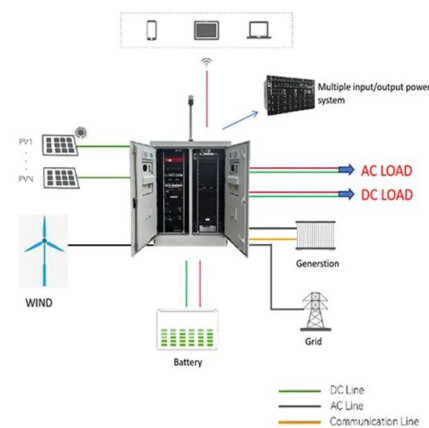


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Italy Energy Storage

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According to Terna's latest data, as of 30 June, there were 16,411 MWh of storage capacity in Italy (+69.3% compared to the same period in 2024), for about 815 thousand ...

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Nuclear power in Italy

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These developments suggest Italy's storage sector might not just meet its 2025 targets - it could potentially exceed them. The question isn't whether storage will transform Italy's energy ...

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The analyzed data reveals that 83% of the total connected capacity is associated with photovoltaic plants, with 82% of that being storage systems under 50 kWh.

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Just as we do for renewable plants, we also gather data on the power and capacity of storage systems all over Italy, as well as the number and type of installations. Find out how Terna ...

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