GE Vernova study delivers a roadmap for how Italy can still meet 2030 and 2050 climate targets

- White paper sets out two scenarios for Italy’s power sector, showing that only accelerated renewable deployment, storage, and grid investment can deliver climate goals on time.

- In this white paper, GE Vernova proposes a roadmap for how to still meet 2030 and 2050 targets. Two futures, two outcomes: Only a Renewable Ambition pathway enables Italy to meet both 2030 and 2050 targets. A Business-as-Usual trajectory risks missing 2030, driving higher costs and greater reliance on imports.

- Grid as the decisive factor: Without urgent transmission upgrades, Italy could waste 82 TWh of renewable energy by 2050 – approximately 16% of national demand.

MILAN, ITALY (October 15, 2025) — Italy’s energy future is at a crossroads. A new white paper from GE Vernova (NYSE: GEV), *Navigating the Energy Transition: Pathways to Net Zero in Italy*, shows that while the country is at risk of missing its 2030 goals, a clear roadmap can deliver both 2030 and 2050 climate targets — if decisive action is taken now.

Recent analyses across Italy’s energy sector warn the country is not on track for near-term milestones, and they set out the reasons: renewables are growing too slowly, grid capacity is constrained, and permitting remains a bottleneck. GE Vernova’s study provides a roadmap for how Italy can still meet its targets, with two quantified scenarios that highlight the choices ahead.

“2030 is Italy’s make-or-break moment,” said Jim Walsh, Vice President of GE Vernova’s Consulting Services. “This study provides a roadmap to success: the numbers, the scenarios, and the solutions that show how Italy can still achieve its decarbonization goals, while capturing the economic and industrial benefits of the transition.”

With electricity demand expected to rise by 60% by 2050 due to electrification, the study evaluates two scenarios for Italy’s power sector:

- Renewable Ambition: This pathway requires wind and solar capacity to double to 90-100 GW by 2030 and expand to approximately 200 GW by 2050. It also calls for at least 40 GW of battery energy storage, 13–17 GW of CCGTs with carbon capture, 8 GW of nuclear SMRs, and urgent completion of the Hypergrid transmission projects. This technology mix, along with some other critical permitting and regulation enablers, is a pathway that achieves both 2030 and 2050 climate targets.

- Business-as-Usual: A slower trajectory for renewable growth combined with heavier reliance on CCS, hydrogen-capable gas, and imports. Italy may still achieve net zero by 2050 but will miss 2030, exposing the system to higher costs and greater dependency on external supply.

The grid is the decisive factor. Without accelerated transmission upgrades, renewable curtailment could reach 82 TWh annually by 2050—equivalent to approximately 16% of projected national demand. Even with Terna’s planned Hypergrid projects, additional reinforcements will be required to bridge the gap between renewable-rich southern regions and demand-heavy northern centers.

The economic stakes are significant. A slower trajectory would increase reliance on imports, heighten consumer exposure to volatile fuel costs, and may undermine Italy’s industrial competitiveness.

The full white paper is available here.

GE Vernova is a key player in Italy's energy transition having enabled power generation in Italy for more than 100 years. Currently, approximately 25% of Italy's power capacity is being provided using GE Vernova technology.**MILAN, ITALY** (October 15, 2025) — Italy's energy future is at a crossroads. A new white paper from GE Vernova (NYSE: GEV), *Navigating the Energy Transition: Pathways to Net Zero in Italy*, shows that while the country is at risk of missing its 2030 goals, a clear roadmap can deliver both 2030 and 2050 climate targets — if decisive action is taken now.

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