

Electrical Digital Twin Market by Twin Type (Gas & Steam Power Plant, Wind Farm, Digital Grid, Others), Usage Type (Product, Process, System), Deployment Type (Cloud, On-Premises), End User, Application, and Geography - Global Forecast to 2026

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Abstracts

The electrical digital twin market is projected to reach USD 1.3 billion by 2026 from an estimated USD 0.8 billion in 2021, at a CAGR of 12.2% during the forecast period. The global electrical digital twin market is driven by the reduction in unplanned downtime and operation & maintenance costs and the increase in efficiency and optimization of operations of power sector owing to the use of electrical digital twins. Growing demand to achieve network-level optimization and the increasing adoption of advanced technologies for the implementation of digital twin applications are expected to offer lucrative opportunities for the electrical digital twin market during the forecast period

“The cloud segment, by deployment type, is expected to be the fastest-growing market from 2021 to 2026”

The deployment type segment is categorized as cloud and on-premise. The cloud segment of the electrical digital twin market is expected to grow at the fastest rate during the forecast period, as cloud-based solutions offer various advantages, such as scalability, adaptability, cost-effectiveness, and low energy consumption, due to which their adoption rate is increasing at a significant rate across organizations.

“The digital gas & steam power plant segment, by twin type, is expected to be the largest market from 2021 to 2026”

The digital gas & steam power plant segment held the largest share of the electrical

digital twin market as power sector operators globally are gradually planning to implement digital twins of gas and steam power plants to reduce emission and fuel consumption of gas and steam turbine assets. The digital twins of gas and steam power plants can also help operators optimize their strategies, improve machine and equipment health, and increase reliability through performance management.

“North America: The largest and the fastest-growing region in the electrical digital twin market.”

North America is expected to dominate the global electrical digital twin market between 2021–2026. North America has aging power infrastructures, which may increase the risk of a widespread blackout. Therefore, governments of different countries in this region are actively focusing on upgrading and replacing aging infrastructures for improved grid reliability and resilience, along with enabling smart electricity networks. Digital twin technologies help utilities in the region analyze and model their power generation operations amid the ever-changing generation resource mix.

Breakdown of Primaries:

In-depth interviews have been conducted with various key industry participants, subject-matter experts, C-level executives of key market players, and industry consultants, among other experts, to obtain and verify critical qualitative and quantitative information, as well as to assess future market prospects. The distribution of primary interviews is as follows:

By Company Type: Tier 1- 65%, Tier 2- 24%, and Tier 3- 11%

By Designation: C-Level- 30%, D-Level- 25%, and Others- 45%

By Region: North America- 33%, Europe- 27%, Asia Pacific- 20%,— 4%, and South America-12%, Middle East & Africa- 8%

Note: “Others” include sales managers, engineers, and regional managers

The tiers of the companies are defined based on their total revenue as of 2019: Tier 1: >USD 1 billion, Tier 2: USD 500 million–1 billion, and Tier 3:

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*Details on Business and financial overview, Products offered, Recent developments, and MNM view might not be captured in case of unlisted companies.

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