

Infinite Energy Ltd's Green Horizon industrial storage tackle the green electricity challenges

Around 21 % of the **energy consumed is electricity, with total net electricity production in the EU at 2,759 TWh (2,759,000,000,000 KWh) in 2020.**

Tracking Europe's electricity transition, revealed that **renewables overtook fossil fuels to become the EU's main source of electricity** for the first time in 2020. That is great news, indeed! Renewables rose to generate 38% of Europe's electricity in 2020 (compared to 34.6% in 2019), for the first time overtaking fossil-based generation, which fell to 37%.

**Wind and solar are boosting Europe's renewables surge.** Wind based electricity generation increased by 9% and solar power plant generation jumped by 15% in 2020. Together they accounted for 19.57% of Europe's electricity generation in 2020. Since 2015, wind and solar have supplied all of Europe's growth in renewables, as bioenergy and hydro growth has halted.

Renewables' rise is still far too slow – **wind and solar electricity generation growth must triple for Europe to reach its 2030 green targets.** In volume terms, electricity green production must go up from 38 TWh per year average growth in the period of 2010-2020 to 100 TWh per year average growth between 2020 and 2030.

Wind and solar electricity generation increase by 51 TWh in 2020 is encouraging. Yet, presently, **EU countries' national energy and climate plans only add up to about 72 TWh** of new wind and solar per year, far from the 100 TWh/year that are needed.

Germany had the highest level of net so called green electricity generation in 2019 among the EU Member States, accounting for 20.8 % of the EU total, just ahead of France (19.7 %) and Italy (10.2 %).

The **average efficiency of the wind and solar power plants are low at around 20-25%** measured by actual production / peak capacity. That is due to two primary factors: The production and the consumption do not match in time and the grid network is unable to store electricity. As a result the quantity of opportunity lost is very high.

The above suggest that the EU needs to apply large industrial electricity storages between the renewable power plants and the grid networks to store the excess electricity when produced and feed it back into the grid when needed. By raising **the actual efficiency of the renewable power plants to 35-45% the 100 TWh/year increase could be met with the existing** production capacities.

Green Horizon's 8 years of research and development focused on building such large scale industrial electricity storage. The company's **innovative technology combines hardware and software to enable arbitrary storing** of electricity produced by the renewable power plants and accepted by the grid to be delivered to the back end consumers. Such flexibility not only provides the EU the ability to reach its declared energy mix goals, but it also expands the renewable power plant industry's ability become more independent from present grid limitations and increase its production level.

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