

Press Release

09 June 2021

Mobilizing a revolution to tackle climate change: the ambitious plan for a competitive green-hydrogen industry by 2030

- *Unlocking the Green Hydrogen Revolution*, a new whitepaper from Siemens Gamesa, sets out a roadmap to drive down the cost of green hydrogen production within the next decade
- Green hydrogen price parity with fossil-based hydrogen achievable from onshore wind by 2030 and offshore wind by 2035 with appropriate policy frameworks and market mechanisms in place
- The paper outlines the path needed to ensure that green hydrogen becomes a mainstream energy source

Achieving carbon neutrality by 2050 is crucial to fight climate change and reduce our earth's temperature. A net-zero future relies on mass-decarbonization, which is only possible through the deployment of carbon-neutral fuels.

In recent decades, renewables, and mainly wind energy, have played a key role in the transition to a greener world, but the vision of a carbon-free economy can only be achieved if hard-to-electrify sectors, such as heavy transport and heavy industry, transition to net-zero emissions. Green hydrogen generated from wind energy has the potential to be the long-awaited, climate-friendly solution for these industries but, for this to become a reality, it needs to be produced cost-effectively and at industrial scale soon.

Today, Siemens Gamesa launches an industry whitepaper, **Unlocking the Green Hydrogen Revolution**, that outlines an ambitious plan to deliver cost-competitive green hydrogen by 2030 from onshore wind and by 2035 from offshore wind. Siemens Gamesa calls for a joined-up approach to encouraging both market demand and scaling production, highlighting four key requirements to deliver low-cost green hydrogen within the next decade:

1. Increase drastically the capacity of renewables because the green hydrogen revolution relies on this. The world needs up to 6,000 GW of new installed renewable energy capacity by 2050, up from 2,800 GW today to generate the expected demand for hydrogen (500 million tonnes, according to the Hydrogen Council).
2. Create a cost-effective demand-side market for green hydrogen to drive down the costs of equipment, infrastructure and day-to-day operating costs. Currently, the main operating cost for green hydrogen production is powering the electrolyzers, so a decrease in energy costs lowers the cost of the hydrogen and increases demand.

3. Develop the supply chain as no one provider can own the entire production and distribution process. At the moment, initiatives are fragmented, and therefore costly, meaning renewable energy companies, electrolyzer manufacturers, network providers and water treatment specialists need to work together to build a resilient supply chain.
4. Build the right infrastructure in terms of logistics, storage and distribution. There needs to be investment in hydrogen pipeline networks to unlock the potential of green hydrogen.

Andreas Nauen, Siemens Gamesa CEO, said, “When it comes to green hydrogen, we need to act now. It took three decades for wind and solar to reach grid parity with fossil fuels, and we cannot afford to wait that long for green hydrogen to reach price parity with fossil-based hydrogen. Wind will play a powerful role in accelerating the production of green hydrogen, which is vital to decarbonizing our economy. Therefore, to unlock the potential of green hydrogen, we need to drive down costs quickly. To do this, we need a consensus between industry, policymakers and investors to rapidly develop the demand-side market, build the supply chain and roll out the necessary infrastructure.”

Siemens Gamesa is at the forefront of wind-to-hydrogen solutions, playing a pivotal role in the energy transition. Its Brande Hydrogen site in Denmark has been granted status as official regulatory test zone by the Danish Energy Agency, providing a freer framework to develop innovative green energy solutions. Here, Siemens Gamesa has integrated a battery, a turbine and an electrolyzer to serve as a test bed for several technology pathways, here among the production of green hydrogen in the near term from existing wind projects. In addition, Siemens Gamesa and Siemens Energy announced that they were joining forces contributing their developments to an innovative solution that fully integrates an electrolyzer into an offshore wind turbine as a single synchronized system to directly produce green hydrogen. The solution will lower the cost of hydrogen by being able to run off grid, opening up more and better wind sites. The companies' developments will serve as a test bed for making large-scale, cost-efficient hydrogen production a reality and will prove the feasibility of reliable, effective implementation of wind turbines in systems for producing hydrogen from renewable energy.

Click here to read the whitepaper on [“Unlocking the green hydrogen revolution.”](#)

Contact for journalists

Guy Dorrell
+44 7808 823177
guy.dorrell@siemensgamesa.com

Verónica Díaz
+34 616 348 735
veronica.diaz@siemensgamesa.com

Úrsula Guerra
+34 677 940 665
ursula.guerra@siemensgamesa.com

About Siemens Gamesa Renewable Energy

Siemens Gamesa unlocks the power of wind. For more than 40 years, we have been a pioneer and leader of the wind industry, and today our team of more than 25,000 colleagues work at the center of the global energy revolution to tackle the most significant challenge of our generation – the climate crisis. With a leading position in onshore, offshore, and service, we engineer, build and deliver powerful and reliable wind energy solutions in strong partnership with our customers. A global business with local impact, we have installed more than 110 GW and provide access to clean, affordable and sustainable energy that keeps the lights on across the world. To find out more, visit www.siemensgamesa.com and connect with us on social media.