



Europe is installing less than half the wind energy it needs

'The EU has set itself the goal of becoming climate-neutral by 2050. The European Green Deal was launched back in 2019, and despite the challenges Covid-19 and other unforeseen developments have brought in the meantime, this target is more solid than ever,' says WindEurope CEO Giles Dickson.



What is holding back the expansion of wind energy?

The problem is not government ambition. In fact, most governments have committed to reasonably high wind energy expansion rates in their National Energy and Climate Plans, which they are currently adjusting upwards to meet the EU's new 40% renewables target for 2030.

Nor is the problem public opinion. Polling consistently shows that across the EU most people want more wind energy. And the invasion of Ukraine has further added to the political urgency of transitioning from an energy system based on imported fossil fuels to an energy system based on renewable energies.

The problem is not technology either. Wind energy is cheap and scalable. It is one of the few technologies that can be rolled out at scale over a relatively short period of time. And wind turbines keep getting more powerful. Many of the operating turbines across Europe today are only 2 MW or less. But the latest onshore ones are up to 6 MW. Offshore they can be as much as 11 MW already, with 14-15 MW turbines to be deployed in the next 2-3 years.

Digitalisation and 24-hour access to information about turbine performance are further boosting capacity factors and electricity output of modern wind turbines. New onshore wind turbines today have capacity factors of 30-45% and offshore wind turbines now reach capacity factors of 50%. Combined with additional information about temperature, gearbox vibration and other factors, we're now able to make timely interventions based on reliable real-time data.

The problem is not financing either. Banks and investors are keen to put their money in new wind energy projects. Europe invested €42.8bn in new wind farms in 2020, the second highest figure on record, which was up 70% on 2019. €26.3bn went on offshore wind, a new record. The investments covered 19.6 GW of new capacity, 7.1 GW for offshore and 12.5 GW for onshore. As far as financial concerns go, the wind industry is well funded.

The problem remains the insufficient permitting of new wind farms. The rules and regulations that public authorities use to permit wind energy projects are too lengthy and complex. The authorities are also often understaffed and overwhelmed by the workload and the complexity of the permit applications. Too many different authorities are involved in each application process and many steps are not sufficiently digitalised.

All of this leads to wind energy projects often taking five years and longer before they are awarded their permits, an unbearable situation, especially when the EU needs to ramp up its domestic renewable energy production and reduce its dependency on Russian fossil fuel imports.

The EU has big plans for the expansion of wind energy. Wind is expected to become Europe's biggest source of electricity before 2040. And by 2050, the EU wants wind to generate half of its electricity. Over the same period the EU will triple the rate of direct and indirect electrification of its energy system, from one quarter today to up to three quarters by 2050.

To facilitate this, wind power in Europe will have to scale-up massively in the decades ahead. To this end the EU wants onshore wind to grow from 173 GW today to 1,000 GW by 2050, and offshore from 16 GW to 300 GW. When it comes to the energy transition in Europe, wind energy is very much in the driving seat.

So how are we doing so far?

We're off-track. At the moment Europe is installing less than half the wind energy it needs to reach its energy and climate goals.

By 2030 the European Union aims to cut

greenhouse gas emissions by 55% compared to 1990 and raise the share of renewables in energy to 40%. This means the EU will need to install 30 GW of new wind each year up to 2030.

Currently the EU is not building enough new wind to meet any of those targets. At the end of February WindEurope presented its Annual Statistics 2021: the EU built only 11 GW of new wind farms in 2021 and is set to build 18 GW a year over 2022-26, far less than the 30 GW a year it needs. Europe must accelerate the speed of its energy transition, not least to increase its energy security.

The Russian invasion of Ukraine highlights the urgent need for the EU to reduce its dependence on fossil fuel imports from Russia and elsewhere. In line with the Green Deal objective of climate neutrality by 2050, accelerating the energy transition with wind energy at its core ensures energy security, prosperity, employment and peace in Europe.



But it's not just wind farms which face permitting bottlenecks. Grid infrastructure investments are also being held back. Grid optimisation and expansion is a prerequisite to the growth of renewables, and the current permitting regime has also stifled the buildout of new grids.

To get Europe back on track, we need to simplify and harmonise permitting procedures for new wind farms, and we need more staff in the permitting authorities. Thankfully there is movement in this area. The EU's Renewable Energy Directive to impose stricter deadlines on the maximum duration of permitting processes, two years for new projects, one year for repowering projects. And EU Member States are required to have one-stop-shops for permitting. Unfortunately, very few EU countries are meeting these new legal requirements.

The EU Commission understands the challenge and is going to publish detailed new Permitting Guidance to national Governments this summer. The Guidance will outline how Members States can go about harmonising and simplifying their permitting procedures. We have great hopes for this Permitting Guidance.

Impacts on the wind energy supply chain

The slow expansion rate is impacting on Europe's wind energy supply chain. Insufficient permits and rising costs for shipping, steel and other commodities in the post-Covid-19 period have already caused thousands of job losses and several factory closures across Europe. Wind still employs 300,000 people in Europe. But Germany alone has lost 50,000 jobs in wind over the past six years. Further plant closures are currently being discussed in Spain and Germany. It's important that the EU takes measures which help to strengthen the competitiveness of our industry. In a letter to European Commission President Ursula von

der Leyen, we highlighted the 'poor health' of the industry.

The small size of the market is the most damaging aspect of this. Wind farm developers bid into government auctions for new wind farms at the lowest possible price to win the small volumes of permitted projects on offer. And the cost pressures are passed on to the EU wind supply chain that struggles to meet these cost levels under the current market conditions. As a result, only one out of five European wind turbine manufacturers was profitable in 2021. The others were operating at a loss, a highly unsustainable situation.

Energy prices and Ukraine conflict: the need for domestic renewables

The European Green Deal means urgent action on climate, and boosting jobs, innovation and energy security. Even before the invasion of Ukraine it was clear that Europe needs to rapidly expand renewables. Energy prices have soared in recent months. Renewables are not responsible for this price spike. Instead, the blame lies with Europe's dependence on expensive, imported fossil fuels. Europe is still importing 58% of its energy, often from unreliable sources.

Already today wind energy is lowering the price of electricity in Europe. Whenever Europe builds a new turbine under a Contract-for-Difference scheme, we know exactly how much the electricity from this turbine will cost for the next 15-20 years of operation. That's a security which fossil fuels just can't offer.

Europe's wind industry stands ready to deliver more renewable energies 'made in Europe'. If Europe solves its permitting issues and strengthens its wind energy supply chain with intelligent auction designs and trade policies, wind-based electrification will accelerate Europe's energy transition.

The EU and national governments clearly get this. Germany's Finance Minister Christian Lindner called renewables 'freedom energies' and demanded a rapid acceleration of domestic renewable energy deployment and Germany's Energy Minister Robert Habeck said that 'the expansion of renewable energies is a matter of national and European security.' The political determination to deliver the Green Deal might be more solid than ever before.

The next opportunity to discuss necessary steps in speeding up the deployment of wind energy in Europe will be WindEurope's Annual Event in Bilbao 2022, from 5-7 April 2022. The entire wind industry in Europe, both on- and offshore, will be there alongside policymakers, scientists and investors. Power and Energy Solutions (PES) is an official media partner of the WindEurope Annual Event Bilbao 2022.

www.WindEurope.org



Biography

Giles Dickson is the Chief Executive Officer of WindEurope, a position he's held since 2015. WindEurope is the voice of the European wind industry. It represents the whole value chain of onshore and offshore wind across Europe and has more than 400 members.

It engages governments and other stakeholders on policy and regulation. It organises industry exhibitions, conferences and workshops. And it coordinates publicly-funded R&D in wind.

Dickson is also Chairman of the independent Advisory Council of ENTSO-E, the European Network of Transmission System Operators for Electricity.

From 1992 to 2008 he was a civil servant in the UK Government, working mostly on European affairs. From 2008 to 2015 he worked for the French engineering company Alstom where he was Vice-President for Global Public Affairs.