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European Wind Power Action Plan

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1. INTRODUCTION

Wind energy is renewable, abundantly available in the EU and secure. It is pivotal to meet the EU's decarbonisation objectives and deliver clean, affordable and secure electricity to our households, our industry and increasingly our transport sector. The expansion of wind energy and wind industry across the EU will create jobs and enhance our energy security.

The projections for European and global deployment of wind are bright. The European target of at least 42.5% of renewables by 2030 will require the installed capacity to grow from 204 GW in 2022 to more than 500 GW in 2030[1]. Globally, annual wind capacity additions should reach at least 329 GW per year until 2030 to achieve net-zero emissions, more than quadrupling today's deployment levels (75 GW)[2].

Yet, the European wind industry has recently faced difficulties in operating its business. All largest wind turbine manufacturers reported significant operating losses in 2022[3]. And with 16 GW of new wind projects installed in 2022[4], we are nowhere near 37 GW/year needed as cost-effective contribution to achieve the EU 2030 targets.

This situation calls for immediate action. The EU cannot double the wind energy pace of deployment without a healthy, sustainable and competitive wind supply chain. And the wind industry cannot be healthy without a clear and secure pipeline of projects, attracting the necessary financing and competing on a level playing field globally.

Furthermore, the energy crisis following the Russian invasion of Ukraine has underscored the risks stemming from over-reliance on a dominant foreign fossil-fuels supplier and has demonstrated the importance of wind and other renewable energy sources for the stability and security of the energy system. In a world going through a fast green and digital transition, clean technologies are central to European strategic autonomy. With this in mind, in her State of the Union speech on 13 September 2023, President von der Leyen recognised that the EU wind industry faces a unique mix of challenges and announced a European Wind Power Package. The objective of this Action Plan is to support European companies in the wind sector and improve their competitiveness to ensure that European wind industry can continue to play a key role in the green transition.

The Action Plan lays out actions that should be urgently undertaken in order to achieve this objective. The Action Plan will also indirectly support other clean power sectors, including the solar industry, given that several of the proposed actions are of relevance to all renewable sources. It is structured into **six main pillars of concerted action by Commission, Member States and industry**: acceleration of deployment through increased predictability and faster permitting, improved auction design, access to finance, creating a fair and competitive international environment, skills and industry engagement and Member States commitments.

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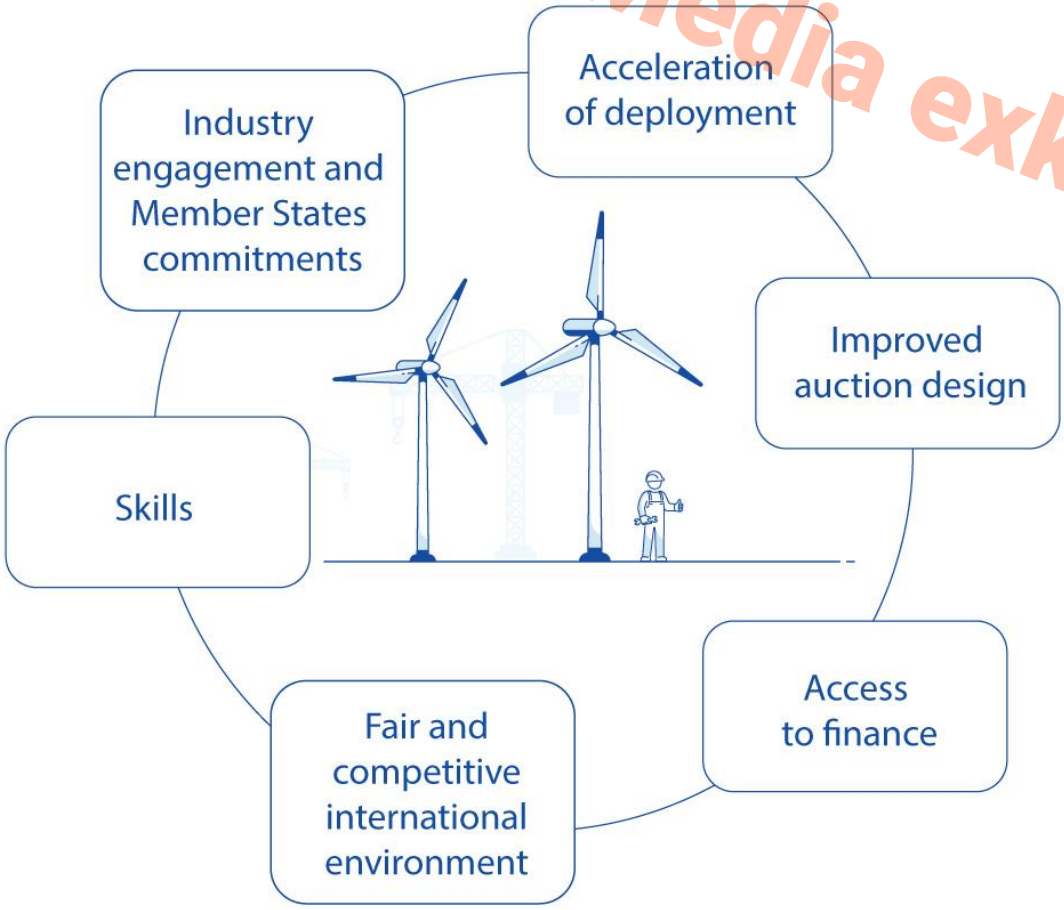
[1] MIX scenario in the Policy scenarios for delivering the European Green Deal. (Available at https://energy.ec.europa.eu/data-and-analysis/energy-modelling/policy-scenarios-delivering-european-green-deal_en)

[2] IRENA World Energy Transition Outlook 2023

[3] Rystad Report (2023) The State of the European Wind Energy Supply Chain

[4] WindEurope (2023) Wind Energy in Europe-2022 Statistics and the outlook for 2023-2027



2. STATE OF THE WIND INDUSTRY IN EUROPE

Wind energy, both onshore (92% of wind installed capacity) and offshore is already a central pillar in our electricity system. In 2022, it provided on average 16% of electricity consumed in the EU and often reaches more than 30% per day[5]. The technologies to harness wind energy, developed and scaled up in Europe, have become significantly cheaper over the last 10 years, thanks to innovation and economies of scale.[6] In many parts of Europe, wind energy is the cheapest source of electricity[7].

So far, the wind installations deployed in the EU have been provided mainly by the domestic wind manufacturing sector. The main European manufacturers accounted for 85% of the EU wind energy market and for 94% in the offshore sector[8]. Manufacturing of turbines and their components (blades, nacelles and towers, gearboxes, foundations, substations, generators, etc.) spans across the EU. This makes the wind manufacturing sector an important job provider: it

[5] ENTSO-E data.

[6] Irena (2023) Renewable power generation costs in 2022.

[7] Georgakaki, A et al. (2022) - Clean energy Technology Observatory Overall Strategic Analysis of Clean Energy Technology in the European Union – 2022 Status Report.

[8] SWD(2023) 68 final of 23 March 2023.

employs around 90,000 people across the EU, out of over 150,000 employed in total in the wind sector[9].

European companies hold a significant share of the expanding global wind equipment market which, however, fell from 42% in 2020 to 35% in 2022.[10] This is to a large extent due to the rapid deployment of wind energy in China which relies primarily on its growing domestic producers. Out of the world's 10 largest wind turbine manufacturing companies (covering over 80% of the demand of wind turbines globally), four have their headquarters in the EU, while four are located in China.

European wind project operators and developers are also active globally, but in contrast to wind equipment manufacturers they recorded in 2022 and in previous years significant profits. However, the problems of EU manufacturers increasingly weigh on the performance of EU wind operators resulting in e.g. project delays or abandonment. Furthermore, they are all increasingly facing access barriers in foreign markets.

3. MAIN DRIVERS BEHIND THE DIFFICULTIES OF THE EU WIND MANUFACTURING INDUSTRY

Despite the overall positive development in the past, the European wind industry currently faces major problems. The drivers behind the difficulties of the EU wind equipment manufacturers in operating their business can be divided into five main categories.

First, under-utilisation of production capacities driven by **inadequate and uncertain demand for wind turbines** in the EU. Currently, manufactures do not have an adequate overview of the planned wind deployment by Member States, leading to difficulties in planning production and investments.

The under-utilisation is also mostly caused by **slow and complex permitting** for renewable energy projects. The industry estimates that 80 GW of wind energy capacity is going through permitting procedures across the EU, i.e. five times more than the total wind deployment last year. Much of that capacity has been in the permitting process for years due to slow and inefficient permitting procedures.

Second, **high inflation and commodity prices**[11]**,** combined with limited hedging by wind equipment manufacturers against input price volatility, have eroded their financial standing. This was compounded by increasing interest rates and difficulties to access financing.

Third, the **design of national tenders** for the support of renewable energy often does not adequately reward the high environmental and social standards of the European products nor takes into account the need for supply chain resilience, as they are based solely or mostly on price criteria. This is the case for most auctions, though some Member States, e.g the Netherlands or France, have started to introduce non-price criteria. Some tenders for offshore wind, such as those organised on the basis of "uncapped negative bidding", lead to very high bids from the operators. This, coupled with cases where there are no sufficient penalties for

[9] European Commission estimates based on data from WindEurope and the Eurobarometer for 2020.

[10] SWD(2023) 68 final of 23 March 2023.

[11] Rystad Report (2023) The State of the European Wind Energy Supply Chain

non-execution of projects, increases the risk for the full and timely delivery of projects. Furthermore, there is high heterogeneity in the design of auctions across the EU. Altogether, this complicates investment planning by manufacturers, affects the stability of production lines and reduces the benefits of economies of scale[12].

Fourth, **pressure from international competitors** on the EU wind manufacturing sector has increased. For example, the EU's trade balance with China in the wind sector has been negative with a record deficit of EUR 462 million in 2022. China is an important supplier of raw materials and components to EU and global manufacturers but also is becoming a serious competitor in third country markets - where so far European companies have been successful. Thanks to prices on average 20% lower than those of their European and US counterparts[13], sometimes, according to the industry, backed by attractive deferred payments, the presence of Chinese companies abroad has been steadily increasing. All evidence put forward by the industry in terms of possible unfair practices will be thoroughly investigated by the Commission. While competition stimulates innovation and product improvements, an unlevel playing field would negatively affect EU wind equipment manufacturers and could even reduce their competitiveness on the EU market.

Chinese manufacturers have also benefited from vertically integrated business models with shorter supply chains owing to China's dominance in steel production and raw materials, as well as possibly from highly attractive financial conditions. All this severely undermines EU companies' ability to compete on a level playing field.

And fifth, **availability of skilled workers** in the wind manufacturing sector may affect the speed of increasing European production capacity[14]. In offshore wind in particular, skilled operators of vessels, cranes or heavy lifts are hard to find. The industry will require more workers, including engineers and tradespeople.

It is estimated that European manufacturing can cover most of the current demand for wind turbines in the EU[15]. But in order to keep their market share in a growing market driven by EU's onshore and offshore wind ambitions, European wind manufacturers would need to rapidly scale up their capacities. If this does not happen, supply bottlenecks could soon materialise leading either to slower deployment or to an increase in imports to fill the gap.

4. ACTIONS TAKEN SO FAR BY THE COMMISSION

The Commission has already put forward initiatives addressing some of the key issues the wind manufacturing in the EU is facing.

[12] A typical example is the rapid growth of wind turbines, which obliges manufacturers to adapt continuously their production lines with new investments.

[13] BloombergNEF data (2023) https://about.bnef.com/blog/cost-of-clean-energy-technologies-drop-as-expensive-debt-offset-by-cooling-commodity-prices/

[14] See 2023 Annual report on the competitiveness of clean energy technologies (to be published on 25 October 2023).

[15] According to the Global Wind Energy Council (GWEC), Europe as a whole has around 30 GW of wind turbines manufacturing capacity.

The **revised Renewable Energy Directive (RED)**[16] – which lays down a minimum binding target of 42.5% share of renewables by 2030 - with an aspiration to reach 45% - sets the course for a rapid acceleration of renewable energy deployment, while taking into account other policy considerations such as multiple use of land. It will require massive scale-up of renewable projects driving demand for *inter alia* wind equipment.

In order to accelerate the deployment of renewable energy in the short-term, the Commission put forward an **Emergency Regulation on permitting**[17] that simplifies and shortens permitting procedures for renewables, including repowering as well as grids. The Regulation has been in force since the end of 2022 and is due to expire by mid-2024.

The implementation of the Regulation has varied across Member States, but is already bringing first results. For example, following the entry into force of the regulation, in Germany, a record volume of new permits was issued in 2023 and the repowering rate rose to 34%, the highest in nine years. The revised **RED,** when implemented, will simplify and shorten permitting procedures in a more comprehensive and structural manner. Almost all Member States are accompanying this regulatory overhaul with permitting reforms included in their Recovery and Resilience Plans, including in the recently adopted REPowerEU chapters. The **Technical Support Instrument (TSI**) Regulation[18] foresees that Member States can receive, through either stand-alone or multi-country projects, technical expertise for accelerating permitting for wind energy. Six Member States have already taken advantage of this instrument for support in permitting acceleration. The adopted revision of the **Trans-European Networks for Energy** (TEN-E) Regulation[19] also contains streamlining permitting provisions for cross-border infrastructure projects, such as offshore hybrid interconnectors. The TEN-E framework also helps to implement or kick-start key cross-border electricity infrastructure projects with the financial support from the Connecting Europe Facility for Energy.

The **Electricity Market Design (EMD)**[20] **reform** proposal aims at providing stable investment signals to renewable energy investments through the promotion of long-term contracting via Contracts for Differences (CfDs) and Power Purchase Agreements (PPAs). At the same time, the proposal introduces provisions to create a more flexible power system that can accelerate the integration of variable renewable energy sources, such as wind.

Looking specifically at the manufacturing sector of net-zero technologies, including wind, the Commission substantially supported its resilience with the **Green Deal Industrial Plan** and the proposals for a **Net-Zero Industry Act** (NZIA) and a **Critical Raw Materials Act** (CRMA)[21]. The NZIA proposal, in particular, introduces sustainability and resilience criteria in public procurement and auctions for the support of renewable energy. Furthermore, it will accelerate permitting for setting up manufacturing facilities, will enhance upskilling and reskilling and foster better coordination between Member States. The CRMA proposal aims to strengthen the value chain of critical raw materials, a number of which are used by the wind

[16] Proposal for a Directive of the European Parliament and of the Council (COM/2021/557).

[17] Council Regulation (EU) 2022/2577 of 22 December 2022 laying down a framework to accelerate the deployment of renewable energy, OJ L 335, 29.12.2022, p. 36–44.

[18] Regulation (EU) 2021/240 of the European Parliament and of the Council of 10 February 2021 establishing a Technical Support Instrument, OJ L 57, 18.2.2021, p. 1–16.

[19] Regulation (EU) 2022/869 of the European Parliament and of the Council of 30 May 2022

[20] COM (2023)148 final of 14 March 2023.

[21] Respectively: COM(2023) 62 final of 1st February 2023, COM(2023) 161 of 16 March 2023 and COM(2023) 160 of 16 March 2023

industry, prioritising the circular economy – the best approach to reduce dependence on raw materials, while minimising environmental impacts.

To support the investments needed, the Commission, in addition to the possibilities for support under the Regional aid Guidelines has also introduced a new section in the **Temporary Crisis and Transition Framework** (TCTF) that allows until 31 December 2025 for investment aid in the manufacturing of strategic equipment for the transition towards a net-zero economy, including among others wind turbines and their key components and related critical raw materials [22]. On the basis of this new section some Member States are setting up support schemes for clean-tech manufacturing expansion. Since March 2023, the Commission has approved schemes set up by several Member States for a total budget of around EUR 6.9 billion and is currently assessing additional ones.

In June, the Commission proposed the **Strategic Technologies for Europe Platform** ('STEP') to support investment in critical and emerging technologies relevant for the green and digital transition[23]. STEP would allow directing both existing and additional EU funding under a number of EU programmes towards technology fields that are crucial for Europe's leadership, in particular in clean technology manufacturing, thus contributing to a level playing field for investments throughout the Single Market.

The EU spending programmes offer opportunities of support to the wind industry. The **Innovation Fund,** which can support scaling up innovative manufacturing projects, has selected since 2020 six wind projects for a total support of EUR 150 million. The last large-scale call[24] included a specific window for clean-tech manufacturing and further calls are planned. A number of Member States are making use of the Recovery and Resilience Facility to support the build-up of industrial capacity for renewable technologies

The existing RRPs foresee measures for to the deployment of up to 15.9 GW of additional wind and solar power capacity[25], earmarking up to EUR 5.6 billon for wind and solar related projects. The measures focusing specifically on wind power include the construction of offshore or onshore wind energy farms and associated infrastructure such as energy islands or offshore terminal infrastructure.

Furthermore, investment in manufacturing and deployment can be supported by the **InvestEU** programme, under which more than EUR 1.8 billion of loans from the EIB for wind projects were approved so far. The **Horizon Europe** research programme provided ca. EUR 250 million to wind-related topics. **The Cohesion Fund, the European Regional Development Fund and the Just Transition Fund** support innovation, build-up of industrial capacity, in particular in SMEs, and deployment in the field of wind energy, on the basis of national and regional cohesion policy programmes.

The Commission also supported the creation of the **Large Scale Partnership on Skills** driven by stakeholders with the aim to gather information on skills needs in the renewable energy

[22] Communication from the Commission 2023/C 101/03

[23] COM/2023/335 final of 20 June 2023

[24] https://climate.ec.europa.eu/eu-action/eu-funding-climate-action/innovation-fund/calls-proposals/large-scale-calls_en

[25] Most of the supported measures under the RRPs have shared deployment targets that cover both solar and wind with no disaggregation per technology type.

sector, contribute to the provision of appropriate skills and provide guidance and recommendations to public authorities.

Alongside this Action Plan, the Commission adopts a Communication on delivering on the Offshore renewable energy strategy which includes a set of actions specifically dedicated to offshore renewable energy.

5. A WIND POWER ACTION PLAN

However, more should be done to support the European wind sector. Therefore, this European Wind Power Action Plan, which builds upon the actions already taken by the European Commission includes additional actions to address the challenges identified structured into 6 key pillars: (i) acceleration of deployment through increased predictability and faster permitting, (ii) improved auction design, (iii) access to finance (iv) creating a fair and competitive international environment, (v) skills and (vi) industry engagement and Member States commitments.

I. ACCELERATION OF DEPLOYMENT THROUGH INCREASED PREDICTABILITY AND FASTER PERMITTING

Unlocking existing projects in the authorisation phase and accelerating new projects requires more efficient and transparent permitting processes, better staffing and training of the national permitting authorities and faster implementation of the new regulatory framework on permitting. To address these obstacles, the Commission will focus on rolling out the digitalisation of the permitting process across all the EU Member States. Better exchange between Member States on existing practices to gain acceptance of local communities will also bring additional value to the process.

Overall, under the Recovery and Resilience Facility Member States have proposed measures to support the national permitting authorities of an amount equal to EUR 31 million. This is strengthened by additional financing via the RepowerEU chapters in the Recovery and Resilience Plans in Member States.

Additionally, despite the specific legal provisions in force[26], detailed planning of auctions for renewables is either unreliable or lacking in many Member States. The Commission will work more closely with Member States to ensure transparent planning of auctions for renewables and if this is not sufficient, take action to ensure proper implementation of the relevant provisions in the Renewable Energy Directive.

Finally, policies to facilitate wind deployment through renewable power purchase agreements are missing. Unclear perspectives on the deployment volumes in the coming years make EU manufacturers hold back on expansion of production and capacities. More comprehensive and granular auction planning will give the industry greater confidence about short- and mid-term business opportunities.

[26] Art. 6.3 in the Renewable Energy Directive.

Action 1: Prolongation of the Emergency Regulation on permitting

The energy market has stabilised compared to 2022, but the EU is still facing the consequences of the energy crisis. While our preparedness and security of supply architecture has been reinforced, risks, such as disruption to our energy imports, remain. Electricity prices are at a high level and continue to be volatile. The need to accelerate deployment of renewables, in particular wind energy, across the EU is higher than ever as it helps to address security of supply risks, displace fossil fuels from the energy mix and achieve our ambitious 2030 targets.

The Emergency Regulation on permitting is already speeding up the permitting procedures in the Member States, before the provisions of the revised RED are effectively implemented. The Commission is currently carrying out a review of the Emergency Regulation on permitting. By November, it will present the report on the main findings of this review and, provided that the relevant conditions are met, propose to prolong provisions of this Regulation beyond its current expiry date (end June 2024) in the context of the ongoing assessment on the need to prolong the validity of the emergency regulations (including the solidarity regulation and the market correction mechanism regulation). The extension, while remaining a temporary, emergency measure in anticipation of the full implementation of the revised RED, would bring concrete benefits to renewables and would send a strong signal to the industry and Member States about the need to urgently accelerate deployment of wind and other renewable energy sources. In order to ensure that the favourable conditions created by the Emergency Regulation are preserved seamlessly in a structural manner, the Member States are urged to frontload the transposition of the provisions of the revised RED.

Action 2: Commission and Member States to work together to frontload transposition and implementation of the revised RED provisions on permitting - "Accele-RES"

The Commission will launch the "Accele-RES" initiative consisting inter alia of the following specific actions:

- **The Commission will prioritise the acceleration of permitting** by putting a strong emphasis on **digitalisation** of the national permitting processes across the EU as well supporting the roll out of **trainings** of the national permitting authorities. This action will be supported in selected Member States by the RepowerEU chapters of their Recovery and Resilience Plans. The Commission will encourage Member States to use the **Technical Support Instrument (TSI)**[27] to further support fast implementation of permitting provisions in RED. The financial support available will depend on the needs presented by Member States in their application for technical support.

- Before the end of the year, the Commission will launch **a dedicated online tool to support Member States in the permitting process.** The tool will, among others, provide for answers to frequently asked practical questions from Member States related to the implementation of the revised permitting provisions.

- To support fast implementation of the permitting rules, the Commission will urge all Member States to set up detailed implementation plans for the revised RED.

[27]https://commission.europa.eu/funding-tenders/find-funding/eu-funding-programmes/technical-support-instrument/technical-support-instrument-tsi_en#:~:text=The%20Technical%20Support%20Instrument%20(TSI,co%2Dfinancing%20from%20Member%20States.

- By April 2024, the Commission will **update the Recommendation** on speeding up permit-granting procedures for renewable energy projects[28] and the Guidance on good practices to speed up permit-granting procedures for renewable energy projects and on facilitating Power Purchase Agreements[29] that accompanies it, with further guidance on topics such as repowering, simplification of environmental procedures or permitting for grids, as necessary. The Commission will also issue Guidance to the Member States on the designation of the renewables acceleration areas[30].

- The Commission will **upgrade the informal expert group on permitting** into a dedicated forum to regularly exchange best practices and identify remaining obstacles that require further action at EU level. Other cooperation fora with Member States, such as the **Concerted Action on the RED** (CA-RES) and the **Single Market Enforcement Task Force (SMET)** will be mobilised to support the implementation of the new legislation[31].

Action 3: Member States to increase visibility of the wind projects pipeline through wind pledges, publication of the mid-term auctions schedules, long-term plans for renewables deployment

Under the RED, Member States already have an obligation to publish a long-term schedule on the expected allocation of support for renewables covering at least the following five years and to introduce measures to ensure that power purchase agreements will also contribute to the required deployment of renewables.[32] In cooperation with the Member States, the Commission will ensure the visibility and predictability of national plans for renewables deployment, by ensuring the implementation of the relevant RED provisions and deploying transparent digital tools.. This would help industry better plan their investments in manufacturing capacity, increase their bankability and bolster their business case. Some Member States, such as Denmark or Poland, are already working on concrete tendering programmes for large offshore investments.

To this end:

- The Commission will establish an interactive **EU digital platform** on which the Member States auctions planning will be published. This will ensure higher visibility of

[28] Commission Recommendation C/2022/3219 final

[29] COMMISSION STAFF WORKING DOCUMENT Guidance to Member States on good practices to speed up permit-granting procedures for renewable energy projects and on facilitating Power Purchase Agreements Accompanying the document Commission Recommendation on speeding up permit-granting procedures for renewable energy projects and facilitating Power Purchase Agreements, SWD/2022/0149 final

[30] Member States must designate renewables acceleration areas for at least one renewable energy technology pursuant to Article 15.c of the revised RED.

[31] SMET will continue its work on eliminating process-related barriers to permitting for wind and solar energy projects. It will also support the exchange of good practices for one-stop shop, digital permitting, and clear information and deadlines.

[32] Article 6.3 of the Directive (EU) 2018/2001: "*Member States shall publish a long-term schedule anticipating the expected allocation of support, covering, as a reference, at least the following five years, or, in the case of budgetary planning constraints, the following three years, including the indicative timing, the frequency of tendering procedures where appropriate, the expected capacity and budget or maximum unitary support expected to be allocated, and the expected eligible technologies, if applicable. That schedule shall be updated on an annual basis or, where necessary, to reflect recent market developments or expected allocation of support*".

upcoming auctions and expected deployment volumes and allow companies to have a **single point of information** for all auctions planned in the EU.

- The Commission calls on the Member States to commit to specific, concrete **pledges for wind energy deployment volumes** at least for the period 2024-2026, providing a clear and credible overview of the wind energy deployment for the next years to be formalised by the end of 2023. These pledges should complement the ambitious commitments for offshore energy that amount to 111 GW across all EU sea basins by 2030.

- The Commission will reinforce cooperation with Member States, project promoters and grid operators in the context of the regional high level groups[33] to identify concrete ready-to-go projects for wind and other renewables, including cross-border projects, and to support their rapid implementation. One good example is the North Sea Energy Cooperation (NSEC) that adopted a Joint Statement[34] setting ambitious new aggregate targets of reaching at least 260 GW of offshore wind energy by 2050, with intermediate targets of at least 76 GW by 2030 and 193 GW by 2040. The Commission will also use regional cooperation fora to coordinate planning for offshore wind and other renewable projects with regional impacts as also explained in the Offshore Communication.

- In December 2023, following the assessment of the draft National Energy and Climate Plans (NECPs), the Commission will **issue recommendations related to permitting and long-term planning of renewables development,.** In their updated NECPs, going beyond the current legal obligations, Member States should develop **comprehensive 10-year plans** for renewables deployment, in particular wind, with an outlook to the year 2040. The plans should include targeted installed capacities and/or volumes or production, profile of the projects, spatial distribution and energy system integration aspects. This will give visibility to the manufacturing industry as well as to grid operators to timely develop the necessary grids to integrate renewables (through network development plans).

Action 4: Commission to adopt an action plan to facilitate grids build-out

Following the High-Level Electricity Grids conference in September 2023, the Commission will adopt in November 2023 **an action plan for grids**, including both transmission and distribution levels. Building on the framework for trans-European energy networks (TEN-E), the action plan will in particular help accelerating key cross-border electricity infrastructure projects to be included in the first list of projects of common interest and projects of mutual interest following the adoption of the revised regulation on the Trans-European Energy Networks. These projects will be crucial to integrate increasing volumes of renewables and advance energy system integration.

The action plan will include measures to address bottlenecks hampering grid reinforcement and expansion, including cross-border cost sharing. This will help to unblock a larger number of onshore and offshore wind projects and create additional demand for wind equipment. The grids action plan will also facilitate anticipatory investments to ensure the necessary grid developments It will aim both at an accelerated deployment of new infrastructure by addressing

[33] BEMIP, CESEC, South-Western and NSEC

[34] https://energy.ec.europa.eu/system/files/2022-09/220912_NSEC_Joint_Statement_Dublin_Ministerial.pdf

permitting bottlenecks, as well as ensuring better use of the existing grid through e.g. increasing visibility on existing capacities.

II. IMPROVED AUCTION DESIGN

The way Member States design their auctions to support renewables impacts renewables deployment and investment signals sent across the value chain. Well-designed objective, non-discriminatory pre-qualification and non-price award criteria which reward higher value added products and promote industrial scale-up can better support an innovative and competitive wind manufacturing industry. Criteria like longer life-time of installations, carbon content or circular-economy measures reduce the environmental footprint of wind farms, and help to reduce our dependency on critical raw materials. Addressing the risk of project delays or non-execution provides higher predictability and certainty to companies and investors. More generally, further harmonisation in auction design principles for Member States would reduce transaction costs and could go a long way to ensure that auctions are fit-for-purpose, while leaving sufficient scope for flexibility and innovation at Member State level. The use of these elements in the design of auctions should take into consideration the budgetary impacts for the Member States and the need for simplicity.

Action 5: Member States to include in their auctions objective qualitative criteria and measures to maximise the execution rate of the projects, supported by Commission Recommendation and Guidance

Immediately upon the adoption of the Action Plan, the Commission, will **launch a dialogue** with Member States and stakeholders **to improve, simplify and provide coherence in the design of renewable energy auctions** in order to address shortcomings resulting in project delays or abandoning. This uncertainty harms the European wind market players and the Member States but also undermines the achievement of the EU target for renewables. The dialogue will lead to the adoption, by the end of March 2024, of a **Commission Recommendation and Guidance** with the aim of providing suggested standard elements to auctions as well as bringing a more uniform and efficient auction design. In the longer term, the Commission would be ready to ensure a more uniform auction design by making these provisions legally binding via an Implementing Act in the Net Zero Industry Act.

This action will include:

- Proposing a set of pre-qualification criteria related to cyber security and data residency (in line with the EU's international obligations), as well as other criteria such as sustainability/environment/sea basin protection, and ability to deliver;

- Strengthening the clarity of non-price award criteria critical to reward sustainability, innovation, energy system integration, high-quality products and the contribution to a resilient supply chain;

- Exploring the development of a European business conduct code that promotes *inter alia* supply chain transparency and could be recommended for future wind auctions;

- Reinforcing the cyber-resilience of wind installations and of the infrastructure to which they are connected;

- Ensuring the full and timely execution of projects through adequate incentives. This could include penalty clauses for non-execution of projects or price indexation to help industry to better cope with cost increases due to inflation;

- Assessing the consequences of negative bidding and exploring solutions to avoid a negative impact on the speed and scale of deployment and on the value chain (e.g. a cap on bids);

- Addressing bid ceilings leading to auctions' undersubscription.

Action 5 aims to bring quick and concrete improvements and more harmonisation to the design of renewable energy auctions. Some of the issues that it intends to tackle are addressed in a structural manner in the proposals for the **Electricity Market Design (EMD)** and **Net-Zero Industry Act** (NZIA). With this in mind, **the Commission calls on the co-legislators to arrive swiftly at an agreement on the EMD (by end 2023) and Net-Zero Industry Act (by March 2024)**.

The Commission will support the co-legislators in introducing in the NZIA provisions related to objective pre-qualification criteria for auctions and strengthening the use of the non-price award criteria, including notably considerations related to business conduct, cybersecurity and data residency as well as ability to deliver the project fully and on time.

Furthermore, if decided so by the co-legislators, the Commission stands ready to swiftly propose **an Implementing Act** to NZIA which will incorporate best practices on renewable auctions design into the European legislation and provide a further streamlining of auction design.

The provisions of the EMD on the use of Contracts for Difference and Power Purchase Agreements could, when adopted, support revenue stability in the wind industry.

Action 6: Tackling cybersecurity risks and addressing the data protection aspects

The Commission will identify cybersecurity risks with respect to wind energy installations and the related infrastructure, including data protection aspects, in view of assessing whether these could be exploited to damage the security of electricity supply in the EU. This identification and assessment will be carried out in the context of the risk evaluation exercise currently being carried by the Commission with the High Representative and the NIS Cooperation Group, as referred to in the Council Recommendation of 8 December 2022 on a Union-wide coordinated approach to strengthen the resilience of critical infrastructure[35]. For this specific analysis, and to feed into the wider risk evaluation, the Commission will also use the expertise of experts groups such as the newly established Smart Energy Expert Group and its Working Group on cybersecurity, in order to involve industry experts, including vendors and electricity undertakings. This analysis would complement the existing security infrastructure and notably

[35] Council Recommendation of 8 December 2022 on a Union-wide coordinated approach to strengthen the resilience of critical infrastructure (Text with EEA relevance) 2023/C 20/01, OJ C 20, 20.1.2023, p. 1–11

the **Network Code on the cybersecurity of cross-border electricity** flows planned for adoption in Q1 2024. The results could support procurement processes and auction design, further policy making as well as the screening of foreign direct investments.

The analysis of cybersecurity risks will be broad in scope and include also installations.

Action 7: Commission to increase the use of strategic procurement in the context of the Global Gateway

In December 2021, the Commission launched the Global Gateway through which the EU invests in clean energy and infrastructure projects around the world, including for wind energy. The Commission will propose to increase the use of strategic procurement in the context of the Global Gateway. This will ensure that projects are delivered according to high environmental, social and governance standards and allow contractors and producers who fulfil these standards find a viable business case. For projects involving the deployment of strategic net-zero technologies like wind renewable technologies, access to markets criteria included in the Net-Zero Industry Act, once adopted, will serve as a reference. Furthermore, the Commission will look into the possible application of similar requirements to procurement by private promoters in Global Gateway projects.

III. ACCESS TO FINANCE

The inflationary environment with raw materials price hikes, interest rates increase and the frequent need to provide upfront guarantees in order to secure contracts have deteriorated the access to finance for the wind sector, both in manufacturing and the deployment. However, to achieve the NZIA targets, an estimated EUR 6 billion of investments into manufacturing capacity is needed by the wind industry. Within the Capital Markets Union (CMU), the Commission has worked to deliver capital market rules attractive for the investment from long-term investors and pension funds.

Action 8: Commission to facilitate access to EU financing

The Commission will expand the possibility for support for wind energy manufacturing under the Innovation Fund, namely by doubling the budget for financing clean technology manufacturing projects to EUR 1.4 billion, including projects for manufacturing of wind turbines and their components, in the next call for proposals on 23 November 2023.

The Innovation Fund has a total of EUR 40 billion in the period 2020-2030[36]. In the overall budget of the Innovation Fund this year, of EUR 4 billion, in addition to the dedicated clean-tech manufacturing topic, innovative wind energy production and pilot projects will also be eligible under the other topics in the upcoming call for proposals on 23 November 2023. At equal merit, priority will be given to wind energy projects under this call.

In order to support project developers and ensure that a solid pipeline of innovative projects is being built, wind energy projects should also get priority for the EUR 90 million Innovation Fund Project Development Assistance that will be provided in cooperation with the European Investment Bank (EIB) over the next three years. Tailored advisory support is also available

[36] At an average carbon price of 75EUR/t

from the InvestEU Advisory Hub. Beyond funding from the Innovation Fund, the EIB and other international financial institutions and national promotional banks and institutions can also co-finance awarded projects so as to facilitate the reaching of a final investment decision.

By end of this year, the Commission will also reinforce wind-related activities under **the revised Strategic Energy Technology Plan (SET Plan[37]),** along with increased support for research and innovation in the wind manufacturing sector, so that relevant European technologies keep their competitive edge, in particular on issues linked to circularity and sustainability, improving industrial processes and digitalisation.

The STEP will also open new opportunities for supporting investment aimed at scaling up the EU's manufacturing for clean technologies, including for wind power, which could particularly benefit transition and less-developed regions. These regions will benefit from financial incentives and higher flexibility in using the **Cohesion Fund**, **European Regional Development Fund** and **Just Transition Fund** allocations for offering support to productive investments in large companies for investments in the strategic sectors contributing to the STEP objectives.

Action 9: EIB to provide de-risking tools and guarantees for EU wind companies

The Commission and the EIB are working to deploy by end of year, partly under InvestEU, a **dedicated instrument to counter-guarantee commercial banks' credit exposures** to key wind industry suppliers, increasing access to advance payment and performance guarantee lines. This will alleviate the financial pressure resulting from a growing order book exacerbated by macroeconomic challenges, including rising inflation, interest rates as well as significant supply chain disruptions.

Furthermore, in July 2023, the EIB approved its second REPowerEU package. The Bank announced its ambition to nearly double its lending contributing to the Green Deal Industrial Plan and the Net-Zero Industry Act, to reach around EUR 100 billion cumulatively in five years. This plan will be partially underpinned by the InvestEU guarantee mechanism.

The European manufacturers of strategic net-zero technologies, associated upstream components and strategic raw materials will be in the focus of this effort. It will include Europe's manufacturing capacity in the onshore and offshore wind industry.

The Commission has also proposed as part of STEP to increase the EU guarantee by EUR 7.5 billion through a dedicated window of InvestEU, which would increase the capacity of the EIB Group and other implementing partners to support investment in development and manufacturing of the clean and other technologies, including for the wind sector.

The work on enhancing coordination between external financial tools – with Member States' export credit agencies working alongside development finance providers, notably in the context of the Global Gateway – will support i.a. renewable projects, including wind.

Action 10: Member States to make full use of flexibility provided under State aid rules for EU wind value chain

Member States should fully use the opportunities provided by the TCTF rules in support of the wind manufacturing in the EU. As concerns certain crisis-related sections of the TCTF that are

[37] Communication from the Commission on revising the SET Plan (to be adopted in Oct 2023)

due to expire by the end of the year, the Commission has consulted Member States and will soon take a decision on their possible extension. Other sections intended to support the transition to a net-zero economy that enable Member States to accelerate the roll-out of renewable energy, including wind power, and support strategic investments for the manufacturing of equipment necessary for the transition to net-zero, including wind turbines, their key components and related critical raw materials, are available until end of 2025. The Commission will assess the need to prolong those sections closer to their expiry date.

Action 11: Commission to strengthen the dialogue with investors to foster the attractiveness of investments in the EU's wind sector

The Commission is actively engaging with stakeholders, in particular long-term capital investors in the context of the Investors Dialogue, on solutions to make the EU wind industry more competitive at attracting investment at a global level. The focus is on the opportunities and vulnerabilities in the sector – operational, financial, and competitive – and ways to enhance Europe's strengths and addressing our weaknesses.

By end of 2023, the Commission will organise dedicated meetings with long-term investors to better understand the main obstacles hindering the attractiveness of investment in the EU's wind sector and the best ways to address them.

IV. ENSURING A FAIR AND COMPETITIVE INTERNATIONAL ENVIRONMENT

The EU wind manufacturing industry has demonstrated that, under fair conditions, it is highly competitive both in its home market and in third markets. The EU should create a propitious environment for the EU industry to compete, innovate, invest and export to third markets in compliance with international commitments.

Action 12: Active use of trade defence instruments

The Commission, in partnership with the European wind industry, will closely **monitor possible unfair trade practices** which benefit foreign wind manufacturers. This will involve a close scrutiny of potential subsidisation of wind-related products imported into the EU. If justified, the Commission will activate its trade defence instruments. To the extent that foreign distorting subsidies allow wind manufacturers receiving them to be successful in public procurement procedures or in concentrations involving EU target companies, the **European Union will also use the measures foreseen in the Foreign Subsidies Regulation. The European wind industry is encouraged to submit further evidence without delay.**

The Commission will encourage Member States to take fully into account the risks to **critical energy infrastructures** when implementing their screening mechanisms on grounds of security or public order. It will make full use of the cooperation mechanism **under the foreign direct investments screening Regulation**[38] to prevent possible threats to security and public order related to foreign investments into the EU wind industry.

Action 13: Commission to facilitate EU manufacturers' access to foreign markets

[38] Regulation (EU) 2019/452 of the European Parliament and of the Council of 19 March 2019 establishing a framework for the screening of foreign direct investments into the Union, OJ L 79I , 21.3.2019, p. 1–14

The Commission will continue to use its large network of trade agreements to strengthen the competitiveness of the EU wind industry, including through effective implementation and enforcement[39]. The Commission equally attaches high importance to **ongoing trade negotiations** with a view to concluding robust chapters on energy and raw materials, as well as other relevant provisions for wind industry. These agreements help the wind industry diversify and de-risk their supply chains as well as address the strategic dependencies, notably on raw materials and other intermediate products. The Commission will, therefore, further **intensify negotiations towards trade agreements** which would strengthen the position of EU companies, including from the wind sector, and ensure undistorted access to foreign markets. The Net-Zero Industrial Partnerships will additionally support the presence of European companies in key markets. In addition, the Commission will seek more strategic cooperation and initiatives within this sector in the EU neighbourhood.

The EU will equally work with its partners in the WTO to develop the **rulebook on subsidies**, with a view to increasing transparency on State intervention and avoiding the subsidy race which increase trade conflicts and undermines the cooperation necessary to achieve the global climate objectives. The work is planned to start in February 2024.

The **International Procurement Instrument** (IPI)[40] provides the EU with leverage to persuade the EU's trading partners that do not yet have commitments in the area of public procurement (in the WTO Agreement on Government Procurement (GPA) or in bilateral FTAs) to open their procurement markets for EU business. If there are substantiated allegations by the EU industry about restricted access to wind power related goods and services in a third country in the area of public procurement, the Commission may launch an IPI investigation with a view to opening that market for EU operators via consultation with a given third country. The IPI also allows the EU to restrict access to its public procurement markets by imposing respective IPI measures in case the consultation mentioned above does not lead to the expected market opening of third country market.

Action 14: Enhancing standardisation in the wind energy sector

In the current stage of the wind industry development, technical standards are a key instrument to ensure interoperability, reduce costs and speed up the market deployment of wind energy technologies onshore and offshore. While the International Electrotechnical Commission (IEC) has adopted a broad range of standards, which are adopted as European standards by CENELEC, additional standards could contribute to further enhance the efficiency and the sustainability of wind energy equipment and remove barriers to its roll-out across the EU. They could also reinforce the industrial ecosystem, especially if combined with the parallel work on renewable energy auction design. Promoting the standardisation process at international level and ensuring EU's active participation will also support the ability of the European wind industry to better compete on quality with global competitors.

In order to **promote the adoption of EU and international standards for the wind sector**, by end of 2023, the following actions will be taken:

[39] EU trade agreements contain provisions prohibiting import and export restrictions, local content requirements as well as opening access to public procurement.

[40] Regulation (EU) 2022/1031 on access of Union economic operators, goods and services to the public procurement and concession markets of third countries entered into force on 29 August 2022.

- As part of the established High-Level Forum on European Standardisation, a special working session on wind technology will identify the main European and international standardisation needs, identify any existing barriers and raise awareness among Member States and industry to ensure the participation of their experts in standard setting activities.

- The Commission will request the European Standardisation Organisations to draft European standardisation deliverables in support of the objectives of the NZIA;

V. SKILLS

It is estimated that ca. 100.000 additional jobs will be needed in the wind sector by 2030, while the associated investment in skills could amount to ca. EUR 850 million.[41] In March 2021 and 2023, renewable energy trade associations, representatives of installers of clean technologies, education and training providers, research centers and regional networks, with the support of the European Commission, set up large-scale skills partnerships for the renewable energy industrial ecosystem under the Pact for Skills , including stakeholders from the wind energy industry. The partnership is working but needs further development to deliver on its objectives.

Action 15: Large Scale Skills Partnerships for Renewable Energy to design projects that support skills development for the renewable energy sector, including wind

The Large Scale Skills Partnerships for Renewable Energy and for Offshore Renewable Energy are encouraged to identify as soon as possible those EU programmes and skills initiatives that offer the best framework for the implementation of projects which allow mapping of the skills needs in the sector, review job profiles, elaborate and operate new labour-market relevant training modules and related material and/or support the development of skills urgently needed in the renewables sector. This could include the application to the Erasmus+ call for a blueprint for sectoral cooperation on skills. The partnership can also benefit from existing initiatives like the European Alliance for Apprenticeships and the Centers of vocational excellence[42].

In addition, NZIA will enhance skills for net-zero technologies by setting up dedicated training programmes through Net-Zero Academies and facilitating the portability of qualifications in regulated professions. The academies, each focussing on one net-zero industry technology, will aim to train 100.000 learners each within three years of establishment.

VI. INDUSTRY ENGAGEMENT AND MEMBER STATES COMMITMENTS

In addition to actions taken by the EU and the Member States, actions by the European wind industry itself will also contribute to a more stable and profitable business environment. This concerns, *inter alia*, more actively hedging against inflation and price volatility of its main

[41] Commission report on "Employment and Social Developments in Europe. Addressing labour shortages and skills gaps in the EU", https://ec.europa.eu/social/BlobServlet?docId=26989&langId=en

[42] For example, the Erasmus+ funded Centre of Vocational Excellence "Technical Skills for Harmonised Offshore Renewable Energy" (T-shore) aims to develop training programmes and resources to provide workers with the skills and competencies they need to succeed in the offshore wind industry.

inputs, such as raw materials, developing further long-term partnerships between wind manufacturers and wind operators which can be of mutual benefit.

Action 16: EU Wind Charter

To scale up wind deployment and manufacturing capacity in the EU, the Commission invites Member States and wind industry representatives to sign up, before the end of 2023, to voluntary commitments as part of a Wind Charter. The objective of the Charter, which builds on this Action Plan and on its policies, is to align and swiftly implement the actions of the Commission, Member States and the industry, while demonstrating a common and coordinated effort to improve the enabling conditions for the European wind industry. The Commission will work closely with Member States and industry to develop the precise commitments of the Charter. The reassurances that this Action Plan and the Charter will provide should allow industry to step up investments and ensure the expansion of its manufacturing capacity, in order to meet the expected increased demand for wind projects in the years to come.

6. CONCLUSIONS AND WAY FORWARD

The wind industry is a pride for Europe. The EU has a solid manufacturing base and many robust wind farm developers with global reach. The sector has great innovating power and ingenuity and is a fertile ground for developing new skills. The European companies active in the wind sector are crucial actors in the ongoing transformation of our energy system and reaching our ambitious climate and energy targets. Alongside other net-zero industries, it makes the EU well-equipped for transforming towards the clean and circular economy of tomorrow. The EU's wind sector thrives on competition and as a result is a global leader. It is a trend- and standard-setter for the world. European cooperation on wind energy with international partners creates new markets and provides global solutions to replace fossil fuels.

This is why the European wind industry must scale up and invest now to let EU industry and citizens seize the opportunities of the European Green Deal and decarbonisation efforts worldwide. To do it, it needs more predictability and a clearly visible, solid project pipeline. It requires a robust business model which ensures adequate profitability and access to finance to grow and attract investors. It needs expanded and reinforced grids to integrate its energy. And it requires fair competition.

There is no time to lose. This Action Plan therefore aims at concrete results already in the coming months. Implementation of this Action Plan by the EU, Member States and industry will support the European wind manufacturing through the difficulties and improve their competitiveness in order to ensure that this sector fully contributes to the ongoing energy transition.

The Action Plan provides the European wind industry with the reassurance that their business case in the European Union is strong, sustainable and long term. Therefore, **the Commission calls on the Member States and the industry to endorse this Action Plan** and implement the actions according to their respective roles.

ANNEX I – THE EUROPEAN WIND POWER ACTION PLAN IN A NUTSHELL

Category	Actions/instruments	Timeline
Acceleration of deployment through increased predictability and faster permitting	1. Prolongation of the Emergency Regulation on permitting	Nov 2023
	2. Commission and Member States to work together to frontload transposition and implementation of the revised RED provisions on permitting - "Accele-RES"	Starting Nov. 2023
	3. Member States to increase visibility of the wind projects pipeline through wind pledges, publication of the mid-term auctions schedules, long-term plans for renewables deployment	Starting Nov. 2023
	4. Commission to adopt an action plan to facilitate grids build-out	Nov. 2023
Improved auction design	5. Member States to include in their auctions objective qualitative criteria and measures to maximise the execution rate of the projects, supported by Commission Recommendation and Guidance	Q1 2024
	6. Tackling cybersecurity risks and addressing the data protection aspects	Start beginning 2024
	7. Commission to increase the use of strategic procurement in the context of the Global Gateway	As of adoption
Access to finance	8. Commission to facilitate access to EU financing	By end 2023
	9. EIB to provide de-risking tools and guarantees for EU wind companies	Q4 2023
	10. Member States to make full use of flexibility provided under State aid rules for EU wind value chain	As of adoption
	11. Commission to strengthen the dialogue with investors to foster the attractiveness of investment in the EU's wind sector	By end 2023
Creating a fair and competitive international environment	12. Active use of trade defence instruments	As of adoption
	13. Commission to facilitate EU manufacturers' access to foreign markets	As of adoption
	14. Enhancing standardisation in the wind energy sector	Start by end 2023
Skills	15. Large Scale Skills Partnerships for Renewable Energy to design projects that support skills development for the renewable energy sector, including wind	By mid-2024
Industry engagement and Member States commitments	16. EU Wind Charter	Dec. 2023