



## **ZF Wind Power celebrates the 3000<sup>th</sup> SHIFT 4k gearbox on Global Wind Day**

- The 3000<sup>th</sup> SHIFT 4k gearbox has been manufactured at ZF Wind Power Lommel (Belgium): the complete 4k-line now powers 14GW of turbine capacity and has enabled 12 million households to switch to renewable energy.
- New generation SHIFT platforms will unlock even larger opportunities for wind technology. With a contribution of more than 86 percent of renewable electricity by 2050, renewables will be the largest driver for change in the global energy transition.
- Innovations in the wind sector are essential to meet the European climate and renewable energy targets. However, accelerating the pace of energy transformation also requires decisive political actions.

Lommel, Belgium. Today, at Global Wind Day, ZF Wind Power celebrates the 3000<sup>th</sup> SHIFT 4k gearbox, in the presence of the Belgian Minister for Energy, Tinne Van der Straeten, and WindEurope's CEO, Giles Dickson. SHIFT 4k is one of the gearboxes of ZF's innovative modular gearbox platform SHIFT that has accelerated innovation in the wind market.

With a torque range covering 3000 to 8000 kNm, the SHIFT modular gearbox platform portfolio enables cost-efficient new generation turbine designs for all markets. The SHIFT platform uses standardized building blocks to offer maximum flexibility to wind turbine manufacturers with a shorter time to market. It offers the opportunity to quickly introduce new turbine models, enabling customers to reduce levelized cost of energy. In addition, the modular platform approach allows further optimization of gearbox configurations per wind site and lowers the total investment and development cost. With 60 percent of today's shipments based on



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SHIFT, the industry has embraced the advantages of this modular platform design.

**SHIFT 4k: a compact gearbox with a large impact on a global scale**

The SHIFT modular gearbox platform comes in four variants: SHIFT 3k, SHIFT 4k, SHIFT 6k and SHIFT 7k (see caption 3 for details).

The portfolio provides leading compact designs and flexibility in building more powerful and more efficient wind turbines reducing electricity costs. The power of SHIFT 4k should not be underestimated: it is deployable in both onshore and offshore and relevant to diverse international wind areas (Europe, China, US, Latin America). "With the production of the 3000<sup>th</sup> gearbox, ZF Wind Power confirms the success of modular designs and is proud to say the 4k-line now powers 14GW of turbine capacity transforming 12 million households to renewable energy," says Hans Akkermans, CCO of ZF Wind Power. "With the innovative SHIFT platform we commit ourselves and our customers to make wind one of the most cost-efficient renewable energy sources powering the global energy shift."

**Empowering a sustainable future**

Global Wind Day is a worldwide event that occurs annually on June 15. It is a day for discovering wind energy, its power and the possibilities it holds to reshape energy systems, decarbonize our economies and boost jobs and growth. With a contribution of more than 86 percent of renewable electricity by 2050 in 'Transforming Energy Scenario (TES)', renewables will be the largest driver for change in the global energy transition according to the International Renewable Energy Agency IRENA (Global Renewables Outlook, edition 2020). Wind remains a competitive energy source in Europe and will join forces with other main renewable energy sources. In 2050, 50% of the electricity mix in Europe will be wind, compared to 16% today.

"At ZF Wind Power we empower a sustainable future," says Hans Akkermans, CCO of ZF Wind Power. "During 41 years of innovation in



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the wind market, we produced 150 GW of high-end gearboxes globally (the equivalent of powering 125 million households with renewable energy). Worldwide, every month we enable 1 million households to switch to wind energy. Acceleration is needed to support a 2050 zero carbon edition.”

“Wind energy is good for the environment and it helps drive economic recovery,” continues Giles Dickson, CEO of WindEurope. “Wind contributes €37 billion to EU GDP and supports 300,000 jobs in Europe. Every new wind turbine generates on average €10 million of economic activity. The ZF plant here in Lommel is one of 248 factories in Europe producing elements for wind energy. Together, these companies represent the technological excellence and international competitiveness of European wind turbine manufacturing.”

### **Challenges in European wind policy**

In 2020, the European Union agreed to a 55% reduction of greenhouse gas emissions by 2030. This requires rapid deployment of additional renewables. Setting new targets alone will not widen the path for more wind energy. “Governments need to roll up their sleeves and make things happen. Simplify the permit rules and procedures and ensure there is enough staff working in the permit authorities. Have a strategy for repowering existing wind farms. Make sure the grid connections get built on time. Ensure the market framework is right, and that consumers can source renewables directly if they want to,” says Giles Dickson, CEO WindEurope. “Alongside that, the European Emission Trading System (ETS) should be revised. By adapting the ETS to the 55 percent emissions reduction target, Europe can spur investments in renewable energy. For now, the transport and heating sectors are not yet integrated into the ETS. Including these sectors will further drive wind-based electrification and reduce carbon emissions.”



## **Belgian offshore with international impact**

Offshore wind technology will play an important role, allowing countries to exploit vast amounts of wind energy at gigawatt-scale while offering the potential to decarbonize the energy sector and relevant industries. Over the last years, rapid technology improvements and the scaling of products and logistical synergies in closely linked European markets resulted in rapid cost reductions. Offshore wind has gained momentum. The broader energy sector recognizes the vast potential of Europe's unique offshore conditions as a complimentary alternative to onshore wind deployments.

ZF recognized Europe's unique offshore base and established itself as a global leader in the large turbine offshore segment, with industry-leading installations of +8MW transmission systems driving the world's largest serial offshore turbines. With the completion of the NorthWester 2 wind park, Belgium is at the forefront with the world's largest turbine in commercial production, powered by ZF technology. "We aim to support the development of new areas in offshore wind for both electricity and hydrogen generation," says Martin Knops, CTO of ZF Wind Power. "For the moment we are developing a new type of gearbox for the next generation of offshore wind turbines up to 15MW, in close cooperation with our customer."

### Captions:

- 1) SHIFT 4k – In the presence of Belgian Minister of Energy, Tinne Van der Straeten, CEO of WindEurope, Giles Dickson and the CEO of ZF Wind Power Felix Henseler the 3000<sup>th</sup> SHIFT 4k gearbox has been celebrated at ZF Wind Power Lommel (Belgium)
- 2) Giles Dickson – Mr. Dickson, CEO of WindEurope, presents the opportunities for the European wind industry.



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- 3) Hans Akkermans – Hans Akkermans, CCO of ZF Wind Power introduces the power of SHIFT 4k.
- 4) TinneVanderStraeten – Tinne Van der Straeten, Belgian Minister of Energy, explains the role of Belgium in the international wind industry.
- 5) SHIFT leaflet - SHIFT modular gearbox platforms enable maximization of energy output at every wind site
- 6) SHIFT4K - the complete 4k-line now powers 14GW of turbine capacity and has enabled 12 million households to switch to renewable energy.
- 7) Nortwesther 2 (© Northwester) – World’s largest offshore turbine is located at the Belgian Nortwesther 2 wind farm and is powered by ZF-technology.

Visit our *SHIFTx launch platform* to discover the complete modular gearbox platform and the technology behind the platform:

[www.shifftowardsthefuture.com](http://www.shifftowardsthefuture.com)

### **ZF Wind Power**

ZF Wind Power is a worldwide leading technology driven manufacturer and pioneer in the global wind turbine gearbox industry. The company is leading the high-performance onshore segments with products up to 8000 kNm and is the first in exceeding 200 Nm/kg torque density in compact designs. ZF delivered the world’s first offshore 9.5 MW wind turbine gearbox and has the largest global installed capacity of +8 MW offshore wind turbine gearboxes. Since the company entered the wind industry in 1979, ZF Wind Power has delivered more than 75,000 gearboxes, powering as much as 150 GW wind turbines, covering approximately 25 percent of the total installed capacity of geared-driven wind turbines worldwide.



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**ZF Friedrichshafen AG**

ZF is a global technology company supplying systems for passenger cars, commercial vehicles and industrial technology, enabling the next generation of mobility. ZF allows vehicles to see, think and act. In the four technology domains of Vehicle Motion Control, Integrated Safety, Automated Driving, and Electric Mobility, ZF offers comprehensive product and software solutions for established vehicle manufacturers and newly emerging transport and mobility service providers. ZF electrifies a wide range of vehicle types. With its products, the company contributes to reducing emissions, protecting the climate and enhancing safe mobility.

In fiscal year 2020 ZF reported sales of €32.6 billion. The company employs more than 150,000 associates at approximately 270 locations in 42 countries. For further press information and photos, please visit: [www.zf.com](http://www.zf.com)

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