The Portuguese Wind Energy market has seen a remarkable evolution since the turn of the century. In 2017, Renewable sources account for 44% of the electric consumption of mainland Portugal. Wind energy is more than half of the electric generation, at 12.0 TWh. Over this period of time, renewable capacity grew 2.85 times to 13.7 GW. Wind accounts for 5.3 GW, generated by over 2,500 turbines.

Starting in 2024, hundreds of turbines every year will reach an operating life of 20 years. As the technology evolves, smaller, less efficient turbines will be replaced by larger, higher, more powerful turbines. The future of the industry falls on two axis:

- Wind energy components manufacturing companies that already comprise a significant industrial and economic cluster, with champions like Enercon production of towers and blades in Viana do Castelo and Senvion with blades and nacelles in Oliveira de Frades and Vagos
- Repowering existing wind farms, reducing the number of turbines yet increasing production capacity with lower environmental impacts

To achieve the goal of 100% renewable electricity in 2040, wind production should increase to around 20 TWh from current 11 TWh. Repowering the existing wind turbines and adding 400 new turbines will be a significant contribution to continue the decarbonization of the Portuguese electric sector.