

End of life and repowering trends, and policy recommendations on repowering

The EU has simplified the permitting rules for repowering projects with the Emergency Regulation on Renewables Permitting and the revised Renewable Energy Directive. The scope of the Environmental Impact Assessment that developers must provide is now limited only to the incremental changes that repowering makes to the wind farm. Deadlines to deliver permits have been reduced to 3 months when the wind farm capacity increases by max. 15%; otherwise, it is 6 months in Renewable Acceleration Areas and 1 year in all other areas.

Repowering will be key to meeting Europe's 2030 Climate and Energy security goals. It nearly triples the electricity output of a wind farm, while reducing the number of turbines. Old windfarms are usually located in the best wind location, it makes sense to equip those sites with more modern turbines. And repowering is also good for overall social acceptance of onshore wind because it means we need fewer new greenfield sites - though the latter will still be the majority of new onshore installations.

But projects fail to materialise. Since 2014 Europe has commissioned at least 5.8 GW of repowered onshore wind capacity. Between 2023 and 2030, 83 GW of onshore wind power capacity will reach 15 years of age in Europe. Based on current trends and market expectations, we estimate that 70 GW of this will be lifetime extended, 7.8 GW will be decommissioned and only 5.6 GW will be repowered. This is very low compared to industry expectations on the back of the improved permitting rules for repowering that are now in place.

This is also due to a reassessment of their economic rationale. Repowering projects often have higher upfront costs than greenfield projects. Decommissioning costs are high as there is no fully established supply chain to reuse and recycle old turbines. Road access to existing wind farms may not be suitable for bigger turbines. Developers are often reluctant to dismantle an existing asset and invest in repowering.

WindEurope recommends the following measures to promote repowering:

- Member States should use the repowering definition of the EU Renewables Directive correctly and ensure national policy measures apply to both full and partial repowering as per EU law.
- Member States should incorporate repowering targets in their 2030 National Energy and Climate Plans and regional plans.
- Member States should transpose the permitting simplification rules for repowering from the EU Emergency Permitting Regulation and the revised EU Renewables Directive asap.
- Member States running CfD auctions should set dedicated auction pots for repowering projects, reflecting the economic reality of repowered projects.
- Member States should prioritise the grid connection of repowered projects' as they need less grid reinforcement than a greenfield project.