

Repowering: Making old wind farms work harder for the UK

Onshore wind already generates 12% of the UK's electricity. But as wind farms reach the end of their ~25-year lifecycles, repowering allows us to replace ageing turbines with modern, more efficient models, securing clean, reliable energy for decades to come.

What is Repowering?

Repowering is the process of upgrading ageing onshore wind turbines, by upgrading and/or replacing older turbines with modern, more efficient models while reusing much of the existing infrastructure.

Instead of dismantling wind farms at the end of their ~ 25-year lifecycle, repowering can extend value, boost energy output by between 3 and 10 times, reduce environmental impact, and ensure a consistent supply of secure, home-grown renewable power to support the UK's energy transition.

Why it matters

Repowering is central to the UK government's Clean Power 2030 strategy, which targets 27–29GW of onshore wind capacity by 2030 and 35–37GW by 2035. Without repowering, up to 9GW of capacity could be lost by 2050, undermining progress towards climate and energy security goals.

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Without onshore wind repowering, the UK risks losing up to 9GW by 2050 – home-grown renewable energy that will help the region meet its climate targets and make energy security a reality.



Repowering
can also
reinforce



Energy security
providing consistent, home-grown
electricity as demand surges
through the 2030s.



Faster decarbonisation
extending the life of existing wind
farms reduces the need to build new
projects on untouched land.



Community resilience
projects continue to deliver local
investment, shared ownership
opportunities, and community benefits.

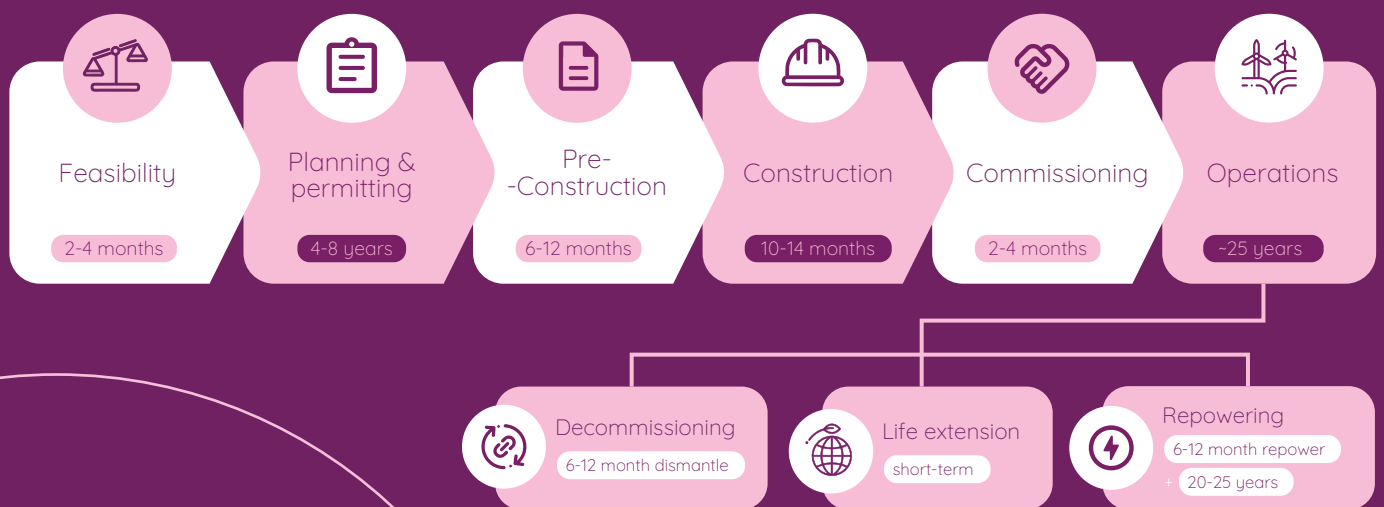
Unlocking the full potential of repowering requires clear and supportive policy. Faster and simpler planning, priority access to grid connections, and a stable investment framework will help ensure projects can be delivered efficiently. By recognising repowering as a national clean energy priority and encouraging collaboration between government, industry, and communities, the UK can accelerate progress toward its 2030 clean power targets while maximising benefits for people and places.



How it Works

Repowering can often reuse much of the existing infrastructure, such as roads, cabling, and grid connections, to upgrade existing onshore wind farms. Depending on the site, this can mean fully or partially replacing older machines with new-generation models capable of producing between 3 and 10 times more renewable energy.

Just as important as the technical upgrades are the environmental and community considerations. Every repowering project includes thorough noise, visual, and biodiversity assessments, ensuring wildlife, landscapes, and local resources are protected.





Key Benefits



More home-grown energy

Increasing energy output, reducing carbon emissions and helping secure the UK's energy supply as demand surges.



Economic growth

Repowering could support 27,000 new jobs across the UK, boosting local economies and communities.



Decarbonisation

Reusing existing sites minimises land disturbance and reduces the impact on new land.



Community impact

Nadara is committed to shared ownership, transparent engagement, and ensuring communities benefit from long-term renewable investment.



Greater energy efficiency

New turbines are more reliable and require less maintenance, reducing operational downtime and costs.

Learn More

Visit Nadara's website for more on our approach to repowering: nadara.com/repowering