

Life extension and repowering of renewable assets: a challenge and opportunity for communities to take a stake in the energy transition.

Overview

Repowering (the partial or full upgrade or replacement of existing renewable energy assets) is both presenting challenges but also creating growth opportunities within the UK's energy transition. For community-owned wind installations, repowering can extend asset life, increase energy yield, improve reliability, and preserve generation capacity at sites with established infrastructure, grid connections, and local support. **For commercial installations, the point of repowering offers an opportunity to meaningfully engage with and offer ownership stakes to communities** that to date feel that the energy transition has been done to them and not with or by them. **This creates opportunities for long term collaboration and social licence to take projects forward.**

Community-owned renewables have played a meaningful role in the UK energy landscape for decades. As many renewables assets approach end of life, repowering offers a practical and cost-effective alternative to decommissioning, while the opportunity to increase the proportion of community-owned energy assets within our system aligns strongly with national net zero ambitions and the principles of a just transition.

Strategic Importance and Market Context

Community-led renewable generation is well established across Scotland, particularly through single or small clusters of wind turbines developed 15–25 years ago. Many of these installations are now nearing the end of their original design life. Communities plan for this transition, and repowering is widely recognised as the preferred route to maintain revenue generation for use in their local communities, many of which have become dependent on this income stream.

Repowering also provides the opportunity for more communities to benefit from these reliable income streams. This might be by communities taking on and repowering smaller scale commercial sites that are no longer of interest to the original operators, or by entering into shared ownership for the repowering phase of larger developments.

Repowering undertaken by communities:

- Retains and increases renewable generation without new site acquisition
- Builds on existing grid and land rights, reducing development risk
- Builds community wealth, increasing economic value within local areas
- Strengthens community support for the renewable energy sector
- Ensures communities continue to bring in and control the wealth created by the assets
- Strengthens community resilience by supporting socio-economic and environmental priorities at a local level

Repowering contributes directly to Scotland's just transition by ensuring that communities continue to benefit financially from energy infrastructure located in their area, while maintaining control over how revenues are reinvested in their locale.

Policy Developments

Existing guidance, such as the Scottish Government's Good Practice Principles on Shared Ownership from Onshore Renewables, already encourages developers to offer shared ownership as standard on all projects including at repowering and extensions to existing projects. The UK Government last year published a working paper outlining options on making shared ownership and community benefits from low carbon infrastructure mandatory, possibly also including at the point of repowering.

In Scotland, last year the Scottish Government announced a new pilot scheme whereby communities would be given a protected window to make an asset transfer request to lease Forestry and Land Scotland sites where the existing wind farm is coming to the end of its operational life, giving the community organisations a unique opportunity to apply to repower them as community-owned assets.

Supply chain opportunities

As more projects come to the end of their operational life, this **creates opportunities for the supply chain to create new offerings for renewable energy projects that are looking at their options** (including not only repowering but also life extension and decommissioning). These might include:

- Repowering and refurbishment contracts
- Supply of new or second-life turbines and components
- Development, construction and O&M services
- Long-term financing, insurance and risk management solutions

As the first generation of community-owned projects comes to an end, **there is an opportunity to create bespoke products and services for this sector**, particularly as many are operating smaller scale turbines and technologies that are no longer widely available on the market.

Key Barriers to Delivery

Despite strong alignment between community ambition and commercial opportunity, a number of barriers constrain progress. Addressing these collaboratively would unlock significant project volume.

- **Revenue and Finance**

Community repowering projects require long-term, bankable revenue certainty to secure finance. The future uncertainty of the Scottish Renewables Obligation scheme and the

end of Feed-in-Tariff revenue will render some existing generation unviable unless replacement mechanisms are available. Some form of minimum pricing mechanism that is accessible to the community sector, such as a simplified Contract for Difference offering, a floor price scheme and/or index-linked price guarantees are critical to maximising the lifespan of existing projects and ensuring investability of the next generation of repowered projects.

Improved engagement from banks, infrastructure funds and other financiers (particularly those able to offer flexible or blended finance) would materially accelerate project delivery.

- **Insurance and Risk**

Insurance for repowered or second-life assets remains expensive and difficult to secure. However, emerging market offerings (such as cover for refurbished turbines, decommissioning bonds, and parametric insurance products) demonstrate that viable solutions are developing and could be scaled with wider industry engagement.

- **Innovation and Integration**

Technical innovation will be essential in strengthening the commercial case for community repowering. Storage, hybrid generation, and alternative revenue models can materially improve resilience and returns. However, current grid connections reform has introduced uncertainty around timelines for modification applications and extremely limited ability to secure necessary connection offers for the additional technologies, adding risk to project development.

Conclusion

Community-owned renewable repowering is a **maturing market with policy support, a visible project pipeline, and strong alignment with commercial, social and environmental objectives.**

Early engagement with community organisations will allow industry partners to help shape this growing sector, reduce delivery barriers, and play a meaningful role in Scotland's net zero transition, while building sustainable, place-based value over the long term.

If you are interested in exploring repowering opportunities, contact:

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