

Harnessing Wind in Rural Communities

How wind projects drive economic growth, create jobs, and empower communities

STAFFORDSHIRE, UK, September 19, 2023 /EINPresswire.com/ -- Onshore wind power capacity has grown rapidly in recent years, and with countries worldwide pledging to embrace renewable energy and phase out fossil fuels, this is set to continue. However, as these projects are decided at a local level by the host community, it is important that wind energy projects benefit individual communities and regions and drive economic development while contributing to wider sustainability targets. Here, Vijay Madlani, CEO of [greentech innovator](#) Katrick Technologies, explains how rural areas can benefit from wind energy.



Katrick Technologies logo



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Suitably sited wind power generation with strong community support is integral to the decarbonisation of national energy supplies. As of November 2022, there are almost 11,500 wind [turbines](#) in the UK with 8,827 of these turbines installed onshore across 2,604 wind farms. Due to the specific requirements for wind farms in terms of space, height, and wind levels, many of these projects are in remote and rural areas.

While on a wider scale, these projects are contributing significantly to both national and global climate goals, wind power also offers many benefits for host communities, particularly in rural areas. Wind projects sited in these areas are proven to have multifaceted advantages for surrounding communities, driving their economy, generating income, and creating opportunities for employment.

Renewable energy such as wind provides a secure, stable, and affordable source of power for

the installation site, and if connected to the local network this offers energy independence from the wider grid. In terms of environmental benefits, once they are operational, turbines do not produce carbon emission or pollutants, leading to improved overall air quality. Harnessing wind power also allows the community to contribute to a low-carbon economy and improve its overall sustainability.

However, wind farms, while providing a reliable and sustainable source of energy, aren't always met with enthusiasm in rural communities. Local opposition can cause delays or even outright rejection of proposed projects, with reasons ranging from concerns over wildlife and the landscape, to outright mistrust of wind energy itself. The proposed Navitus Bay Wind Park in Dorset was ultimately cancelled in 2015 when the local community campaigned to block the project over concerns around noise, visual impacts, and potential harm to tourism.

This example showcases how intense local opposition can lead to the cancellation of a wind power project in the UK. It highlights the influence that community concerns and public sentiment can have on the fate of renewable energy initiatives, emphasising the importance of engaging with local stakeholders and offering benefits. It also offers an opportunity for greentech innovation moving forward. New technology in renewable energy will be imperative in meeting decarbonisation goals, so acceptance is key. Innovators can learn from public opinion and ensure that emerging technologies can meet the need for quieter, less obtrusive, and safer wind technology to address some of the traditional concerns that may impact local communities.

Providing benefits to the local economy and community can encourage the acceptance of these projects. The [Whitelee Wind Farm](#), located on Eaglesham Moor near Glasgow, is the largest onshore wind farm in the UK. The project has created numerous job opportunities, with 4,000 roles created during construction and 600 jobs every year since for ongoing operations and maintenance. In addition, the project has established a community benefit fund, which has supported various local initiatives, including educational programs, community projects, and job training schemes.

The Walney Extension Offshore Wind Farm (https://orsted.co.uk/energy-solutions/offshore-wind/our-wind-farms/walney-extension?utm_source=Stone+Junction&utm_medium=Opinion+piece&utm_campaign=KAT164_Harnessing+wind+for+rural+areas&utm_id=KAT164&utm_content=Earned), off the Cumbrian coast, has boosted economic growth in the region. The project created over 1,000 jobs during its construction stages, and currently supports over 250 jobs directly in the local region for ongoing operations.

Many developers offer 'community benefits' in the form of a financial boost to the host region as an incentive to allow the construction of wind farms. Some developers allow the community to hold a stake in a turbine to receive profits from the site's operation, or funding for new community facilities.

For example, when building the Tirgwynt Wind farm in Wales, developer Belltown Power worked with the community to determine what support would be most beneficial. This led to the company providing £2.5 million, which was matched by the local council, to improve the area's education facilities.

The UK government has also recently announced a goal to provide enhanced rewards for communities hosting onshore wind projects to allow them to benefit directly from it, including energy bill discounts to encourage more rural areas to consider wind power installations and to engage more effectively with these regions to determine how best they can offer mutual incentives.

There are also advantages for landowners in rural areas. Farmers can lease their land for wind turbine installations, providing them with additional income streams based on the amount of land and of energy generated. This diversification of revenue can be especially beneficial for agricultural communities that may face economic challenges. It allows landowners to retain ownership while generating sustainable income over the long term.

Due to the nature and requirements of traditional wind turbines, developers will continue to target rural communities for hosting onshore wind projects, making it more important than ever that this is an attractive prospect. Wind power forms a significant portion of all renewable energy worldwide, and ongoing innovation is set to ensure that this grows.

Increasing renewable capacity will require new technology, and suitable open space for wind farms isn't infinite — but maximising the wind captured in the space currently occupied by these installations, as well as harnessing previously unexploited wind sources such as in urban areas, is key in supporting this.

Having identified untapped low frequency and ground winds as a potential way of generating even more renewable energy, Katrick Technologies has developed a novel form of wind power generation. Its Wind Panels use unique aerofoil technology to capture wind at a range of speeds and frequencies inaccessible to turbines on traditional wind farms. The panels will be available in various sizes for different applications but will be a flexible and scalable solution as users will be able to install as many panels as necessary to meet their energy demands.

What sets these panels apart from other wind solutions is the wide range of suitable locations. Not only can they be installed in urban or industrial areas, but they could also be installed in existing wind projects complimentary to turbines to capture even more power. They are also smaller, less obtrusive, and quieter than the alternative, offering an attractive option to counter the concerns that many in rural areas have around wind projects.

As renewable energy is so imperative in the journey to net zero, engagement with potential host communities should be a top priority for councils and developers. These enhanced benefits,

financial incentives and ensuring that rural areas reap the benefits of these projects is now more important than ever, and new innovations can help to ensure that wind energy is mutually beneficial for the community, for renewable energy companies, and for a greener future.

To find out about Katrick Technologies wind power generation technology, visit the website here : https://www.katricktechnologies.com/?utm_source=Stone+Junction&utm_medium=Opinion+piece&utm_campaign=KAT164_Harnessing+wind+for+rural+areas&utm_id=KAT164&utm_content=Earned).

About Katrick Technologies

Founded in 2016, Katrick Technologies is a green energy start up. It is focused on innovative engineering technologies, performing energy research and development of eco-friendly concepts for a more sustainable planet.

Katrick Technologies utilises unharnessed energy, reducing carbon footprint in a profitable way. It has designed and patented technologies to capture and convert energy from waste heat, wind and waves into mechanical vibrations, using them to produce carbon-free electricity.

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