

How a French startup is reviving Europe's ageing wind turbines

Alexandre Bousquet and Nicolas Vrecourt created the digital marketplace Renvo to connect sellers and buyers of second-hand wind turbines across Europe. Based in Montpellier, Alexandre leads operations while Nicolas drives business development.

At its core, the marketplace connects sellers of ageing wind turbines with buyers across Europe seeking to reinstall, repurpose components, or recycle materials. Renvo prioritizes opportunities that deliver the greatest circular value, especially when project timelines align with turbines becoming available.

The platform also serves as a hub for spare parts, enabling their resale across different technologies and helping to maximize the use of existing resources.

Renvo represents an alternative solution for wind project developers who regularly see the disappearance of the smallest products in the OEMs' portfolios, but continue to obtain permits with these vintage products. The marketplace is an efficient way to find compatible turbines and to source the necessary equipment in an anticipated way.

Transparent market model

Most dismantling companies operate on a turnkey basis, often disclosing limited information about installation costs or the resale value of the equipment. In most cases, the wind turbines are quoted at the value of their scrap metal. If the provider resells the equipment at a higher price, the original owner does not benefit from that added value.

Renvo's system operates with full transparency, using a brokerage model in which payment is earned as a percentage of each completed transaction. Its customers know where the dismantled turbines go, to

whom and at what price. This clarity gives turbine owners and developers greater control and confidence in the reuse process.

By creating incentives for improved turbine maintenance and more responsible end-of-life planning, the model encourages a shift in how ageing turbines are managed. As awareness of the added value through resale and reuse grows among stakeholders, Renvo anticipates broader adoption of circular practices at scale.

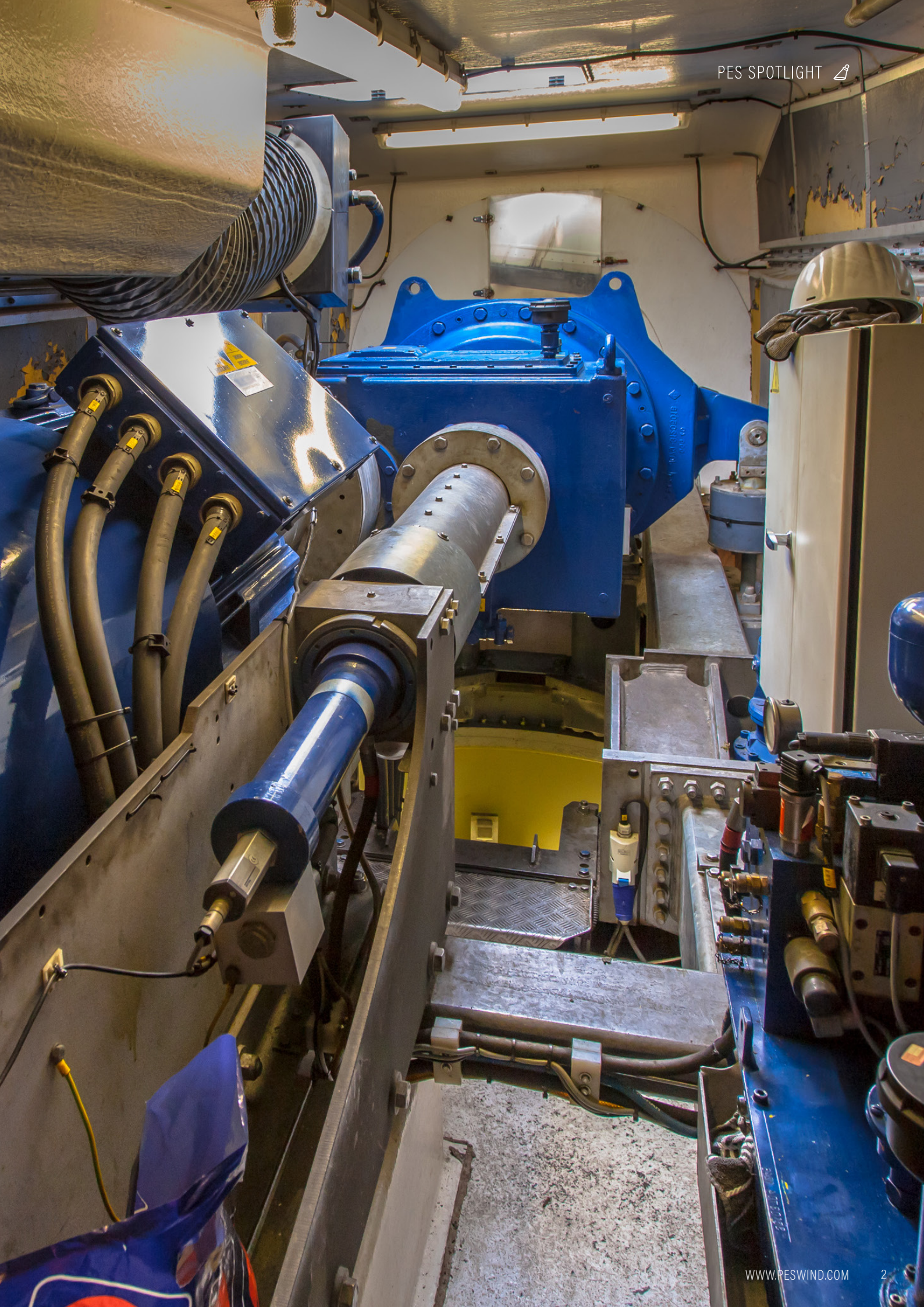
Project services and operational support

Renvo goes beyond matchmaking. The company offers comprehensive project support, including dismantling, transportation, refurbishment, recertification and reassembly. It works with long-standing partners across Europe who are experienced in various turbine technologies and familiar with the specific tooling and dismantling procedures required.

Handling turbines that have been in operation for 15 to 20 years demands technical expertise. Poor decommissioning can result in damage that reduces the resale value or renders components unusable. By relying on trained teams, Renvo ensures each turbine is disassembled properly, preserving the integrity of the equipment.

Additional services include cost-effective long-term storage for projects where there is a delay between reconditioning and reinstallation. This allows developers to prepare sites while securing valuable equipment in advance.





These services are especially helpful in regions where the second-hand market is still emerging, such as France. Some developers remain cautious and prefer to observe initial projects before committing. Renvo offers them both technical and logistical reassurance.

Renvo's most advanced project involves the sale of five dismantled Nordex N80 turbines from western France, along with the refurbishment and reinstallation of three additional turbines in the south.

Asset evaluation and lifespan analysis

An important aspect of the second-hand market is increasing the knowledge of the condition of the assets. Before launching a transaction, wind farm owners are advised to provide all available information, compiled into a complete data room. This should include inspections conducted before dismantling, which help determine the turbine's remaining lifespan.

These inspections are performed by independent third parties. Renvo also estimates the theoretical value of each machine, factoring in the technology reputation, turbine type and fleet age. This value is then adjusted based on the results of the inspections.

The goal is to identify turbines with strong remaining lifespan potential. In early projects, some turbines demonstrated theoretical lifespans of 36 years or more, often due to low wind stress and robust engineering in the early 2000s. This proves the viability of reusing turbines across various regions.

As regulatory frameworks tighten across Europe, especially concerning decommissioning and materials recovery, the value of lifecycle extension through reuse is growing. Renvo's structured assessment

tools and partner network position it as a compliance friendly solution, aligned with EU circular economy goals.

Refurbishment and reuse

The scope of refurbishment is determined by the condition of each turbine. In some cases, only minor work such as rust removal or the replacement of small components is sufficient. In other cases, key subcomponents must be overhauled.

A full refurbishment can take between one and six months. Once completed, suppliers issue parts and labor warranties ranging from six to 24 months.

Refurbishment companies are active in several European countries, particularly in Spain, the Netherlands, Denmark and the UK. Their involvement is key to ensuring turbine readiness and compliance with reinstallation standards.

Some refurbishment partners are now exploring modular upgrades, such as smart controllers and remote diagnostics, that bring older turbines closer to modern performance standards. This hybrid approach is particularly appealing for clients balancing cost with technological expectations.

Cost competitiveness

One of the main benefits of second-hand turbines is cost. A useful benchmark is around 600,000 euros per megawatt. This figure includes equipment purchase, which can reach up to 300,000 euros per turbine, as well as operational costs for dismantling, transport, reconditioning and reassembly.

This price point makes used turbines especially appealing to developers with limited budgets or those focused on self-consumption and smaller-scale projects.

Sourcing and project matching

Renvo's biggest challenge is identifying turbines scheduled for removal early enough for developers to plan for reuse. Since many park owners issue tenders only six months before removal, the company recommends beginning the process 12 to 18 months in advance. This gives developers time to adjust permits, arrange logistics and prepare installation sites.

To build a consistent supply, the business maintains active sourcing efforts in countries like Germany and Spain. France offers lower volumes but good-quality turbines, due to milder wind conditions and conservative operating histories.

It also maintains a growing database of upcoming installation projects. The team's knowledge of regional permitting, remuneration schemes and transportation logistics plays a key role in matching turbines with suitable second-life opportunities.

For example, reselling a turbine into a Nordic project with a 10-year power purchase agreement differs significantly from doing so for a feed-in tariff project in France or a self-consumption project in Belgium. Yet all are compatible with the second-hand model, showing the strong future potential of this market.

Looking ahead, Renvo aims to integrate digital forecasting tools to better match dismantling timelines with installation readiness. This predictive capacity will strengthen supply chain coordination and unlock greater efficiency across borders.

The company is also exploring partnerships in emerging markets where smaller-scale, cost-effective turbines can play a key role in rural electrification.

renvo.eu/en/



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