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# **POSITION PAPER.**

# - Restyling Wind Turbines

#### Background

The energy transition is redefining the future, turning challenges into opportunities and driving a shift toward a more sustainable, innovative and resilient global system.

Enel is continuing on its path to reduce carbon dioxide emissions in line with the Paris agreements, accelerating **the transition to clean energy in order** to improve the quality of life for people and the planet.

**Innovation** is a key lever for achieving these goals and building a better world for future generations.

We believe that innovation must be **continuous**, **collaborative and concrete**: we are therefore committed to constantly developing solutions that not only improve energy production and distribution, but also make technology more accessible and sustainable. We collaborate with startups, research centers, companies and the academic world, professionals and creatives, with the aim of imagining and designing a new future for energy. Through the **Open Innovability**® platform, anyone with an innovative idea can help create opportunity and value.

With the international "WinDesign" **wind turbine re-design competition,** we want to test the talent and creativity of those who imagine new solutions for a world powered by clean energy while minimizing environmental impact. This is our vision of innovation: a driver for change, serving sustainability and people.

## The competition

On April 2, 2025, Enel will launch the international competition "WinDesign," which provides an opportunity for proposing to Enel the conception, design



and construction of innovative wind turbines. The proposed design must comply with the industry's technical regulations<sup>1</sup>, envisage turbines with three-blade rotors and identify the most efficient and suitable solution for power generation with the least environmental impact, taking into consideration the following specific properties:

- Rated power = 5-6 MW;
- Rotor diameter = 150-175 m;
- Hub height = 90-120 m;
- Steel tower;
- No changes to the electrical and mechanical components inside the standard turbine;
- No changes to blade geometry.

College students or recent graduates in engineering, architecture or design, qualified architects and architectural firms, qualified engineers or engineering firms, qualified designers and design firms, research institutes, universities, commercial companies and startups may **take part**.

Participants may be natural or legal persons, who may group themselves into teams of up to three individuals ("**Teams**").

<sup>&</sup>lt;sup>1</sup> The projects will be designed in accordance with applicable technical standards, including, without limitation, the International Technical Industry Standards for Wind Technology IEC 61400 for those parts applicable to the Proposed Solution and as prescribed by the International Civil Aviation Organization - ICAO. Please refer to the technical specifications attached to the regulations for further details.



Employees of Enel and all Enel Group companies (including spouses, partners or any relatives up to the fourth degree) are not eligible to take part in the Competition.

The turbine design to be submitted to the Competition should mainly focus on the following **characteristics**, which also correspond to the **evaluation criteria for** the projects:

- Design
- Technical and financial feasibility
- Innovation and sustainability

Furthermore, the project must take into consideration the following requirements:

- Environmental integration: the turbine should have a low visual and/or acoustic impact.
- Technical functional suitability: the solution must ensure productivity.
- Flexibility of use: it must be adaptable for any turbine manufacturer, with correct and simple production and construction, using industrial materials and processes already available on the market.
- Economic sustainability: simplicity of implementation that does not impact investment, operation and maintenance.

Participants will be required to submit technical and economic documentation to support their proposal. This should include:

- Explanatory technical papers
- 3D/BIM model of the proposed wind turbine



- Estimated investment/maintenance costs
- Specialized analyses (including noise/visual impact studies, performance analysis, and Life Cycle Assessment)

## **Competition Phases and Rewards**

The Competition will be divided into two phases. During the **first phase**, participants will be able to submit their creative and innovative ideas and related preliminary designs by June 16 through the Open Innovability® platform and will be able to take part in explanatory **workshops** (on April 15 and May 15), which will be organized by Enel. This is in order to answer any questions potential that participants may have.

During this phase, a cash prize (the **"Preliminary Reward**") of €5,000 will be awarded to each participant who is admitted to the next phase (in the case of Teams, the prize will be divided equally among its members).

This will be followed by the **second phase** in which detailed designs and further technical-economic feasibility studies and reports of innovative solutions must be submitted. This phase will end on September 29. These projects will be reviewed by a jury of Enel experts and academics.

The Competition will close with a final awards event on November 10, 2025.

Reward winners will receive the following prizes:

- €250,000 for first place,
- €150,000 for the runner-up

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- €50,000 for third place

In addition, there are **"special**" **Rewards** of €15,000 for projects judged to be the "best" in terms of: Design, Technical and Economic Feasibility, and Innovation and Sustainability. There will be a limit of one reward per participant or team.

In the case of Teams, the Reward will be divided equally among their members.

The awarding of all prizes, including the Preliminary Reward Prize, will be conditional on compliance with certain preconditions, including the irrevocable assignment to Enel:

- Of the design rights contained in the proposal submitted for the first phase;
- of all intellectual property rights, as well as all rights for the design and implementation of the solution, related to the proposal submitted for the second phase.

This will take place by means of the signing of a special contract in which, in return for the recognition of the relevant Reward, the participant agrees to transfer all existing rights to the project and undertakes to provide Enel with the materials used for its development.

For further information, please refer to the Competition Rules and the technical specifications attached to them. These are available on the relevant <u>Open Innovability® page</u>.