

Challenge

Open Innovation # 68

Rooftop wind turbines meeting the safety and security requirements of a nuclear site



Nuclear
Industry



Roof of the utility building, East view



Dates of the challenge

Opening date: May 12th 2023

Closing date: June 12th 2023

Purpose of the challenge

Orano wants to develop self-generation of electricity at its La Hague industrial site and plans to equip some of its workshop roofs with wind turbines to meet the safety and security challenges of a nuclear site.

Description and expectations

The proposed solutions will have to provide an optimal, measurable and quantifiable output. They must be ISO 9001 certified. Their performances will have been demonstrated by tests already carried out in wind tunnels.

The conditions of use are described below:

Pilot building on which the wind turbines will be installed

- The maximum daily energy consumption of the pilot building is 1.4MWh
- The admissible load on the roof of the building is 100 kg/m²

Environmental constraints

- Resistance to winds of 240 km/h in order to avoid any risk of tearing, breakage and projection of parts
- Resistance to frost (temperatures below -10°C)