News

IFPEN

Wind Energy

IFPEN, through its Carnot IFPEN Ressources Energétiques (RE) announces the creation of GreenWITS, a start-up dedicated to providing digital services to the wind industry

IFP Energies nouvelles (IFPEN) through its Carnot Ressources Energétiques and three of its employees are creating GreenWITS, a start-up specializing in digital solutions for the wind sector. As an IFPEN Group subsidiary based in the Lyon region, GreenWITS leverages more than 12 years of wind energy research at IFPEN. In a market that is enjoying rapid growth, particularly offshore (250 GW installed in 2030 compared to 50 in 2022*), and is also extremely competitive, GreenWITS will enable project developers and operators to optimize the design and operational efficiency of wind farms with a view to maximizing their profitability.

A differentiating range of services for the wind energy sector

GreenWITS aims to provide wind project developers and operators with digital services enabling them to optimize the design and wind farm operation phases, thanks to advanced simulation combined with data science.

GreenWITS' offer is hinged around four objectives:

- **Optimize wind farm design**, particularly in terms of locating turbines in such a way as to limit wake-related energy losses (aerodynamic interactions between turbines) and optimize project economics,
- **Secure the design of fixed and floating offshore turbines** and foundations using advanced simulations,
- **Monitor the performance** and health of wind energy assets,
- **Increase the production of wind farms** by mitigating the operational wake losses.

GreenWITS brings together a team of engineers and researchers with cutting-edge expertise in the fields of simulation, IT and data science, most of whom come from IFPEN.

> "GreenWITS's differentiating approach is characterized by the combination of theoretical models with technical data gathered and recorded over time from wind farm operations. We use advanced simulation to design new solutions and analyze turbine performances using the same models, calibrated via data analysis and artificial intelligence methods. Our company addresses the needs of industrial operators as they seek to optimize the value of their wind farm projects throughout their lifespan ", explains Daniel Averbuch, GreenWITS CEO.

A next step resulting from more than 12 years of wind energy research and innovation (R&I) at IFPEN

The creation of GreenWITS is in line with the strategy of ensuring the industrial development of research conducted by IFPEN. At the interface between research and industry, IFPEN has established a number of avenues for transferring its innovations, particularly via the creation of subsidiaries.

In 2011, IFPEN launched an R&I program dedicated to wind energy, drawing on longstanding experience in key fields such as fluid mechanics, offshore equipment design and advanced control. The research conducted led to the development of software - particularly for simulating turbine operation and evaluating the wind resource within a wind farm -, as well as the formation of partnerships with various industrial players.
GreenWITS digital offer will thus benefit from software developed at IFPEN and protected by exclusive licenses. New innovations jointly developed by IFPEN and GreenWITS will subsequently be launched to market. In parallel, IFPEN will continue a low TRL (technological logical readiness level) wind energy research program to prepare for the future and anticipate the evolving needs of the sector's industrial players.

"We're delighted to be involved in the creation of a start-up in the wind energy sector. The transfer of our research and support for new energy transition sectors are integral to our DNA. The establishment of a collaboration agreement enables GreenWITS to create a unique and constantly improving range of services, thanks to IFPEN's continuing wind energy research", says Pierre-Franck Chevet, Chairman of IFPEN.

To find out more: www.greenwits.com

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About IFPEN
IFP Energies Nouvelles (IFPEN) is a major player in research and training in the areas of energy, transport and the environment. From scientific concepts in fundamental research to technological solutions in applied research, the Institute's activities are focused on innovation and hinged around four key priorities: climate, the environment and the circular economy, renewable energies, sustainable mobility and responsible oil and gas.

About GreenWITS
GreenWITS is a new company based in Lyon (France) created to offer digital advanced simulation and digital services to the wind industry. It provides innovative digital solutions drawing on more than 12 years of IFPEN's R&I and enables its customers to optimize the design and operation of their wind farms. GreenWITS is a member of the IFPEN Group.

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