

Written on 20 February 2025 4 minutes of reading

News

IFPEN

At a time when the word is facing an unprecedented climate crisis, IFPEN, the French national training institute dedicated to energy, mobility and the environment, is affirming its position as an instrumental player in the triple ecological, energy and digital transition. How does the organization implement concrete solutions in key fields such as low-carbon energy, sustainable mobility and the circular economy? What are the resources and tools at its disposal enabling it to contribute to industrial development in Europe?

Pierre-Franck Chevet, Chairman and CEO, and Cécile Barrère-Tricca and Benjamin Herzhaft, Executive Vice-Presidents, answer our questions in the interview below.

What major challenges are we facing today?
Tackling climate change is an emergency that demands immediate action at every level, locally, globally and everything in between. Ambitious national, European and international objectives have been set. We must use every possible lever to attain carbon neutrality by 2050: sobriety, behavior change, knowledge dissemination, energy efficiency, the circular economy and technological solutions.

What is IFPEN's role in this transition?
Aware of these challenges and drawing on its extensive experience, IFPEN is fully engaged in the triple ecological, energy and digital transition. Driven by our Horizon 2035 strategic vision, we are working to consolidate already tried and tested technologies, develop promising low-carbon solutions, and explore forward-looking themes. Within this context, we use our expertise to inform public

decisions, invent and develop decarbonization solutions, and prepare the new generations of engineers who will be responsible for seeing through this transition.
By rolling out low-carbon solutions and training talented young people, we play a role in reinforcing the sovereignty and reindustrialization of Europe and France.

What resources does IFPEN have at its disposal to achieve these objectives?
IFPEN supports the deployment of industrial sectors thanks to its capacity to carry out end-to-end research and training projects, from fundamental research through to industrial applications. To do so, we have access to experimental tools, ranging from the laboratory to pre-industrial pilots. We develop the associated multi-physical, numerical simulation tools and have mastered digital technologies and high-performance data analysis. We draw on the skills of our personnel, skills that are rich, varied and constantly evolving in line with the ambitions I have set out.

Can you remind us of the specific areas IFPEN is focused on?
IFPEN is active in many of the key fields: low-carbon energy production (floating wind power, natural hydrogen, geothermal energy, large-scale energy storage), sustainable mobility (electric, hydrogen), the decarbonization of industry (CO2 capture, storage and use), the bioeconomy (biofuels, bioproducts), the circular economy (recycling of plastics, metals, etc.), and the preservation of natural systems (soil, air quality, water).
Our technological developments fall within a systemic approach taking into account economic, environmental and social impacts. For example, we work on plastic recycling technologies, while developing solutions to monitor and manage the plastic cycle in the environment. Similarly, we support the production of advanced biofuels and bioproducts, while integrating life-cycle analyses and taking into account factors such as resource availability and soil and water management.
Some of our technologies are ready for industrial application in the next few years, once the necessary regulations have been put in place. Some projects are already at the pre-industrial demonstrator stage, such as DMX™ and CLC for CO2 capture, Rewind®PET and Biobutterfly for sustainable materials, while others are at the first industrial unit stage in France, such as BioTfueL® and Futurol™ for sustainable aviation fuels. Others still have resulted in the creation of subsidiaries or partnerships, such as GreenWITS for wind power and Tec E Mouv for low-carbon mobility.

And tomorrow?
To prepare for the future, IFPEN teams are working to overcome the scientific challenges set out in their fundamental research programs and exploring new themes, such as new materials, direct CO2 capture from the air, water treatment, etc.
In parallel, IFP School is training talented young people, equipping them with a global vision and cutting-edge skills to ensure they are ready to meet the challenges of energy innovation in a company setting.
IFPEN is also reinforcing its outward-looking approach by diversifying its partnerships with laboratories, industrial groups and start-ups, in France, Europe and elsewhere in the world. Through our stakeholders' committee, we remain in tune with society's expectations, enabling us to anticipate and support the appropriation of new technologies.
Lastly, IFPEN continues to play a key role as a trusted third party in the energy and ecological transition, providing rigorous analyses to inform public decisions.

What about a concluding motto?
True to its general interest mission, IFPEN boldly imagines and meticulously designs solutions for

tomorrow’s world.

Committed to making the triple transition a springboard for performance and impact
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