

Research & Innovation: Total in the Heart of Paris-Saclay Cluster from 2019

Paris, 18 December 2018 – During his visit to the Ecole polytechnique cluster at Paris-Saclay to inaugurate the Ile-de-France Photovoltaic Institute (IPVF) and sign the Trend-X chair, Patrick Pouyanné, Chairman & Chief Executive Officer of Total, announced the planned opening of a new research & innovation centre in the heart of Ecole Polytechnique cluster at Saclay. In 2019, the management team of Total's R&D department will move to Saclay before the new centre is officially opened by 2022.

This new centre is a major project for Total, that puts the Group at the heart of a global innovation ecosystem. Eventually, Saclay will be home to 20-25% of the French scientific research community. The centre will also add to Total's investments in research and innovation in France. Already the Group has 1,400 researchers under its wing in seven centres as well as 1,000 agreements with academic partners worldwide.

Thanks to the proximity to the Saclay ecosystem, the Group will be able to strengthen its open innovation initiative, and its partnerships with internationally recognized research teams. The new Total Research & Innovation Centre will tackle the main energy and technological challenges of our society. Two areas of work are prioritized: digital, especially Artificial Intelligence (AI), and low-carbon power management, in pursuit of sustainable and responsible development.

Total took the opportunity of this announcement to realize its commitment to work alongside several key organizations of the cluster on two new initiatives in renewable energy and energy efficiency:

- **A partnership with École Polytechnique to develop technology related to low-carbon energies.** Total will fund a chair at École Polytechnique called "*Meeting the technological challenges of responsible energy*" as part of the Trend-X initiative. The chair will assist research on capturing and storing solar power as well as the development of smart building energy management, and integrate such work into university courses.
- **The Ile-de-France Photovoltaic Institute (IPVF) to speed up the development of solar power.** Total has joined forces with a number of partners (EDF, the CNRS, École Polytechnique, Air Liquide, Horiba and Riber) to give life to this new centre of excellence dedicated to research on solar power and its integration into power grids.

"The proposed creation of a new research and innovation centre in the Paris-Saclay cluster is major for Total. Our capacity for innovation is at the heart of our ambition to become the responsible energy major. This Centre places us among one of the best global research ecosystem and will strengthens our ties with the top-tier research teams already present at Saclay" stated Patrick Pouyanné, Chairman and Chief Executive Officer of Total. "We are keen to contribute to the global reach of this cluster, and to anticipate the technological disruptions that will shape the future of energy. This process is henceforth well under way with the inauguration of the IPVF and the creation of the Trend-X chair."

About Total

Total is a major energy company that produces and supplies oil, natural gas and low-carbon electricity. Our 100,000 employees are committed to better energy that is safer, cleaner, more affordable, more innovative and accessible to all. With operations in more than 130 countries, our aim is to become the world's leading responsible energy major.

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