



Complementarity between gas and power in the decarbonization of the power system

Achieving the decarbonization of the energy sector requires to promptly phase out from fossil fuels and to accelerate the diffusion of renewable energy sources. Thanks to its lower carbon content, it was considered that natural gas could be used during the transition. Yet, it is more and more marginalized in energy planning models. Among the developing alternatives for natural gas, biogas (produced from industrial or agricultural waste) appears to be a non-negligible option of the decarbonization of buildings and transports. Used as a complement of other energy sources, gas can facilitate the integration of renewables in the power system thanks to the power-to-gas as a form of storage. In France, this issue has been publicly debated during the preparation of the National Energy Plan (PPE). The goal of the internship is to evaluate the potential and the costs associated to the different renewable energy sources with a focus on the complementarity between gas and renewable power. Among others, this research will rely on past works of the chair.

Missions

- Literature review on empirical studies and energy planning models in Europe
- Analysis of the evolution of costs of low-carbon and storage technologies in the power sector
- Evaluation of the complementarity potential between gas and renewable power for the French case, and the resulting CO2 reduction in the sector

Profile

This position is aimed at master students/engineering students in the fields of economy/energy/environment. The candidate must have organizational ease, autonomy and ability to work in relation with the various interlocutors of the Chair. A good experience of computational and empirical methods is recommended, and a personal interest in the fields of the economics of climate change is an asset. This internship can lead to a thesis project within the Chair.

Duration: Starting March-April 2019 for a 6 months period

Place: Chaire Economie du Climat, Palais Brongniart, 28 Place de la Bourse, Paris

Salary: 90% SMIC

Contact: Cover letter and CV claire.berenger@chaireeconomieduclimat.org

Indicating the internship name's offer (only 2 applications maximum on all CEC internships offers)