

***The emerging interregional trade of hydrogen:
a preliminary economic analysis***

Background

The transition to a hydrogen-based economy is gaining momentum in the European Union (EU). Hydrogen can potentially reduce emissions in hard-to-decarbonize industries like heavy industry, aviation, and marine trade when used as an energy carrier.

Policymakers hope that the shift to hydrogen will favor Europe's energy independence. Yet, we observe that the ongoing transformation of the energy system also triggers the emergence of export-oriented hydrogen production projects that explicitly ambition to supply Europe in North Africa, Latin America, and the Middle East. The new energy world is thus likely to go hand in hand with the rapid development of an inter-regional trade of low-carbon hydrogen and hydrogen-based products.

Missions

The purpose of this internship is to accumulate the essential knowledge needed to understand this emerging trade in three main directions.

First, the intern will clarify the economics and organization of the envisioned new value chains by reviewing the blossoming economic and modeling literature on export-oriented hydrogen production projects. The aim of this analysis is to clarify and possibly quantify the comparative advantages of these sources of hydrogen. From an industrial organization perspective, it will also clarify the envisioned cost and industry structure and discuss the institutional framework envisioned to govern that trade.

Second, from a development economics perspective, the analysis will examine the implications for the energy-exporting nations. In most cases, these projects are located in developing nations, and understanding how the projected exports interfere with the country's developmental trajectory is key. The interactions with the local energy sector are of particular interest.

Lastly, the internship will explore the policy implications for the EU. Arguably, the future organization of that interregional trade can be affected by European policy decisions. One can thus wonder to what extent the EU energy and trade doctrine that will be forged in the coming years will shape that trade.

By nature, this internship aims to accumulate the essential knowledge needed to define a policy-relevant and academically ambitious doctoral project on this emerging trade.

Profil

This position is for a master's student with a good energy and environmental economics background and a strong interest in industrial organization and regulatory policy questions. Some knowledge of the underlying engineering can be helpful but not necessary.

The candidate must have organizational ease, autonomy, and the ability to interact with various interlocutors of the Chair. He also must demonstrate good writing skills in English.

A personal interest in the areas of the economics of climate change is a strong asset.

This internship can lead to a CEC thesis project.

Duration: Starting March-April 2024 for a 6 month-period

Location : Chaire Economie du Climat, Palais Brongniart, 28 Place de la Bourse, 75002

Salary: 80% minimum wage + meal vouchers-face value 9€

Contact and documents: send CV, Cover letter **plus** Master 1 grades (and Master 2 grades available) in **only ONE PDF file** to claire.berenger@chaireeconomieduclimat.org indicating the internship offer's **(only 2 applications maximum on all CEC internships offers)**

Application closure: January 9th, 2024

Interviews from January 10th, 2024

Final response to candidates: January 31st, 2024