

**JOB OFFER**

# SENIOR RESEARCHER

**Position: Senior researcher in LCA and techno-economic analysis**  
**Offer date: CIIAE web**  
**Project: CIIAE - Refª IS-LCA (ELÉCTRICO E HIDRÓGENO Y POWER-TO-X)**  
**Department: Hydrogen and Power-to-X**  
**Estimated starting date: 2023**

<b>Workplace:</b>	University of Extremadura. Cáceres campus	
<b>Tasks to be developed:</b>	<p>Providing decision support is key to speed up the transition to net zero energy systems. In LCA and techno-economic analysis, the environmental and economic impacts, respectively, of products and services are assessed, throughout the life cycle: resource extraction, manufacturing, technology use, and waste management. The created models should be open, when possible, in order to improve the quality of science, on the basis of more transparency, reproducibility and traceability.</p> <p>The successful candidate is expected to perform the following tasks:</p> <ul style="list-style-type: none"> <li>– Developing an attractive research agenda in the field of LCA &amp; Techno-economic analysis</li> <li>– Creating open-source LCA models of energy storage and hydrogen technologies, linked with renewables</li> <li>– Using monitored data in pilot plants for sustainability indicators</li> <li>– Integrating LCA with energy system modelling</li> <li>– Provide recommendations to decision makers based on modelling results</li> <li>– Collaborations with experimental researchers from CIIAE and beyond</li> <li>– Acquisition of competitive funding, both private and/or public, e.g., PhD students and postdocs.</li> <li>– Successful collaboration with universities, research institutes and companies at national and international level.</li> <li>– Successful guidance of PhD, postdocs and master students, i.e. they meet their own requirements</li> <li>– Writing publication as first author (e.g., 1 paper p.a. in a high-ranked journal)</li> <li>– Project management and project administration (internal and external), also towards the department and CIIAE</li> </ul> <p>Challenges: There is a large number of available technologies, actors, e.g., households and industry, as well as intrinsic uncertainty which makes LCA and techno-economic models complex. Plenty of data are also generated, making the assessment of the important results to provide policy recommendations challenging</p>	
<b>Duration of the contract and salary:</b>	Temporary Contract Initial duration: September 2025, with the possibility of extension	Gross Salary + S.S. Fees Gross Salary Range: 45.000 €
<b>Academic background required:</b>	A PhD in chemical engineering, chemistry, energy engineering or equivalent, physics, natural sciences, industrial Ecology, sustainability, or similar	
<b>Other education:</b>		

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<b>Professional experience:</b>	<ul style="list-style-type: none"> <li>- Minimum 2-year postdoctoral experience</li> <li>- Minimum 2-year experience with LCA and/or techno-economic projects</li> <li>- Participation in at least 4 European projects (H2020, FP7, etc.) or equivalent. Also, an equivalent experience in the private sector may be considered</li> </ul>	
<b>Job requirements (have to be fulfilled):</b>	<b>Specific techniques (analytical, software, calculations, prototyping, etc.)</b>	<ul style="list-style-type: none"> <li>- Excellent analytical skills and experience in LCA (OpenLCA, Brightway 2, SimaPro, Ecoinvent, etc.). But the work will be mostly on open source Brightway.</li> <li>- Experience in techno-economic analysis (e.g. LCOE) and circular economy</li> <li>- Previous experience with the Input-Output method</li> <li>- Statistical skills, e.g. statistical tests and regression</li> <li>- Experience in programming in general purpose language (any language, but the work will be mainly in Python and Matlab).</li> </ul>
	<b>Participation and/or collaboration in R&amp;D&amp;I/business projects</b>	Minimum participation in 4 research projects, European, national or business
	<b>Languages</b>	Excellent oral and written skills in English
	<b>Cross-cutting competences</b>	<ul style="list-style-type: none"> <li>- Ability to lead a team towards funding and goals</li> <li>- Commitment to open science in research methods, data and publications</li> <li>- Proven experience with industry collaborations and/or previous experience working in the industry</li> <li>- Experience in collaborating with other colleagues in the same department and external</li> <li>- Communication skills</li> </ul>
	<b>Willingness to travel and stay abroad</b>	The candidate is expected to travel, both nationally and internationally, in the context of projects and conferences
<b>Publications: scientific articles (in journals indexed in Web of Science and/or Scopus), theses (PhD and/or Master's), presentations at conferences, reports, technical reports, technical guides, etc.</b>	Strong track-record of academic publications as first author and co-author as the candidate is expected to publish in top journals in the field. At least 10 publications in Scopus indexed journals.	
<b>To be evaluated (adds points to the final evaluation):</b> <ul style="list-style-type: none"> <li>- Having been a principal investigator in regional/national/European or direct contracting projects.</li> <li>- Having supervised doctoral and master theses.</li> <li>- GIS Modelling.</li> <li>- Experience with MCDA.</li> <li>- Knowledge of modelling and optimisation of energy systems.</li> </ul>		

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- Experience with statistical learning and machine learning models.
- Valuable knowledge of Circular Economy of energy storage systems.
- Valuable knowledge in Spanish and/or Portuguese.
- Valuable to have obtained a Marie Curie fellowship or similar, through competitive competition research contracts.
- Awards, distinctions or any merit that is consistent with the position described.
- Motivation letter (maximum 2 pages) included in the application.
- Evaluation provided by 2 references via telephone conversation. The contact details of the references (e-mail and telephone) are provided by the candidates in their application.

### Selection process details:

**Technical test:** NO

**Language (English):** yes (**will be evaluated during the interview**)

**Job interview:** yes

### Interested candidates:

Please, send all the documents requested by both the terms and conditions of the call for the proposal and the job offer, with the deadline being 15 calendar days from the day following the publication in the CIAIE web indicating the following reference: **Ref. IS-LCA (ELÉCTRICO E HIDRÓGENO Y POWER-TO-X)**

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