

SENIOR RESEARCHER

Position: Senior researcher in LCA and techno-economic analysis
Offer date: WEB Publication
Project: CIIAE – REF. IS-LCA (ELÉCTRICO E HIDRÓGENO Y POWER-TO-X)
Department: Electric Storage and Hydrogen and Power-to-X
Estimated starting date: 4th quarter 2024

| | | |
|---|--|---|
| Workplace: | University of Extremadura. Cáceres campus | |
| Tasks to be developed: | <p>Providing decision support is key to accelerating 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 models created should be open whenever possible, in order to improve the quality of the science, based on increased transparency, reproducibility and traceability.</p> <p>The selected candidate is expected to perform the following tasks:</p> <ul style="list-style-type: none"> – Developing an attractive research agenda in the field of LCA and techno-economic analysis – Creation of open source LCA models of energy storage and hydrogen technologies, linked to renewable energies – Integration of LCA with energy system modelling – Use of data monitored in pilot plants for sustainability indicators – Providing recommendations to decision-makers based on modelling results – Collaborations with experimental researchers from CIIAE and other research centres – Acquisition of competitive funding, both private and public, e.g. PhD students and postdocs. – Successful collaboration with universities, research institutes and companies at national and international level. – Successful orientation of PhD, postdoctoral and master students, i.e. fulfilling their own requirements – Writing publication as first author (e.g. 1 article per year in a high-ranking journal) – Project management and project administration (internal and external), also towards the department and CIIAE <p>Challenges: There are a large number of available technologies, actors, e.g. households and industry, as well as intrinsic uncertainty which makes LCA and techno-economic modelling complex. There is also a lot of data generated, which makes the assessment of outcomes important for providing policy recommendations challenging.</p> | |
| Duration of the contract and salary: | Temporary Contract. Initial duration: September 2025, with the possibility of extension | Annual Gross Salary Range: 46.129,58 € |

JOB OFFER

| | | |
|---|---|---|
| Academic background required: | A PhD. in Chemical Engineering / Chemical Sciences / Industrial Engineering or equivalent / Physics / Natural Sciences / Industrial Ecology / Environmental Sciences / or similar | |
| Other education: | | |
| Professional experience: | <ul style="list-style-type: none"> - Minimum 2 years postdoctoral experience - LCA projects and/or techno-economic analysis minimum 2 years. - Participation in at least 4 European (H2020, FP7, etc.) or equivalent national projects, or equivalent experience in a private company. | |
| Job requirements (have to be fulfilled): | Specific techniques (analytical, software, calculations, prototyping, etc.) | <ul style="list-style-type: none"> - Excellent analytical skills and experience in LCA (OpenLCA, Brightway 2, SimaPro, Ecoinvent, etc.). But the work will be mainly on open source Brightway2. - Experience in techno-economic analysis (e.g. LCOE) and circular economy - Previous experience with Input-Output method - Statistical skills e.g. statistical testing and regression - General-purpose language programming experience (any language, but the work will be mainly in Python and Matlab) |
| | Participation and/or collaboration in R&D&I/business projects | Minimum participation in 4 European, national or company research projects |
| | Experience in Research Centres / Companies | YES. Minimum stay of 1 year (in total) |
| | Languages | Excellent oral and written skills in English |
| | Cross-cutting competences | <ul style="list-style-type: none"> - Ability to lead a team towards funding and goals - Commitment to open science in terms of research methods, data and publications - Proven experience with industrial collaborations and/or previous experience working in industry - Experience in collaborating with other colleagues in the same department and externally - Communication skills |
| | Willingness to travel and stay abroad | Yes |

JOB OFFER

| | | |
|--|---|--|
| | <p>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.</p> | <p>A strong academic publication record as first author and co-author is expected as the candidate should publish in leading journals in the field. At least 10 publications in Scopus indexed journals.</p> |
| <p>To be evaluated (adds points to the final evaluation):</p> <ul style="list-style-type: none"> - Have been Principal Investigator in regional/national/European or direct contracting projects. - Have supervised doctoral theses and master's theses. - "GIS" modelling - Experience with "MCDA" - Knowledge of modelling and optimisation of energy systems - Experience with statistical learning and machine learning models - Valuable knowledge of Circular Economy of energy storage systems. - Valuable knowledge of Spanish and/or Portuguese - Experience with Marie Curie fellowships or equivalent competitive research contracts. - Awards, distinctions or any merit that is in line with the position described. - Motivation letter (maximum 2 pages) included with 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. | | |
| <p>Selection process details:</p> <p>Technical test: Oral knowledge test YES <input type="checkbox"/> NO <input checked="" type="checkbox"/></p> <p>LANGUAGE: ENGLISH ORAL YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> (Will be evaluated during the interview)</p> <p>JOB INTERVIEW: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/></p> | | |

Interested candidates:

Send all the necessary documentation included in THE RULES OF THE CALL and THE JOB OFFER, as well as THE APPLICATION FOR ADMISSION. Deadline 15 calendar days from the day after the publication on the WEB, indicating **REF. IS-LCA (ELÉCTRICO E HIDRÓGENO Y POWER-TO-X)**

FUNDECYT-PCTEX (Edificio Parque Científico Tecnológico), Avda. de la Investigación, s/n, Edificio PCTEX, Campus de la Universidad de Extremadura – 06006 Badajoz (España)

Email: ciae.personal@fundecyt-pctex.es Phone number: +34 927 690 042 Ext. 107

www.fundecyt-pctex.es
www.ciae.org