JOB OFFER

SENIOR RESEARCHER

Position: Senior researcher in energy system analysis
Offer date: CIIAE web
Project: CIIAE – Ref. IS-SISTEMAS (HIDRÓGENO Y POWER-TO-X)
Department: Hydrogen and Power-to-X
Estimated starting date: 2023

Workplace:	University of Extremadura. Cáceres campus	
Tasks to be develped:	Providing decision support is key to speed up the transition to net zero energy systems. In energy system analysis, simulation models are created to find the best pathway to decarbonise our society, considering important constraints, from a interdisciplinary point of view. Energy system analysis should also be open, in order to the quality of science, on the basis of more transparency, reproducibility and traceability The selected candidate is expected to perform the following tasks: – Developing an attractive research agenda in the field of energy system analysis – Creating open-source energy system models at various spatial and temporal scales, e.g., Iberian Peninsula and energy communities. – Creating an open-source energy system model of the Iberian Peninsula with interconnections to France, North of Africa, and overseas – Provide recommendations to decision makers based on modelling results – Collaborations with experimental researchers from CIIAE and beyond – Acquisition of competitive funding, both private and/or public, e.g., PhD students and postdocs. – Successful Collaboration with universities, research institutes and companies at national and international level. – Successful guidance of PhD, postdocs and master students, i.e. they meet their own requirements – Writing publication as first author (e.g., 1 paper p.a. in a high-ranked journal) – Project management and project administration (internal and external), also towards the department and CIIAE Challenges: There is a large number of available technologies, actors, e.g., households and industry, as well as intrinsic uncertainty which makes energy system models complex. Plenty of data are also generated, making the assessment of the important results to provide policy recommendations challenging	
Duration of the contract and salary:	Temporary Contract Initial duration: September 2025, with the possibility of extension	Gross Salary + S.S. Fees Gross Salary Range: 45 000 €
Academic background required:	A PhD in engineering, computer science, mathematics, physics, economics or related numerate disciplines	
Other education:		

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<table>
<tr><td>Professional experience:</td><td colspan="2">– At least 2 years of post-doctoral experience
– Proven experience in acquiring and/or writing competitive project proposal, for example, project or career funding
– Proven experience in supervising PhD and/or master students (for example, as daily supervisor</td></tr>
<tr><td rowspan="6">Job requirements (have to be fulfilled):</td><td>Specific techniques (analytical, software, calculations, prototyping, etc.)</td><td>– Excellent analytical skills and experience in theoretical and applied modelling
– Experience in energy system modelling and optimisation
– Knowledge of energy system engineering and techno-economic assessment
– Statistical skills, for example statistical tests and regression
– Programming experience (any language, but work may be mostly be in Python and Matlab).
– Knowledge of energy technologies including renewables, energy storage, hydrogen, flexibility technologies and power-to-X</td></tr>
<tr><td>Participation and/or collaboration in R&D&I/business projects</td><td>Proven participation on at least 3 R&D projects</td></tr>
<tr><td>Languages</td><td>Excellent oral and written skills in English</td></tr>
<tr><td>Cross-cutting competences</td><td>– Ability to lead a team towards financing and objectives
– Commitment to open science in terms of research methods, data and publications
– Proven experience with industrial collaborations and/or previous experience working on industry
– Experience on collaborating with other colleagues from the same department and beyond</td></tr>
<tr><td>Willingness to travel and stay abroad</td><td>The candidate is expected to travel, both nationally and internationally, in the context of projects and conferences</td></tr>
<tr><td>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.</td><td>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.</td></tr>
<tr><td colspan="3">To be evaluated (adds points to the final evaluation):
– Proven experience with agent-based modelling (ABM)
– Knowledge of power flow analysis
– Machine learning
– GIS modelling
– Experience with statistical learning models and machine learning
– More than 2 years of post-doc experience
– Being the principal investigator of at least 1 project
– Publications as last author
– Knowledge of Spanish and/or Portuguese
– Motivation letter (maximum 2 pages) included in the application.</td></tr>
</table>

– 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 the terms and conditions of the call for the proposal, with the deadline being 15 calendar days from the day following the publication in the CIIAE web indicating the following reference: **Ref. IS-SISTEMAS (HIDRÓGENO Y POWER-TO-X)**

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