

## Annex II. Call for Applications Document

### I. NAME OF THE PROJECT IN RESEARCH LINE

NAME OF THE PROJECTS IN RENEWABLE ENERGY AND ENVIRONMENTAL FLOWS	
PROJECT	Microclimate Impacts of SOLar farms (MISOL)

### II. PROGRAMME/PROJECT/CONTRACT/AGREEMENT FUNDING THE CONTRACT

	PROJECT	PROJECT FUNDING METHOD
PROJECT	Microclimate Impacts of SOLar farms (MISOL)	Call for Applications for the year 2024 for the “Grants to Promote Research Consolidation” within the State Programme for Human Resources, under the State Plan for Scientific, Technical and Innovation Research 2024–2027. (National Subsidies Database Identifier: 763349; extract published in the Official State Gazette of 28 June 2024), pursuant to the Resolution of the President of the State Research Agency of 11 April 2025.

### III. DESCRIPTION OF THE PROJECT

	PROJECT	DESCRIPTION OF THE PROJECT
PROJECT	Microclimate Impacts of SOLar farms (MISOL)	<p>Photovoltaic solar farms are being constructed rapidly across the world at an unprecedented pace in order to meet global demand and achieve net-zero emission targets. Together with wind power, solar energy is set to become the world’s leading source of renewable energy by 2030, with a total of 354 GW installed globally in 2023 alone.</p> <p>Large-scale farms, for example of 50 MW or more, cover over 150 hectares (1.5 km<sup>2</sup> or approximately 100 football pitches). With the installation of thousands of solar panels over such vast areas of land, soil properties such as albedo (solar reflectance) and vegetation index are modified, which may lead to changes in land–atmosphere processes.</p> <p>These changes can generate impacts on the microclimate, such as variations in surface humidity or temperature, compared to the surrounding (unaltered) area. It is necessary to quantify these impacts at the microclimatic scale over time through long-term studies, even though these effects result from the accumulation of instantaneous impacts induced by solar farms.</p>

#### IV. POSITIONS OFFERED

DATA ON THE ACTIVITIES/RESEARCH PROJECTS FOR WHICH SERVICES WILL BE PROVIDED	
<b>Position reference no.</b>	MISOL-25-INV1 - NRP: 6090051
<b>Description</b>	Researcher in Applied Fluid Mechanics for Renewable Energy
<b>Workplace</b>	CESGA, Avenida de Vigo s/n, Campus Vida, 15705 – Santiago de Compostela.
CONDITIONS OF THE POSITION	
<b>Type of contract</b>	Contrato de Actividades Científico-Técnicas.
<b>Employment category</b>	Postdoctoral researcher.
<b>Number of positions</b>	1
<b>Description</b>	The position involves developing and applying mesoscale simulation methods using the WRF code to improve the representation of photovoltaic farms in this model and to understand their impacts on the microclimate.
<b>Duties to be performed</b>	<p>Those required for the proper development of the research programme. To this end, the following tasks will be carried out:</p> <ul style="list-style-type: none"> <li>• Develop a parametrisation model of photovoltaic plants based on numerical simulation data.</li> <li>• Implement the parametrisation model of photovoltaic plants in WRF.</li> <li>• Perform mesoscale simulations of photovoltaic plants, with potential validation of results.</li> <li>• Publication and dissemination of results: preparation of scientific articles, collaboration with companies in disseminating findings, and preparation of reports and presentations for specialised journals and conferences.</li> </ul> <p>For the successful completion of these tasks, the selected candidate will be expected to interact with international research teams. Therefore, fluent communication skills in English, both spoken and written, are required.</p>
<b>Annual gross salary</b>	31.700€.
<b>Duration of the contract</b>	From the execution of the contract until the completion of the project (initially envisaged for 31/03/2027, with the possibility of extension until September 2027).
<b>Planned start date<sup>1</sup></b>	1 October 2025.
<b>Contract type</b>	Full-time.

<sup>1</sup> The planned start date may be altered depending on the date on which the contract is awarded

REQUIREMENTS FOR CANDIDATES			
Required Qualification	PhD in Civil, Mechanical, or Aeronautical Engineering.		
Required Experience	N/A.		
Languages	N/A.		
Other	At least 2 scientific articles in Q1 journals as first author or corresponding author, in the field of numerical simulation in fluid mechanics.		
ACHIEVEMENTS TO BE EVALUATED			
Item	Description of the item	Max. points	Min. points
1	<b>Assessment of the Curriculum Vitae</b> The following aspects will be evaluated: <ul style="list-style-type: none"><li>○ <b>Prior academic or professional experience associated with the duties of the position:</b><ul style="list-style-type: none"><li>• Scientific publications related to the functions of the position, in addition to those required.</li><li>• Presentations and papers at international conferences.</li><li>• Experience in using parallelised codes with MPI on HPC systems. <i>To assess this experience, the CV should include links to the corresponding publications or repositories.</i></li><li>• Experience in using the WRF code.</li><li>• Experience as a postdoctoral researcher in international research groups. <i>To assess this experience, the CV should indicate the research groups in which the candidate has worked, as well as the names of the projects undertaken.</i></li></ul></li><li>○ <b>Specific education and training aligned with the requirements of the contract offered.</b><ul style="list-style-type: none"><li>• Completion of a doctoral thesis in computational fluid mechanics.</li></ul></li></ul>	50	25
2	<b>Technical Statement</b>  Preparation of a research plan of a maximum of 2 A4 pages, in Arial font, size 11, with single line spacing (any content exceeding this length will not be considered).  The content must be prepared personally and exclusively by the candidate.  The evaluation of the research proposal will consider:	40	20

	<ul style="list-style-type: none"> <li>The scientific relevance of the proposal.</li> <li>Clarity of writing, as well as organisation and presentation of the document.</li> </ul> <p>As the selected candidate will be expected to interact with international research teams, requiring fluent communication skills in English, the research proposal must be written in English.</p>		
3	<p><b>Interview</b></p> <p>The interview will focus on assessing the candidate's cross-functional technical competencies and abilities, and suitability for the position offered.</p> <ul style="list-style-type: none"> <li><b>Technical Competencies:</b> Mastery of the subject-specific concepts in the areas related with the position.</li> <li><b>Cross-Functional Abilities:</b> Communication skills, teamwork and problem-solving capacity.</li> <li><b>Suitability for the Role:</b> The candidate's motivation, interest and alignment with the objectives and responsibilities of the position will be evaluated, along with their availability.</li> <li><b>Other considerations of importance to the position.</b></li> </ul> <p>As the selected candidate will be expected to interact with international research teams, requiring fluent communication skills in English, the interview will be conducted in English.</p>	10	5

#### DATA ON THE ACTIVITIES/RESEARCH PROJECTS FOR WHICH SERVICES WILL BE PROVIDED

<b>Position reference no.</b>	MISOL-25-INV2 - NRP: 6090052
<b>Description</b>	Predoctoral Researcher in Fluid Mechanics Applied to Renewable Energy
<b>Workplace</b>	CESGA, Avenida de Vigo s/n, Campus Vida, 15705 – Santiago de Compostela.

#### CONDITIONS OF THE POSITION

<b>Type of contract</b>	Contrato de Actividades Científico-Técnicas
<b>Employment category</b>	Predoctoral researcher
<b>Number of positions</b>	1
<b>Description</b>	The position involves developing the coupling between the DOFAS (microscale) and WRF (mesoscale) codes for renewable energy applications.
<b>Duties to be performed</b>	Those required for the proper development of the research programme. To this end, the following tasks will be carried out:

	<ul style="list-style-type: none"><li>• Familiarisation with the DOFAS and WRF codes.</li><li>• Develop a one-way coupling, obtaining data from WRF to feed into DOFAS.</li><li>• Validation for solar or wind energy case studies.</li><li>• Publication and dissemination of results: preparation of scientific articles, collaboration with companies, and preparation of reports and presentations for dissemination in specialised journals and conferences.</li></ul> <p>For the successful completion of these tasks, the selected candidate will be expected to interact with international research teams. Therefore, fluent communication skills in English, both spoken and written, are required.</p>		
Annual gross salary	28.500€.		
Duration of the contract	From the signing of the contract until the end of the project (initially scheduled for 31/03/2027).		
Planned start date <sup>2</sup>	1 October 2025		
Contract type	Full-time		
REQUIREMENTS FOR CANDIDATES			
Required Qualification	Level 3 (Bachelor's + Master's), according to the Spanish Qualifications Framework for Higher Education established by Royal Decree 1027/2011 of 15 July, in Civil, Mechanical, or Aeronautical Engineering.		
Required Experience	N/A.		
Languages	N/A.		
Other	N/A.		
ACHIEVEMENTS TO BE EVALUATED			
Item	Description of the item	Max. points	Min. points
1	<b>Assessment of the Curriculum Vitae</b> The following aspects will be evaluated: <ul style="list-style-type: none"><li>○ <b>Prior academic or professional experience associated with the duties of the position:</b><ul style="list-style-type: none"><li>• Experience in using Large-Eddy Simulation codes parallelised with MPI on HPC systems. <i>To assess this experience, the CV should include links to the corresponding publications or repositories.</i></li><li>• Scientific publications related to the functions of the position.</li></ul></li></ul>	50	25

<sup>2</sup> The planned start date may be altered depending on the date on which the contract is awarded

	<ul style="list-style-type: none"> <li>• Presentations and papers at international conferences.</li> <li>• Experience in using the WRF code.</li> <li>• Experience as a predoctoral researcher in international research groups. <i>To assess this experience, the CV should indicate the research groups in which the candidate has worked, as well as the names of the projects undertaken.</i></li> </ul> <p>○ <b>Specific education and training aligned with the requirements of the contract offered.</b></p> <ul style="list-style-type: none"> <li>• Additional postgraduate training.</li> </ul>		
2	<p><b>Technical Statement</b></p> <p>Preparation of a research plan of a maximum of 2 A4 pages, in Arial font, size 11, with single line spacing (any content exceeding this length will not be considered).</p> <p>The content must be prepared personally and exclusively by the candidate.</p> <p>The evaluation of the research proposal will consider:</p> <ul style="list-style-type: none"> <li>• The scientific relevance of the proposal.</li> <li>• Clarity of writing, as well as organisation and presentation of the document.</li> </ul> <p>As the selected candidate will be expected to interact with international research teams, requiring fluent communication skills in English, the research proposal must be written in English.</p>	40	20
3	<p><b>Interview</b></p> <p>The interview will focus on assessing the candidate's cross-functional technical competencies and abilities, and suitability for the position offered.</p> <ul style="list-style-type: none"> <li>▪ <b>Technical Competencies:</b> Mastery of the subject-specific concepts in the areas related with the position.</li> <li>▪ <b>Cross-Functional Abilities:</b> Communication skills, teamwork and problem-solving capacity.</li> <li>▪ <b>Suitability for the Role:</b> The candidate's motivation, interest and alignment with the objectives and responsibilities of the position will be evaluated, along with their availability.</li> <li>▪ <b>Other considerations of importance to the position.</b></li> </ul> <p>As the selected candidate will be expected to interact with international research teams, requiring fluent communication skills in English, the interview will be conducted in English.</p>	10	5

## V. PARTICIPATION

1. Applications are to be addressed to the MANAGER of CESGA, using *ANNEX I. APPLICATION FORM*, which must be accessible on the CESGA Foundation website (<http://www.cesga.es>). On this form, applicants must enter their identity and contact details, which will be used for communication with them.

The application must be submitted as shown in section 7 “Submission of Applications and Documentation” of the general bases for personnel selection.

## VI. DOCUMENTATION TO BE SUBMITTED

Candidates must submit the following documentation together with the application for the position:

1. **ANNEX I. APPLICATION FORM**, duly completed and signed.
2. **Curriculum Vitae**, in free form but including detailed references that allow verification of requirements and achievements shown in Annex II. The CV must also clearly state whether the candidate holds an accreditation/certificate for the language level required for the position or, on the contrary, does not.
3. **Technical proposal**, as specified in Annex II, Section IV Positions Offered, under the Merits to be Evaluated.

## VII. DEADLINE FOR SUBMISSION

The deadline for submitting applications will be 10 working days, counting from the day following the publication of this call for applications on the CESGA website.

## VIII. MAXIMUM TIME LIMIT FOR A DECISION ON THE CALL FOR APPLICATIONS

The maximum period for reaching a decision on the call for applications will be three months.

## IX. PROOF OF REQUIREMENTS AND ACHIEVEMENTS

Candidates proposed for hiring must submit the documentation proving compliance with the requirements and achievements for that stage of the competition. They must also submit the remaining additional documentation referred to in this Annex using the methods listed in the section *Submission of Applications and Documentation* of the general bases.

	DESCRIPTION OF THE DOCUMENTATION TO BE PROVIDED
DEGREES	Uncertified copy of the degree(s) or document that reliably proves the possession of the corresponding degree (Undergraduate, Masters, Doctorate and other qualifications).
	Uncertified copy of the official academic transcript.
	In cases in which the topic of the doctoral thesis is to be assessed, a sworn statement must be submitted, specifying the title and a summary of the doctoral thesis that clearly shows that the main topic is related with that being evaluated.
COURSES AND TRAINING	Certified copy of the certificate of attendance or completion, including the topics of the course and the number of hours. Credits obtained from



	normal studies will not be considered to be courses.
<b>CERTIFICATES</b>	Uncertified copy of the official certificate.
<b>PUBLICATIONS</b>	DOI/URL/ISBN and a copy of the publication.
<b>EXPERIENCE</b>	Uncertified copy of the employment contract showing expressly the name and code of the project or contract or a certificate from the entity in which the candidate participated, including the start and end dates of participation.
	Copy of the working life for employment contracts in Spain or the international document that substitutes it, including the duration in days or months of the contract.
	Sworn statement signed by the applicant, with a description of each of the projects or contracts on which he/she worked, of not more than one side of A4 paper each, justifying the link between it and the object of the criterion.
	In cases in which experience linked to the development of digital tools and applications will be evaluated, a link to the code repositories or portfolios: Links to public repositories (GitHub, GitLab, etc.) or portfolios showing examples of scripts or tools developed. Each example must include a brief description of its purpose and context.
<b>LANGUAGES</b>	If appropriate, an uncertified copy of the certificate of mastery of the Galician language, CELGA 4 or similar studies approved by the competent language policy body.
	If appropriate, an uncertified copy of the diploma or certificate in English at the level required in Annex II or an equivalent accreditation/certificate taking into consideration the CEFR (Common European Framework of Reference) scale.

## X. PUBLICATION

All documents relating to the selection process for this position will be posted on the CESGA website.