

STANDARD DECLARATION OF INTERESTS (DOI) FORM

Definitions:

“**Activity**” or “**Activities**” (capitalised ‘A’) means an activity or activities of or under the Group of Chief Scientific Advisors for instance in its formation as Coordination Group or in sub-groups, or that or those in relation thereto, for example, SAPEA Working Groups.

"**Conflict of interest**" means any situation where an individual has an interest that may compromise or be reasonably perceived to compromise the individual’s capacity to act independently and in the public interest when providing advice to the Commission in relation to Activities performed.

"**Immediate family member**" means the individual’s spouse, children and parents. "Spouse" includes a partner with whom the individual has a registered non marital regime. "Children" means the child(ren) the individual and the spouse have in common, the own child(ren) of the individual and the own child(ren) of the spouse.

"**Legal entity**" means any commercial business, industry association, consultancy, research institution or other enterprise whose funding is significantly derived from commercial sources. It also includes independent own commercial businesses, law offices, consultancies or similar.

"**Body**" means a governmental, international or non-profit organisation.

"**Meeting**" includes a series or cycle of meetings.

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**Please answer each of the questions below. If the answer to any of the questions is "yes", please briefly describe relevant interests and circumstances, as appropriate.**

**If you do not describe relevant interests and your DoI form is considered to be incomplete, or if declared interests are considered to constitute a Conflict of Interest, you may be excluded from all or part of the Activities.**

First name: Carlos
Family name: Alejaldre
Date: July 6 <sup>th</sup> 2020
Description of the Activity: SAPEA Working Group on the “Systemic Approach for the Energy Transition in Europe

## 1 EMPLOYMENT CONSULTANCY AND LEGAL REPRESENTATION

<b>Within the past 5 years, were you employed or have you had any other professional relationship with a natural or legal entity, or held any non-remunerated post in a legal entity or other body with an interest in the field of the Activity in question?</b>	<b>yes</b>	<b>no</b>
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<i>1a</i>	<i>Employment</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>1b</i>	<i>Consultancy, including services as an advisor</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>1c</i>	<i>Non-remunerated post</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>1d</i>	<i>Legal representation</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<i>activity</i>	<i>time period (from... until month/year)</i>	<i>name of entity or body</i>	<i>description</i>
<b>Researcher</b>	<b>1986 – 10/2018</b>	<b>Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT)</b>	CIEMAT is a public research body assigned to the Ministry of Science and Innovation of Spain, focusing on energy and environment and the technologies related to them. It has offices in several different regions of Spain, and its activity is structured around projects which form a bridge between R&D&I and social interest goals.
<b>Director General</b>	<b>10/2018 - today</b>		

## 2 MEMBERSHIP OF MANAGING BODY, SCIENTIFIC ADVISORY BODY OR EQUIVALENT STRUCTURE

<b>Within the past 5 years, have you participated in the internal decision-making of a legal entity or other body with an interest in the field of Activities in question or have you participated in the works of a Scientific Advisory Body with voting rights on the outputs of that entity?</b>	<b>yes</b>	<b>no</b>
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2a	Participation in a decision-making process		<input type="checkbox"/>	<input checked="" type="checkbox"/>
2b	Participation in the work of a Scientific Advisory Body		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Activity</i>	<i>Time period (from... until month/year)</i>	<i>Name of legal entity or body</i>	<i>Description</i>	
Standing Advisory Group on Nuclear Energy (SAGNE)	March/2019 – today	International Atomic Energy Agency (IAEA)	SAGNE is the IAEA DG's advisory board for the activities related to Nuclear Energy, Fuel Cycle and Waste Management and Nuclear Science, including nuclear fusion	

### 3 RESEARCH SUPPORT

	<b>Within the past 5 years, have you, or the research entity (institute or department) to which you belong, received any support from a legal entity or other body with an interest in the field of Activities in question?</b>	yes	no
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3a	Research support, including grants, rents, sponsorships, fellowships, non-monetary support	X	<input type="checkbox"/>
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<i>Activity</i>	<i>Time period (from... until month/year)</i>	<i>Name of legal entity or body</i>	<i>Description</i>
<b>HYDROGEN</b>  HYDROSOL BEYOND: Thermochemical HYDROgen production in a SOLar structured reactor:	01/01/2019 - 31/12/2022	European Commission	The HYDROSOL-beyond proposed action is a continuation of the HYDROSOL-technology series of projects based on the utilization of concentrated solar thermal power for the production of Hydrogen from the

facing the challenges and beyond			dissociation of water via redox-pairbased thermochemical cycles.
<b>WAVE ENERGY</b> SEA-TITAN: Surging Energy Absorption Through Increasing Thrust And efficiency	01/04/2018-31/03/2021	European Commission	The SEA-TITAN project aims at making a step change in the wave energy sector by designing, building, testing and validating a crosscutting and innovative Direct Drive Power Take-Off (PTO) solution to be used with multiple types of wave energy converter
<b>BIOFUEL</b> BECOOL: Brazil-EU Cooperation for Development of Advanced Lignocellulosic Biofuels	01/06/2017-31/05/2021	European Commission	The main objective of the BECOOL (EU) and BioVALUE (Brazil) projects is to strengthen EU-Brazil cooperation on advanced lignocellulosic biofuels. Information alignment, knowledge synchronization, and synergistic activities on lignocellulosic biomass production logistics and conversion technologies are key targets of both projects and will bring mutual benefits.
<b>CARBON CAPTURE, UTILIZATION AND STORAGE</b> STRATEGY CCUS: Strategic Planning of Regions and Territories in Europe for Low-Carbon Energy and Industry Through CCUS	01/05/2019-30/04/2022	European Commission	The STRATEGY CCUS project aims to elaborate strategic plans for CCUS development in Southern and Eastern Europe at short term (up to 3 years), medium term (3-10 years) and long term (more than 10 years). Specific objectives are to develop: <ul style="list-style-type: none"> <li>• Local CCUS development plans, with local business models, within promising start-up regions;</li> <li>• Connection plans with transport corridors between local CCUS clusters, and with the North Sea infrastructure, in order to improve performance and reduce costs, thus contributing to build a Europe-wide CCUS infrastructure.</li> </ul>
<b>BIOENERGY</b> BIOFIT: Bioenergy retrofits for Europe's industry	01/10/2018-30/09/2021	European Commission	One way in which bioenergy production can be increased is through retrofitting, the addition of new technology or features to existing industrial installations. Retrofitting means often lower capital expenditure (CAPEX),

			shorter lead times, faster implementation, less production time losses, lower risks and therefore faster project development and increased market benefits. BIOFIT aims to facilitate bioenergy retrofitting in five industries: first-generation biofuels, pulp and paper, fossil refineries, fossil firing power and combined heat and power plants.
<b>CONCENTRATED SOLAR POWER</b>  SFERA III: Solar Facilities for the European Research Area - Third Phase	01/01/2019-31/12/2022	European Commission	The overall objective of this project is to carry on with the work done during the past 8 years for the sustainability of the activities of the European advance solar laboratories involved in SFERA and SFERA 2nd phase, and extend these activities to the new solar laboratories which will bring added value to this European Research Infrastructure for Concentrating Solar Power. The specific goal is to contribute to ensure the long-term sustainability of these European advance solar laboratories, supporting Europe as a global leader in solar research infrastructures.
<b>SOLAR THERMAL ELECTRICITY</b>  MUSTEC: Market uptake of Solar Thermal Electricity through Cooperation	01/10/2017-30/09/2020	European Commission	In the light of the EU 2030 Climate and Energy framework, MUSTEC aims to explore and propose concrete solutions to overcome the various factors that hinder the deployment of concentrated solar power (CSP) projects in Southern Europe capable of supplying renewable electricity on demand to Central and Northern European countries. To do so, the project will analyze the drivers and barriers to CSP deployment and renewable energy (RE) cooperation in Europe, identify future CSP cooperation opportunities and will propose a set of concrete measures to unlock the existing potential.
<b>SOLAR HEAT FOR INDUSTRIAL PROCESSES</b>  INSHIP: Integrating National Research Agendas	01/01/2017-31/12/2020	European Commission	Despite process heat is recognized as the application with highest potential among solar heating and cooling applications, Solar Heat for Industrial Processes (SHIP) still presents a modest

on Solar Heat for Industrial Processes			share of about 0.3% of total installed solar thermal capacity. As of today's technology development stage - economic competitiveness restricted to low temperature applications; technology implementation requiring interference with existing heat production systems, heat distribution networks or even heat consuming processes
<b>SALINE GROUNDWATER AND INDUSTRIAL WASTEWATER</b>  INDIA-H2O: Bio-mimetic and phyto-technologies Designed for low-cost purification and recycling of water	01/02/2019-31/07/2023	European Commission	INDIA-H2O will develop, design and demonstrate high-recovery, low-cost water treatment systems for saline groundwater and industrial wastewaters. The focus for developments will be in the arid state of Gujarat, where surface water resources are very scarce. We will develop novel batch-reverse osmosis technology for a 10-fold reduction in specific energy consumption with high fractions of water recovery (80%) reducing /m <sup>3</sup> operating costs to below €0.35/m <sup>3</sup> (<30 rupees/m <sup>3</sup> ).
<b>WATER TREATMENT</b>  PANI WATER: Photo-irradiation and Adsorption based Novel Innovations for Water-treatment	01/02/2019-31/01/2023	European Commission	About 2.1 Billion people live without access to safe water sources. Contaminants of Emerging Concerns (CECs) such as pharmaceuticals, personal care products, pesticides and nanoparticles are increasingly being detected in wastewater and in drinking water around the world, in addition to geogenic pollutants, pathogens, antibiotic resistant bacteria and antibiotic resistance genes. Water treatment systems that remove CECs and common contaminants from wastewater and drinking water are therefore urgently needed.  PANI WATER will develop, deploy and validate in the field six prototypes for the removal of contaminants, including CECs, from wastewater and drinking water. These prototypes will be deployed in peri-urban and rural areas in India.

<p><b>HIGH PERFORMANCE COMPUTING TO ENERGY TRANSITION</b></p> <p>EOCO-E-II: Energy Oriented Center of Excellence : toward exascale for energy</p>	<p>01/01/2019-31/12/2021</p>	<p>European Commission</p>	<p>The Energy-oriented Centre of Excellence (EoCoE) applies cutting-edge computational methods in its mission to accelerate the transition to the production, storage and management of clean, decarbonized energy. EoCoE is anchored in the High Performance Computing (HPC) community and targets research institutes, key commercial players and SMEs who develop and enable energy-relevant numerical models to be run on exascale supercomputers, demonstrating their benefits for low-carbon energy technology. The present project will draw on a successful proof-of-principle phase of EoCoE-I, where a large set of diverse computer applications from four such energy domains achieved significant efficiency gains thanks to its multidisciplinary expertise in applied mathematics and supercomputing.</p>
<p><b>FUSION AND FISSION MATERIALS</b></p> <p>M4F: Multiscale modelling for Fusion and Fission Materials</p>	<p>01/09/2017-31/08/2021</p>	<p>European Commission</p>	<p>The main goal of M4F project is to bring together the fusion and fission materials communities working on the prediction of microstructural-induced irradiation damage and deformation mechanisms of irradiated ferritic/martensitic (F/M) steels. M4F project is a multidisciplinary one, where both modeling and experiments at different scales will be integrated to foster the understanding of complex phenomena associated to the formation and evolution of irradiation induced defects and their role on the deformation behavior. In addition, an attempt to reduce the gap between the materials science activities as model and experiments, and the needed inputs on design codes will be included.</p>
<p><b>NUCLEAR MATERIALS</b></p> <p>ORIENT-NM: Organisation of the European Research</p>	<p>01/10/2020-31/03/2023</p>	<p>European Commission</p>	<p>ORIENT-NM answers the Euratom WP 2019-20 call NFRP-08, which requests to explore the possibility of establishing a European Joint Programme (EJP) on nuclear materials.</p>

Community on Nuclear Materials			
<b>FUSION ENERGY</b> DONES-PreP: IFMIF-DONES Preparatory Phase	01/10/2019-30/09/2021	European Commission	The International Fusion Materials Irradiation Facility - Demo Oriented NEutron Source (IFMIF-DONES) is a novel Research Infrastructure based on a unique neutron source with energy spectrum and flux tuned to those expected for the first wall in future fusion reactors, to investigate radiation damage phenomena and to characterize materials irradiated under such conditions. It will also develop a unique high-current high duty-cycle accelerator technology, liquid metal target technology and advanced control systems.

#### 4 FINANCIAL INTERESTS

<b>Do you have current investments in a legal entity with an interest in the field of Activities in question, including holding of stocks and shares, and which amounts to more than 10,000 EUR per legal entity or entitling you to a voting right of 5% or more in such legal entity?</b>	<b>yes</b>	<b>no</b>
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<i>4a</i>	<i>Shares</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>4b</i>	<i>Other stock</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<i>Investment</i>	<i>Name of legal entity</i>	<i>Description</i>

#### 5 INTELLECTUAL PROPERTY



	<b>Do you have any intellectual property rights that might be affected by the outcome of the Activities in question?</b>	<b>yes</b>	<b>no</b>
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<i>5a</i>	<i>Patent, trademarks, or copyrights</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>5b</i>	<i>Others</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<i>Intellectual property</i>	<i>Description</i>

## 6 PUBLIC STATEMENTS AND POSITIONS

	<i>Within the past 5 years, have you provided any expert opinion or testimony in the field of Activities in question, for a legal entity or other body as part of a regulatory, legislative or judicial process? Within the past 5 years have you held an office or other position, paid or unpaid, where you represented interests or defended a public statement or position in the field of Activities in question?</i>	<b>yes</b>	<b>no</b>
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<b>6a</b>	<b>For a legal entity or other body as part of a regulatory, legislative or judicial process</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>6b</b>	<b>Represented interests or defended an opinion</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<b>Activity</b>	<b>Time period (from... until month/year)</b>	<b>Name of legal entity or body</b>	<b>Description</b>

**7 INTERESTS OF IMMEDIATE FAMILY MEMBERS**

yes

no

<b>7a</b>	<b>To your knowledge, are there any interests of your immediate family members which could be seen as undermining your independence when providing advice to the Commission in the field of the Activities in question?</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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<i>Interests</i>	<i>Time period (from... until month/year)</i>	<i>Name of legal entity or body</i>	<i>Description</i>

<b>7b</b>	<i>If interests of your immediate family members are declared, it is your responsibility to inform them about the collection and publication of information on their interests included in the DoI and to provide them with the privacy statement attached to the guidance for filling in this DoI, and this at the latest when you file the DoI form with the Commission.</i>
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**8 OTHER RELEVANT INFORMATION**

yes

no

<b>8a</b>	<b>Are there any other elements that could be seen as undermining your independence when providing advice to the Commission in the field of the Activities in question?</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Description:

I hereby declare on my honour that I have read the guidance for completing this form. I also declare on my honour that the information disclosed in this form is true and complete to the best of my knowledge.

Should there be any change to the above information, including as regards upcoming activities, I will promptly notify the competent department or entity and complete a new DoI form describing the changes in question.

I am informed that my personal data are stored, processed and published in accordance with the applicable data protection legislation.

I have been informed that this form may be shared with the European Commission and will be publicly available once the SAPEA report is published.

Date: September 25, 2020

Signature: \_\_\_\_\_