STRATEGIC R&I AGENDA

EERA JP clean **E**nergy tran**S**ition for **S**ustainable **S**ociety (e3s)

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01. INTRODUCTION

The **EERA Joint Programme on clean Energy tranSition for Sustainable Society (e3s)** was founded in 2013 with the ambition of addressing some of the systemic and not merely technical and technological aspects related to the energy transition.

In light of the rapid structural and policy changes primarily caused by the increasing pressure of climate change, the Covid-19 pandemic crisis and the Russian invasion of Ukraine, in early 2022 the JP e3s began a repositioning process that, while keeping its original ambitions unchanged, led to an update of its main focuses, activities and objectives.

This process resulted in a new **Strategic Research & Innovation Agenda (SRIA)** for the period 2023-2030 which aims at repositioning the JP e3s for what concerns the provision of knowledge, expertise and research on the non-technical aspects of the Energy Transition that can be identified as the Social Sciences, Humanities and Environmental (SSH-E) domain.

In short, the ambition of the SRIA is to match the SSH-E competences' demand and supply as much as possible in order to support a just, sustainable and effective Clean Energy Transition (CET).

02. MISSION

The mission of EERA JP e3s is to advance research and **provide EERA, the other JPs and the wider scientific and policy community with evidence, knowledge and tools to address the SSH-E challenges, impacts and interconnections of clean energy transition**. The final aim is to support public and private decision makers in defining and implementing effective strategies and policies at EU, national and local, as well as international level, to **better exploit the immense potential for social innovation in the energy field**, also taking into account social, environmental and economic interactions, and to **overcome existing societal barriers**.

03. OBJECTIVES

1. Contribute to the effective and successful achievement of the European energy and climate targets
2. Provide strategic inputs for the definition of best energy policies and enhance their proper implementation
3. Enhance the integration of SSH-E in energy technologies development processes and deployment
4. Obtain a better comprehension of factors influencing the participation of citizens in the energy system
5. Align different scientific profiles, research capacities and experience, generating synergies
6. Dissemination of scientific knowledge, supporting data transparency, availability & accessibility

04. IMPACTS

In terms of impacts, **EERA JP e3s aims at producing added value for 4 different stakeholders** in the short, medium and long term:

	SHORT-TERM OUTPUTS	MEDIUM-TERM OUTCOMES	LONG-TERM IMPACTS
e3s research community	High-quality research proposals and projects & joint scientific papers	Contributions to and definition of EU research agenda in energy-SSH-E	Positioning of e3s as a leading, reference research platform in energy-SSH-E
EERA community	Complementary expertise to more technology-oriented EERA JPs & evidence-based insights supporting EERA's participation in the EU and international policy forums	More holistic understanding of barriers and drivers of energy transition in the EERA JPs & consolidating the policy support function of EERA	Contributions to achievement of objectives of the EERA JPs & reinforcing EERA's positioning in the EU and international decision-making forums
Policymakers	Strategic inputs for policy design, implementation, and evaluation	Enhanced knowledge and tools for policy making	Contributions to better policies to support clean energy transition
Industry	Insights on user acceptance, consumer behaviour and participatory approaches	Better informed decision-making	Contributions towards more competitive EU clean energy industry

05. SCIENTIFIC DOMAINS

The main competences, skills, tools and experiences referred to the SSH-E aspects that JP e3s is able to cover and provide to the wider energy (scientific and policy) community are clustered in **4 scientific domains (D)**. Moreover **2 transversal domains (TD)** refer to knowledge that serves as a tool to define and explore the former 4.

D.1

ENGAGEMENT, ACCEPTANCE AND PARTICIPATION

D.2

ENERGY DEMAND MANAGEMENT AND REDUCTION

TD.1

POLICY

D.3

ENERGY JUSTICE AND ENERGY DEMOCRACY

D.4

MACROECONOMIC MODELLING, ECONOMICS AND BUSINESS

TD.2

TECHNO-ECONOMIC ENERGY SYSTEM MODELLING, IMPACT ASSESMENT AND DATA

06. SUB-PROGRAMMES

SP1
FOSTERING CHANGES IN ENERGY CONSUMPTION: A PATHWAY TO DEMAND REDUCTION

To understand the social, cultural and economic aspects that shape current energy consumption patterns in order to address the challenges and opportunities for behavioural, practice and organisational changes that might decrease the individuals, companies, public institutions and aggregate final energy demand. This will be tackled by accounting for both energy efficiency and energy savings, as well as direct and indirect energy consumption.

SP2
JUST TRANSITION AND GOVERNANCE OF THE ENERGY TRANSITION

To identify and address the necessary changes in the governance structures of the energy system at all levels to make the ET a participatory and inclusive process able to meet the climate change targets, jointly with the empowerment of citizens and vulnerable groups and the satisfaction of the energy needs for all.

SP3
SUSTAINABILITY OF THE ENERGY TRANSITION

To guide the further development and application of concepts of a stakeholder-based comprehensive assessment on energy technologies contributing to a sustainable energy system, but also of possible energy futures and the paths to them, considering the demands of decision-maker.

SP4
MARTKET AND BUSINESS MODELS OF THE ENERGY TRANSITION

To guide the development of sound and fair markets for energy vectors, flexibility and emissions thereby driving the system forward with an optimal and affordable integration of RES technologies in the energy mix and consumption patterns.

SP5
TRANSITION PATHWAY MODELLING

To provide state-of-the-art tools and methods for assessment of policy, social and environmental aspects of clean energy transition and energy system development and ensure the integrity of these in the contribution to transition pathway development.

EERA

European Energy Research Alliance

clean Energy tranSition for Sustainable Society (e3s)

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