

Smart Specialisation Platform on Energy

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*Serving society
Stimulating innovation
Supporting legislation*

Why energy?

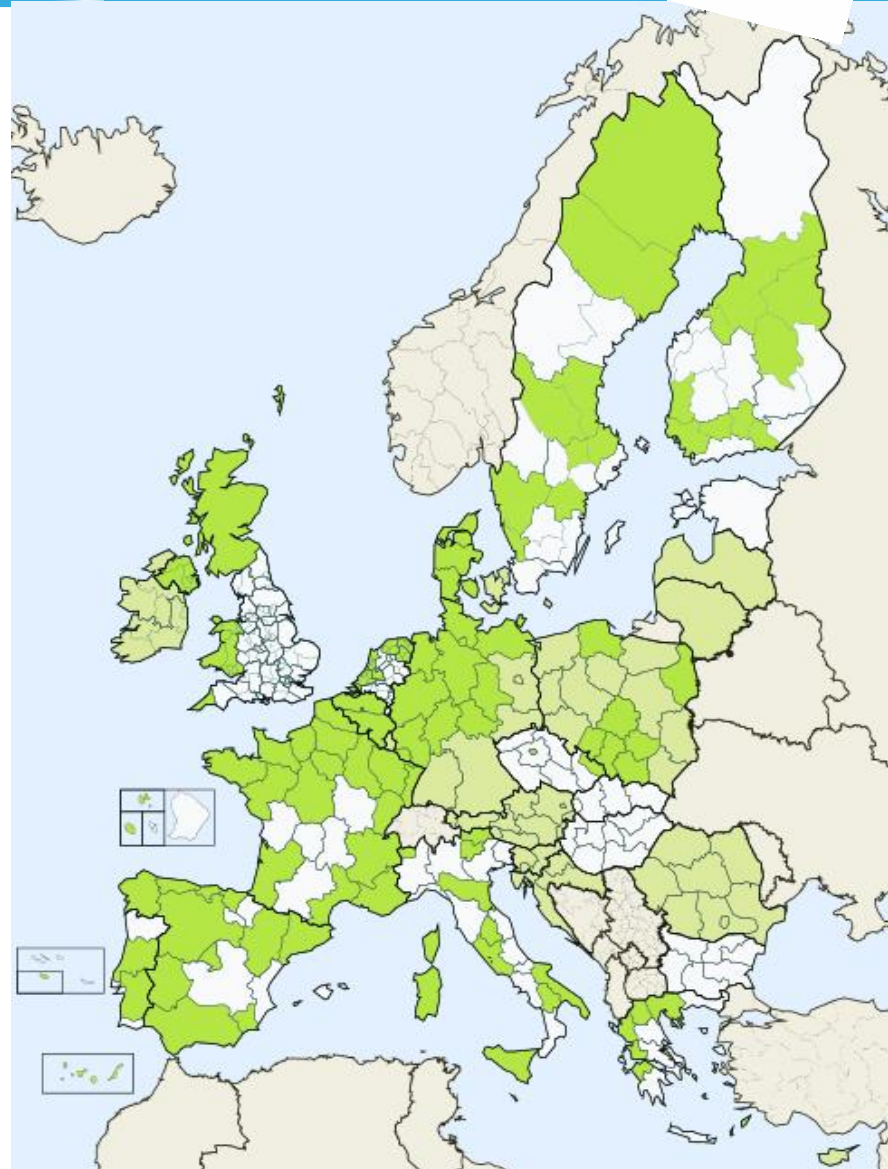


EU-28 energy priorities in online Eye@RIS3 tool

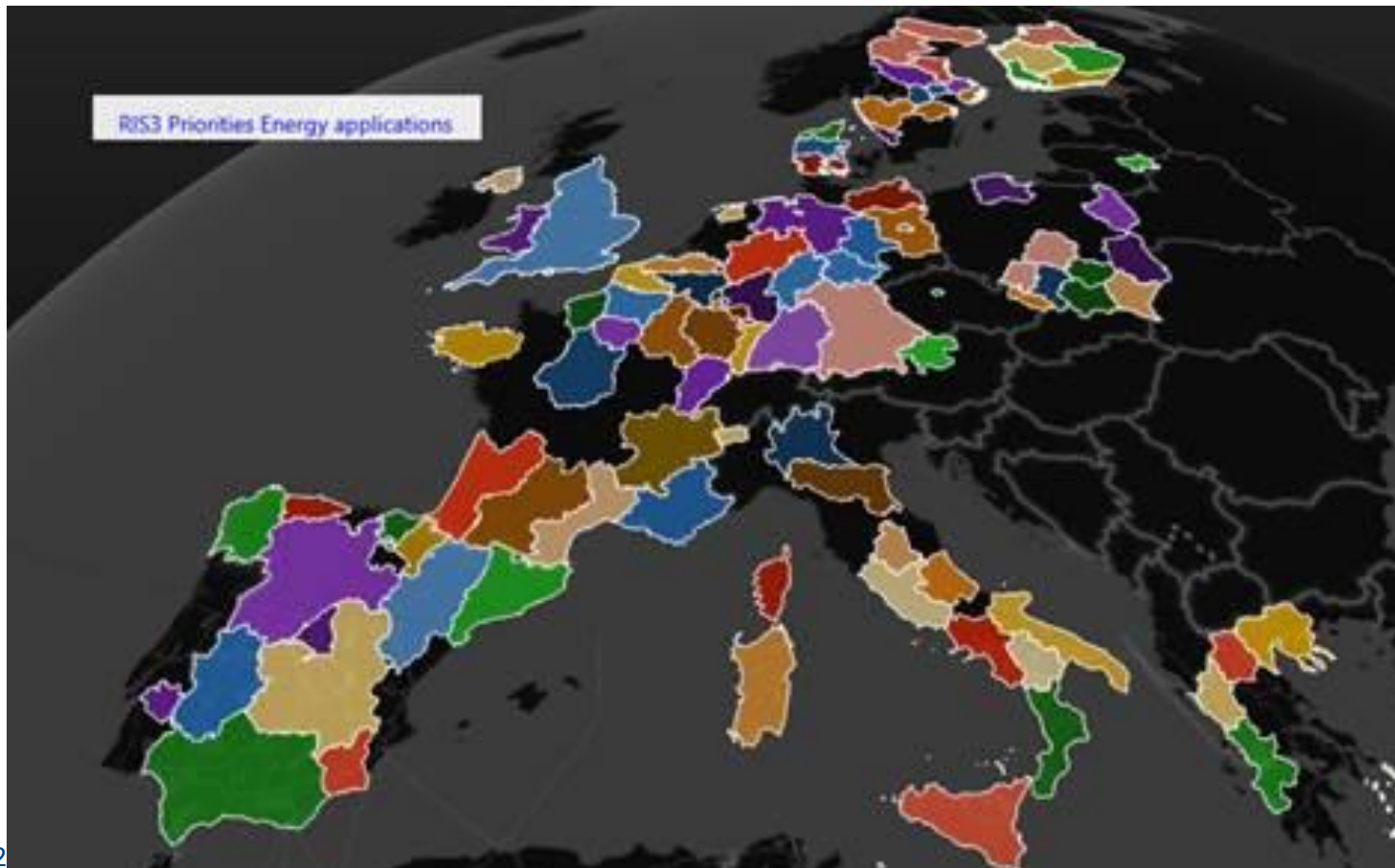
- Energy is the **most popular** priority in S3
- **2/3** of all regions have chosen an energy priority.
 - 12 countries
 - 100 EU regions
 - some both at the national and regional level – e.g. DE, DK, PL

EU Countries with Encoded S3 Priorities

EU Regions with Encoded S3 Priorities



Mapping



S3P on Energy



DG
REGIO

JRC

DG
ENER

- Supports the optimal and effective uptake of the Cohesion Policy funds for Energy.
- Assists countries and regions to set up strategies to accelerate the development of a technology-based low-carbon economy.

Smart Specialisation Platform on ENERGY



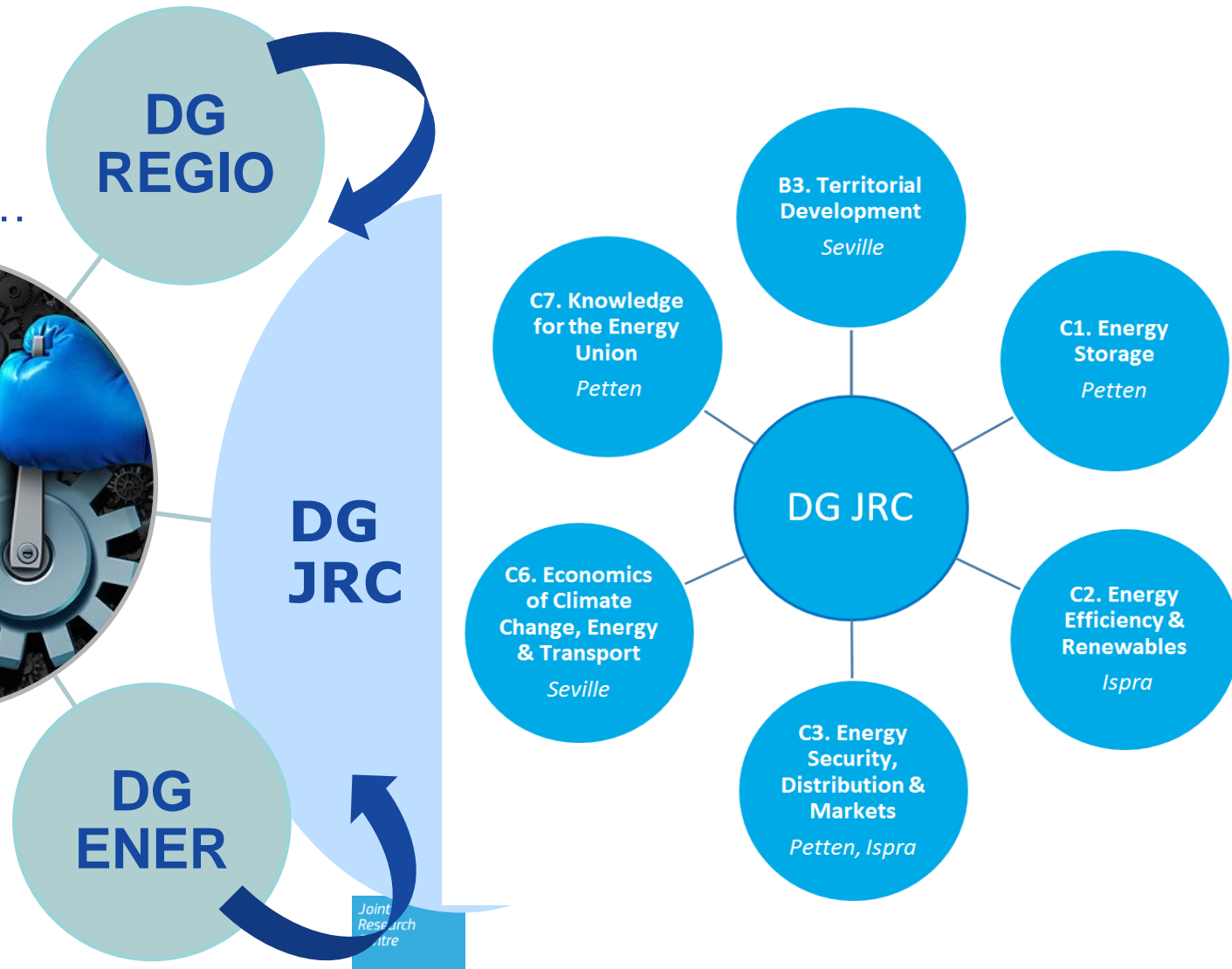
Key players

JRC's multidisciplinary competences in

- energy,
- innovation,
- regional policy...



...integrated in a single project.



TASKS

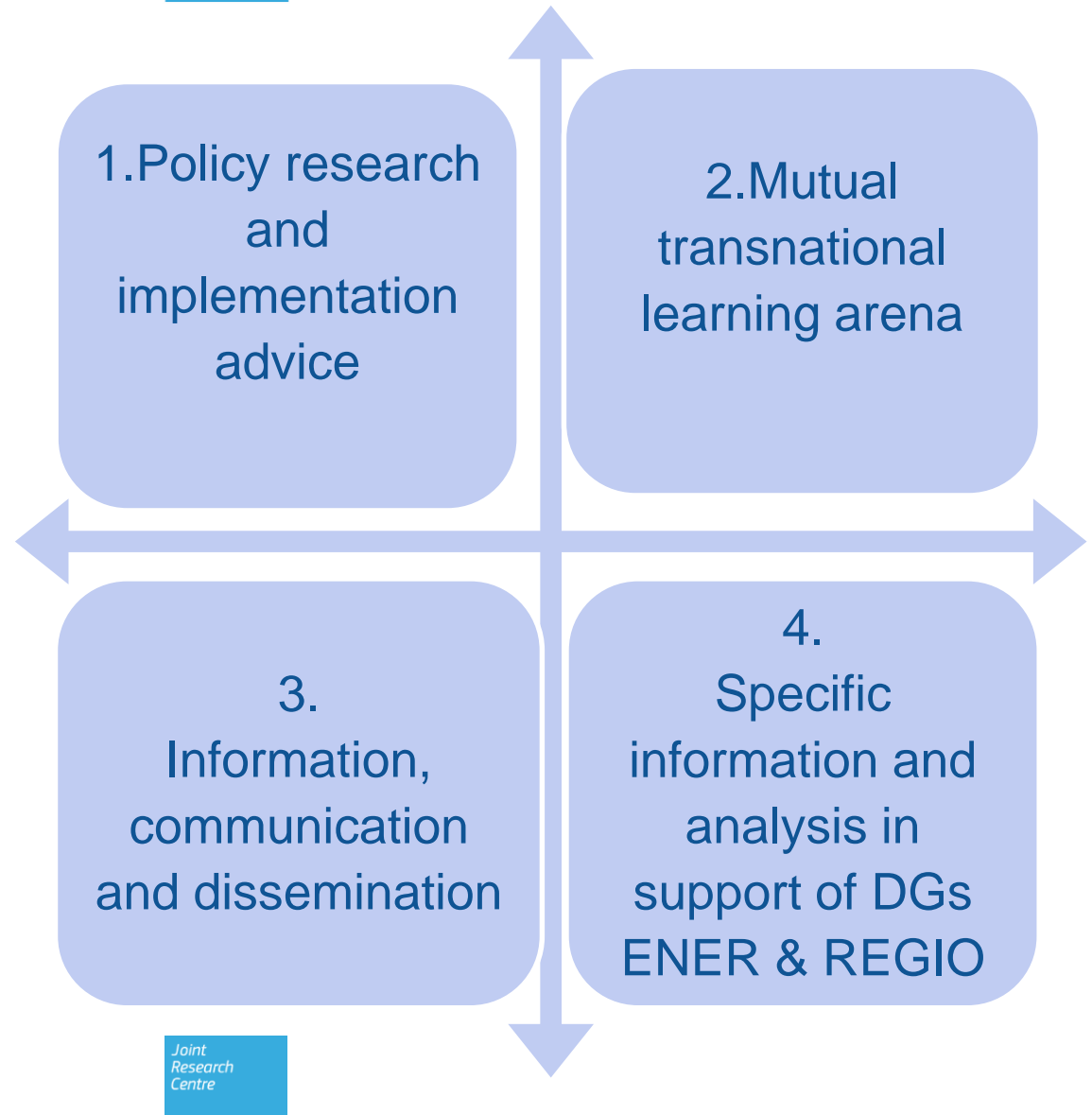
divided into

Four work packages



Objectives:

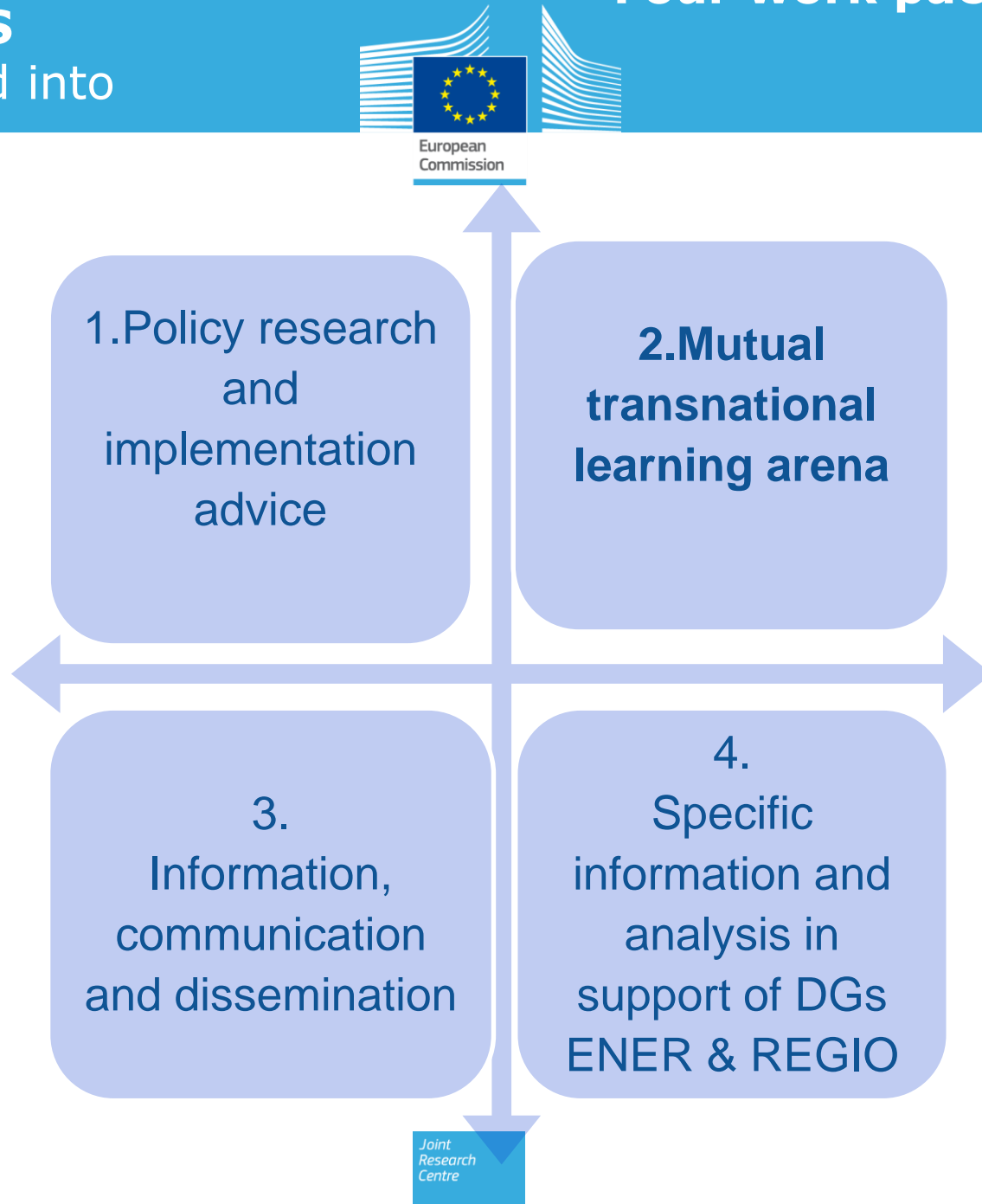
- Optimal uptake of the Cohesion Policy funds for energy
- Align energy innovation at national, regional and local level with the EU priorities



TASKS

divided into

Four work packages



"S3 Energy Partnerships"

offering interactive and participatory arenas for interregional cooperation

Marine Renewable Energy

Interested regions: Basque Country, Andalusia, Asturias, Navarra, (ES), Scotland (UK), Brittany, Normandie (FR), Dalarna, Skåne (SE), Emilia-Romagna, Lombardia (IT), Flanders (BE), Norte (PO), Ostrobothnia (FI), Southern Denmark (DK), Sogn og Fjordane (NO).

Identified links with other initiatives: ADMA Pilot of the Vanguard Initiative; Conference of Peripheral and Maritime Regions (CPMR); regional clusters; Ocean Energy Europe; Ocean Energy Forum; OceanEra-Net; Horizon 2020 projects (e.g. ETIPWind, ETIP OCEAN); Interreg projects...

Bioenergy

Interested regions: Lapland, North Karelia, South Savo, East and North Finland (FI), Castilla y Leon, Extremadura, Asturias (ES), Western Macedonia (GR), Eastern Norway (NO), North East Romania (RU) and Norrbotten, Jokkmokk (SE)

Identified links with other initiatives: ERRIN bioeconomy Working Group and its bioeconomy regions mapping; [JRC bioeconomy observatory](#); Vanguard Initiative on bioeconomy; Committee of the Regions and Knowledge exchange platform on bioeconomy; EU-funded projects such as Bioregions; National bioenergy region initiatives such as the German Bioenergie Regionen...

Sustainable construction

Interested regions: Andalusia, Navarra (ES), Norra Mellansverige y North Midsweden (SE), Lapland (FI), Gloucestershire County (UK), Gorenjska (SI), Rzeszow (PL), North-West Croatia, Jämtland Region (SE), Lithuania.

Identified links with other initiatives: ERRIN Energy Working Group; Interreg Europe project BUILD2LC...

Smart Grids

Interested regions: Pomorskie (PO), Algarve (PT), Bretagne, Provence-Alpes-Côte d'Azur (FR), Northern Netherlands (NE), South Trans-Danubian (HU), Andalusia, Basque Country (ES), North Midsweden (SE), West Finland (FI).

Identified links with other initiatives: [JRC Smart Grid Observatory](#), regional clusters, Horizon 2020, Interreg projects (e.g. SET-UP)...



"POTENTIAL FUTURE S3 Energy Partnerships"

offering interactive and participatory arenas for interregional cooperation

Solar

Wind

Fuel Cells and Hydrogen

Heating and Cooling?



LIST OF EVENTS OF THE S3PENERGY

Date	Title	City (Country)
26 May 2015	High level launching event of the S3PEnergy	Brussels (BE)
22 April 2015	First Smart Specialisation workshop on Fuel Cells & Hydrogen (co-organised JU-Rhone-Alpes)	Lyon (FR)
8-9 July 2015	113th Plenary Session of the Committee of the Regions CoR (with Exhibition stand to explain to interested CoR Members what the S3P on energy is about).	Brussels (BE)
8-9 October 2015	RIS3 Implementation workshop on Blue Growth and Marine Energy (with Canarias)	Las Palmas (ES)
27-30 October 2015	Support to the EU Strategy for the Danube Region (EUSDR)	Ulm (DE)
3 Dec 2015	Towards a model of Sustainable Construction and Energy Efficient Buildings	Seville (ES)
9 March 2016	Embedding Energy Union in the Regions , co-organised with ERRIN (European Regions Research and Innovation Network)	Brussels (BE)
06 April 2016	Smart Specialisation (energy priorities), (back to back with S2E national event in Slovenia)	Ljubljana (SI)
10-11 May 2016	III European Network of Energy Authorities and Managing Authorities of the Cohesion Policy	Brussels (BE)
1-2 June 2016	SMART REGIONS Conference - High Level Event : Thematic Session on Energy, Brussels, (co-organised JU-RA)	Brussels (BE)
16 June 2016	Sustainable Energy Week: Smart Specialisation in Energy. How Europe's regions are implementing their priorities	Brussels (BE)
23-24 June 2016	Smart Grids and Smart Specialisation Smart Mediterraneo - IET	Bari (IT)
4-5 July 2016	How to build Smart Energy Regions : Regional perspectives on energy transition (with Baden-Württemberg)	Karlsruhe (DE)
13-14 October 2016	S3PEnergy in the European Week of Regions and Cities (EWRC) 2016 : <ul style="list-style-type: none"> - Plenary session: "Smart Specialisation in Energy and innovation in European Regions" - Parallel working sessions on S3 Energy Partnerships 	Brussels (BE)

Events



All with external partners

Date	Title	City (Country)
27 May 2015	High level launching event of the S3P Platform	Brussels (BE)
May 2015	Fuel Cells & Hydrogen(co-organised JU-Rhone-Alpes)	Lyon (FR)
13–15 Oct.	Blue Growth and Marine Energy (with Canarias)	Las Palmas (ES)
27–30 Oct.	Support to the Danube Strategy+EUSDR	Ulm (DE)
3 Nov.2015	Sustainable Energy Efficiency Construction (with Andalucia)	Seville (ES)
9 March 2016	Regions and energy union, co-organised with ERRIN (European Regions Research and Innovation Network) - Report	Brussels (BE)
April 2016	Smart Specialisation (energy priorities), (<i>back to back with S2E with SI</i>)	Ljubiliana (SI)

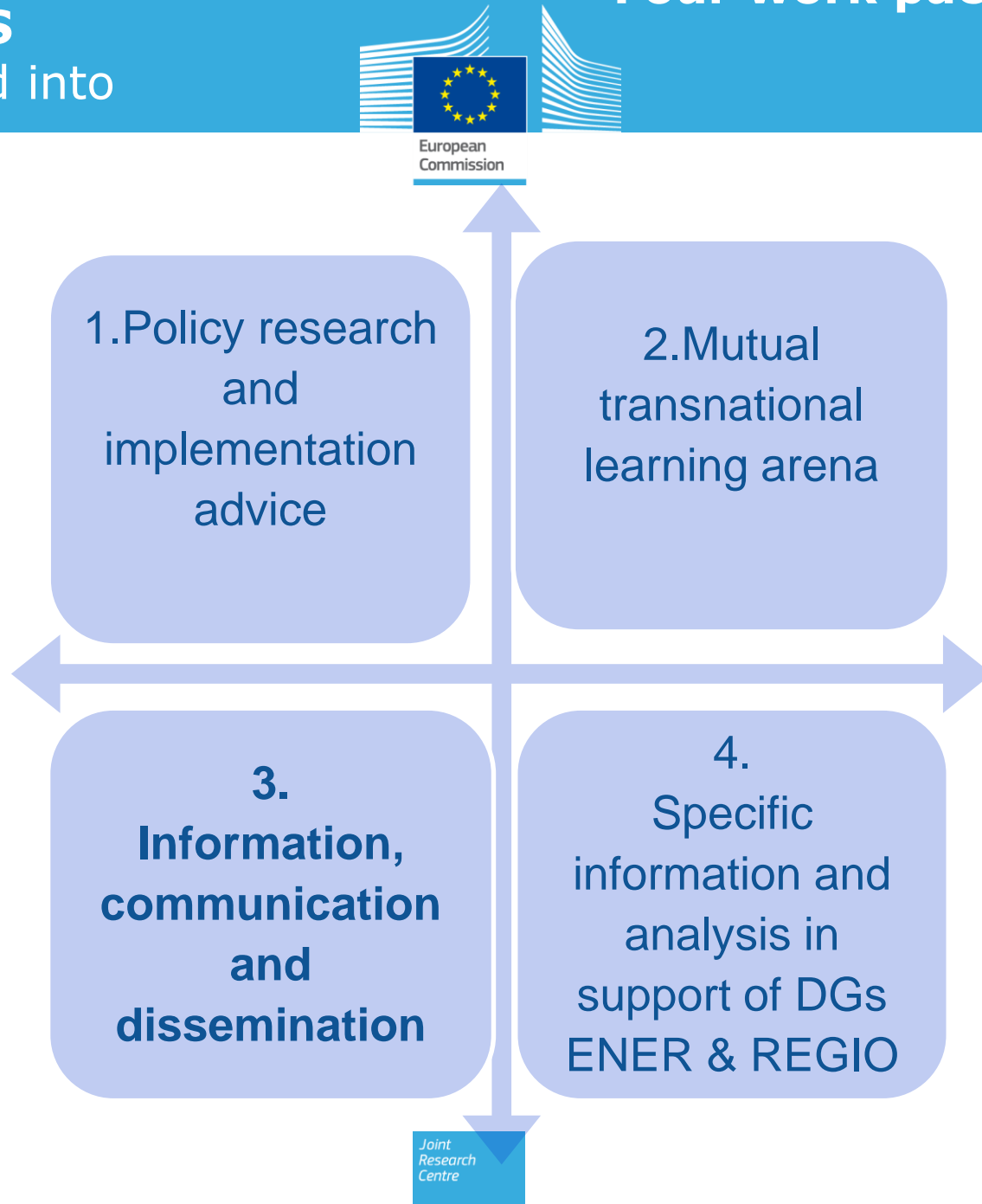


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16 June 2016	<i>Energy Week:</i> Smart Specialisation in Energy, how Europe's regions are implementing their priorities	Brussels (BE)
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4-5 July 2016	How to build Smart Energy Regions: Regional perspectives on energy transition (with Baden-Württemberg)	Karlsruhe (DE)
10-13 October 16'	<i>Open Days:</i> European Week of Regions and Cities 2016	Brussels (BE)

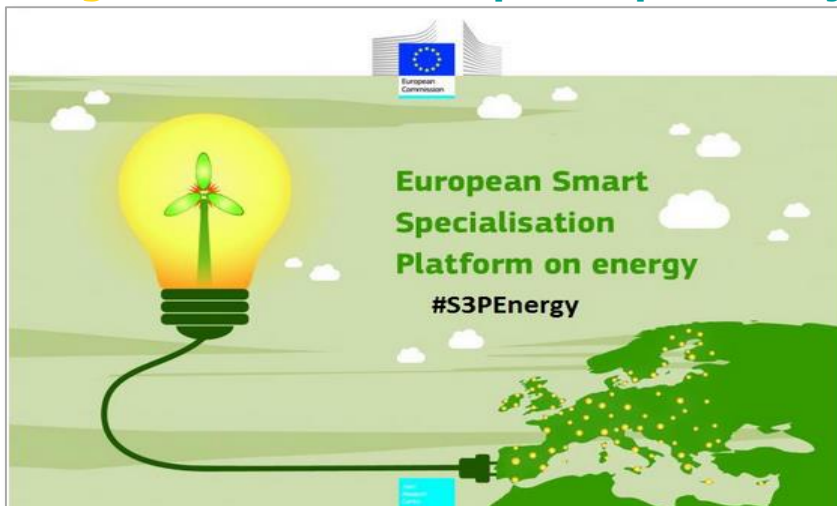
TASKS

divided into

Four work packages



Registration Form: <http://s3platform.jrc.ec.europa.eu/registration-in-s3p-energy>



REGISTRATION FORM - S3PEnergy

Welcome to the Smart Specialisation on Energy (S3PEnergy). S3PEnergy focuses on the area of energy, but builds on the work of the S3 Platform, which was created in 2011 to provide science-based professional advice to EU national and regional policy-makers to establish and implement their research & innovation strategies for smart specialisation (RIS3). **Before registering for the S3PEnergy, please kindly read this information carefully:**

FOR MEMBERS OF S3PEnergy:

- If your country/region **is** already a member of the S3 Platform, the contacts already available will automatically become a member of S3PEnergy. It would be appreciated if you provided a second contact point for your region, which should be the person in charge of energy policy. Please fill in this registration form to do so.
- If your country/region **is not** yet a member of the S3 Platform but is interested in joining S3PEnergy, note that it will automatically become a member of the S3 Platform unless specifically otherwise demanded by emailing to JRC-IPTS-S3PLATFORM-ENERGY@ec.europa.eu

FOR PEERS/FRIENDS:

You are all very much welcome to join S3PEnergy. We are looking forward to working with you!

Please, select the profile with which you would like to be registered in the S3PEnergy to be informed of our activities: *

MEMBERS OF THE S3PEnergy - This category is reserved to governments and their agencies.

- ☐ Governments and their agencies

FRIENDS/PEERS OF THE S3PEnergy - This category includes all public-private actors in the innovation system interested in energy policy.

- ☐ EU institutions (please, specify affiliation/position)
- ☐ Research
- ☐ Industry
- ☐ Networks
- ☐ Civil Society
- ☐ Other (please, specify)

Please, select the energy field in which you work: *

- ☒ Renewable Energy

- ☐ Hidro power

Further information

- ☐ Geothermal Energy

Further information

- ☐ Solar energy - photovoltaic

Further information

- ☐ Solar energy - thermal

Further information

What does S3PEnergy expect from Member States and regions?



Active participation
in platform activities and feedback requests



Cooperation spirit
with other platform members



Collaboration
with territorial actors of same and other regions



Sharing information
on related initiatives, key results and good practices



Be aware
of (and committed with) the significance of bottom-up approach in Smart Specialisation



Benefiting
from the S3PEnergy hub position

Related links and further information

For any kind of enquires and feedback please send us an e-mail to:

jrc-ipts-s3platform-energy@ec.europa.eu

Follow us on:

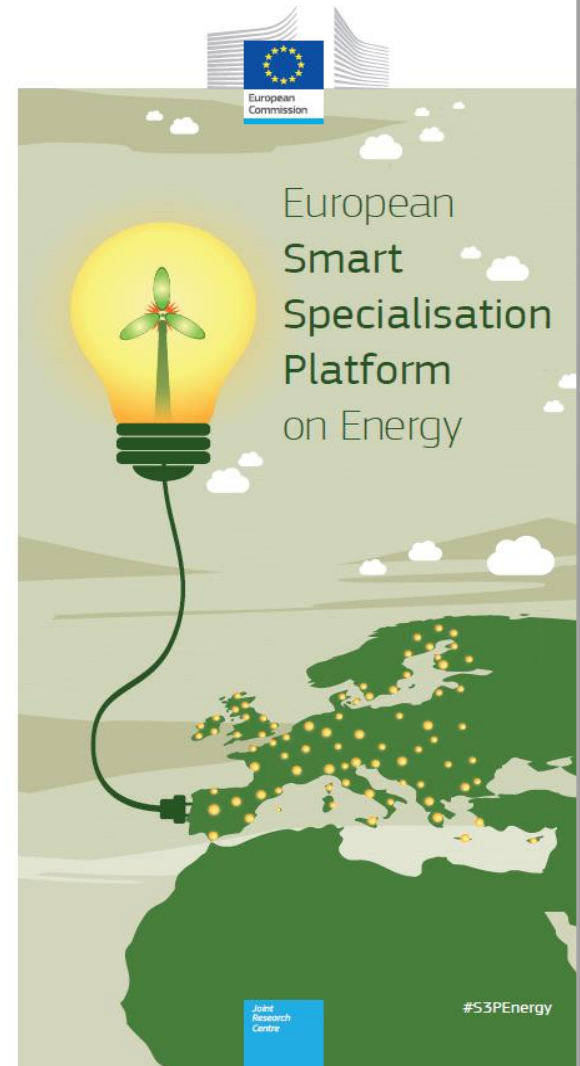
@S3Platform

#S3PEnergy

Website:

s3platform.jrc.ec.europa.eu/s3p-energy

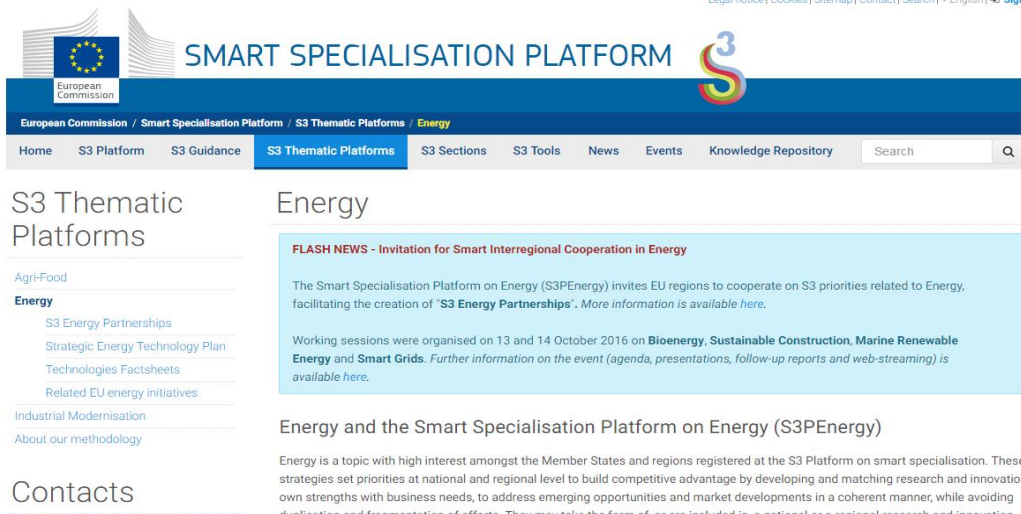
For registration:



Web: <http://s3platform.jrc.ec.europa.eu/s3p-energy>

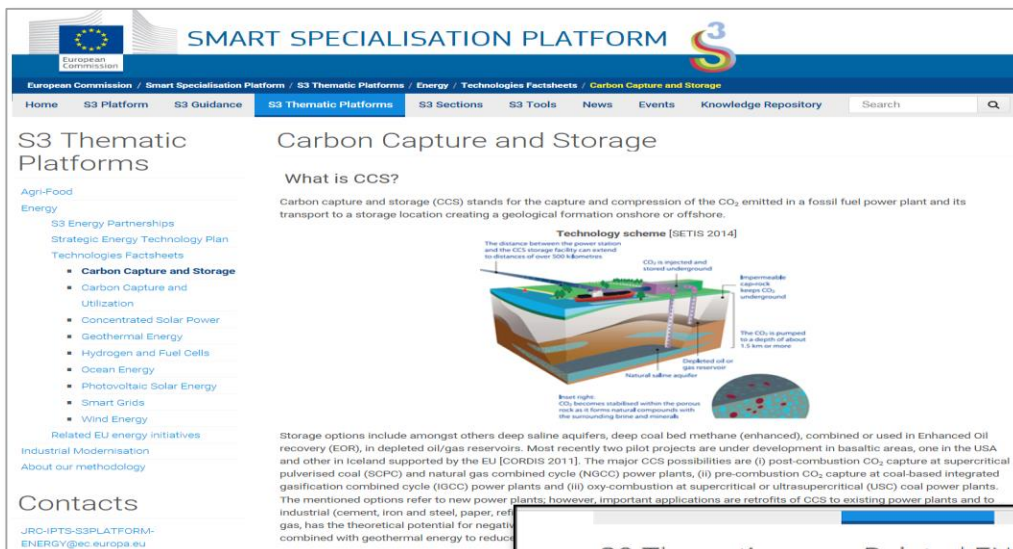


The screenshot shows the homepage of the Smart Specialisation Platform (S3). The header features the European Commission logo and the S3 logo. The main navigation bar includes links to Home, S3 Platform, S3 Guidance, S3 Thematic Platforms (selected), S3 Sections, S3 Tools, News, Events, Knowledge Repository, and a search bar. The left sidebar lists various thematic areas: Agri-Food, Energy, S3 Energy Partnerships (with sub-links for Strategic Energy Technology Plan, Technologies Factsheets, and Related EU energy initiatives), Industrial Modernisation, and About our methodology. The main content area is titled 'S3 Thematic Platforms' and 'S3 Energy Partnerships'. A central graphic titled 'OPEN INVITATION TO EU REGIONS FOR Smart interregional cooperation in Energy' features icons for Bioenergy, Sustainable Construction, Marine Offshore, and Smart Grids. Below this, a section titled 'What?' explains the S3PEnergy initiative, stating it is based on a bottom-up approach and facilitates the creation of 'S3 Energy Partnerships'.



The screenshot shows the 'Energy' page of the Smart Specialisation Platform (S3). The header and navigation bar are identical to the homepage. The left sidebar lists the same thematic areas, with 'S3 Energy Partnerships' expanded to show sub-links. The main content area is titled 'Energy' and features a 'FLASH NEWS - Invitation for Smart Interregional Cooperation in Energy' section. This section contains two paragraphs: the first invites EU regions to cooperate on S3 priorities related to Energy, and the second reports on working sessions held on 13 and 14 October 2016, covering Bioenergy, Sustainable Construction, Marine Renewable Energy, and Smart Grids. Below the flash news, the page title 'Energy and the Smart Specialisation Platform on Energy (S3PEnergy)' is displayed, followed by a paragraph explaining the platform's role in facilitating cooperation and innovation in the energy sector.

Web: <http://s3platform.jrc.ec.europa.eu/s3p-energy>



SMART SPECIALISATION PLATFORM

European Commission / Smart Specialisation Platform / S3 Thematic Platforms / Energy / Technologies Factsheets / Carbon Capture and Storage

Home S3 Platform S3 Guidance S3 Thematic Platforms S3 Sections S3 Tools News Events Knowledge Repository Search

S3 Thematic Platforms

Agri-Food
Energy

S3 Energy Partnerships
Strategic Energy Technology Plan
Technologies Factsheets

- Carbon Capture and Storage
 - Carbon Capture and Utilization
 - Concentrated Solar Power
 - Geothermal Energy
 - Hydrogen and Fuel Cells
 - Ocean Energy
 - Photovoltaic Solar Energy
 - Smart Grids
 - Wind Energy

Related EU energy initiatives
Industrial Modernisation
About our methodology

Contacts

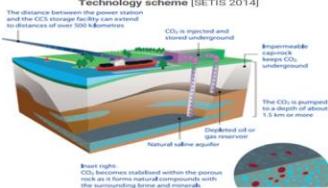
JRC-PTS-S3PLATFORM-ENERGY@ec.europa.eu

Carbon Capture and Storage

What is CCS?

Carbon capture and storage (CCS) stands for the capture and compression of the CO₂ emitted in a fossil fuel power plant and its transport to a storage location creating a geological formation onshore or offshore.

Technology scheme (SETIS 2014)



The distance between the power station and the CCS storage facility can extend to distances of over 100 Kilometres.

CO₂ is injected and stored underground.

Impermeable rock layers trap CO₂ underground.

The CO₂ is pumped to a depth of about 1.0 km or more.

Depleted oil or gas reservoir.

Natural saline aquifer.

Best right: CO₂ becomes stabilised within the porous rock as it forms natural compounds with the surrounding brine and minerals.

Storage options include amongst others deep saline aquifers, deep coal bed methane (enhanced), combined or used in Enhanced Oil recovery (EOR), in depleted oil/gas reservoirs. Most recently two pilot projects are under development in basaltic areas, one in the USA and other in Iceland supported by the EU [CORDIS 2011]. The major CCS possibilities are (i) post-combustion CO₂ capture at supercritical pulverised coal (SCPC) and natural gas combined cycle (NGCC) power plants, (ii) pre-combustion CO₂ capture at coal-based integrated gasification combined cycle (IGCC) power plants and (iii) oxy-combustion at supercritical or ultrasupercritical (USC) coal power plants. The mentioned options refer to new power plants; however, important applications are retrofits of CCS to existing power plants and to industrial (cement, iron and steel, paper, refineries, etc.). Natural gas, has the theoretical potential for negative emissions when combined with geothermal energy to reduce CO₂ emissions.



S3 Thematic Platforms

Agri-Food
Energy

S3 Energy Partnerships
Strategic Energy Technology Plan
Technologies Factsheets

Related EU energy initiatives

Industrial Modernisation
About our methodology

Related EU energy initiatives

This section includes a non-exhaustive repository of links to European initiatives related to the S3PEnergy.

The European Federation of Agencies and Regions for Energy and the Environment (FEDARENE)



The Association of European Renewable Energy Research Centres



European Regions Research and Innovation Network (ERRIN)



European Regions Research and Innovation Network



Thank you for your attention!

