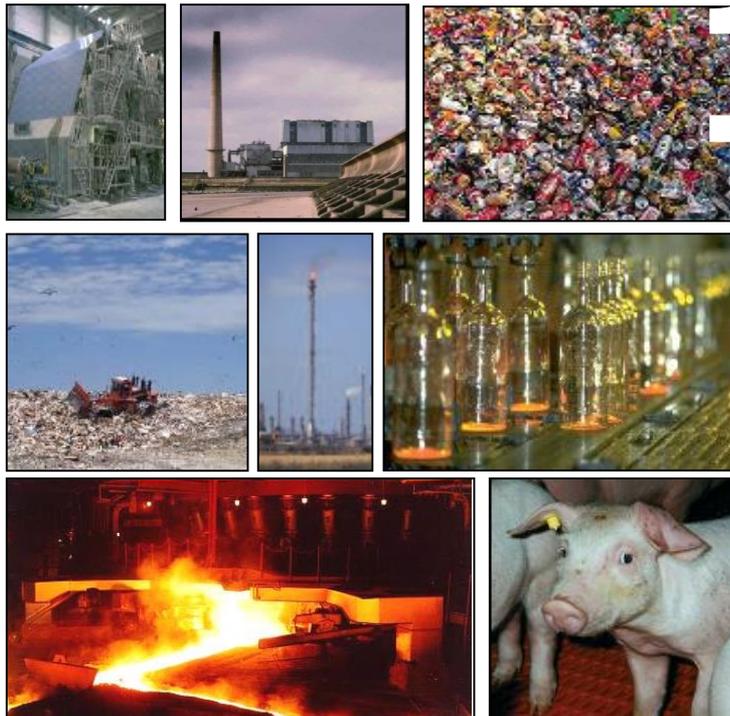


# Smart Specialisation Platform on Energy

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[www.jrc.ec.europa.eu](http://www.jrc.ec.europa.eu)



*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

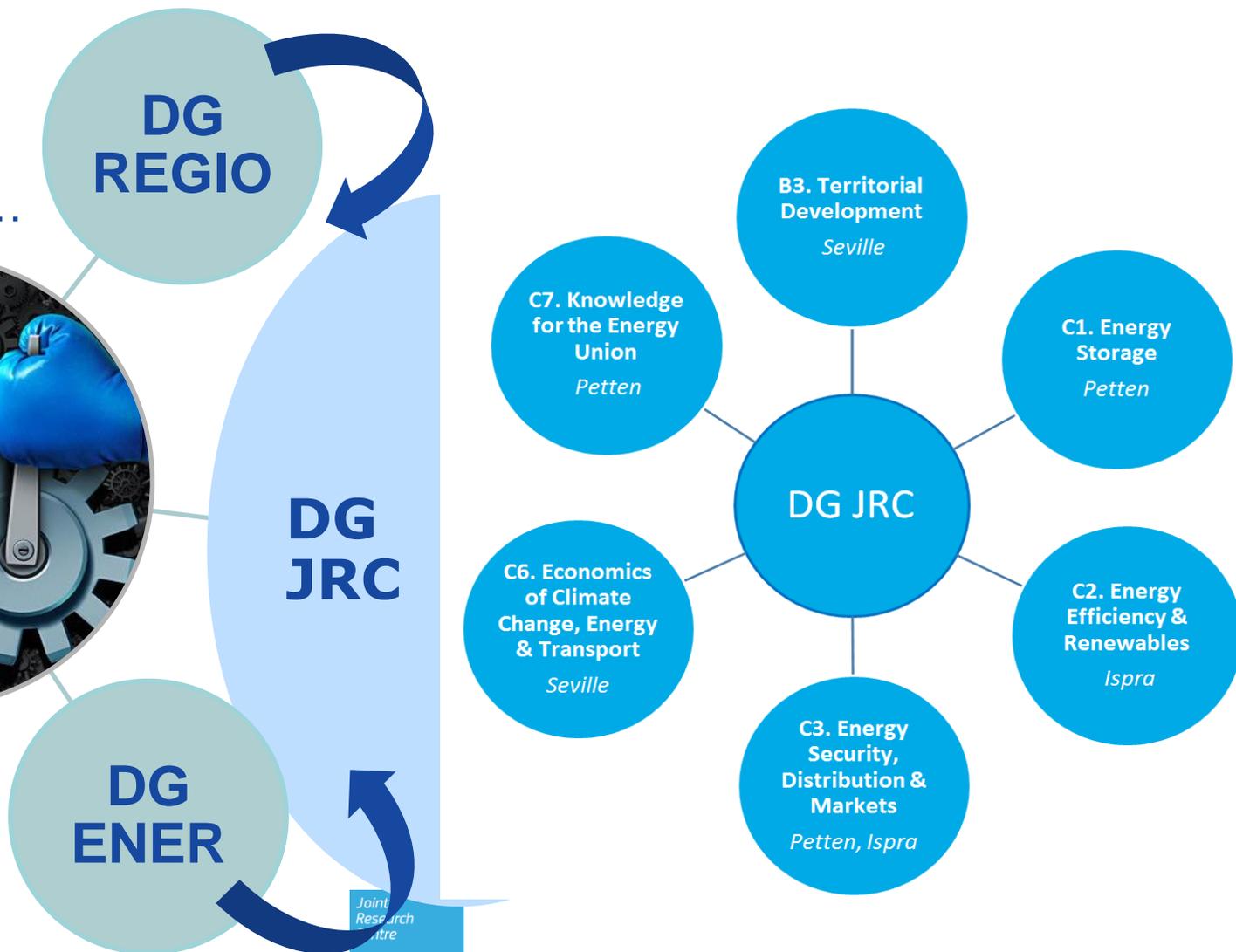
- Supports the optimal and effective uptake of the Cohesion Policy funds for Energy.
- Assists countries and regions to set up strategies to accelerate the development of a technology-based low-carbon economy.

JRC's multidisciplinary competences in

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



...integrated in a single project.



# TASKS

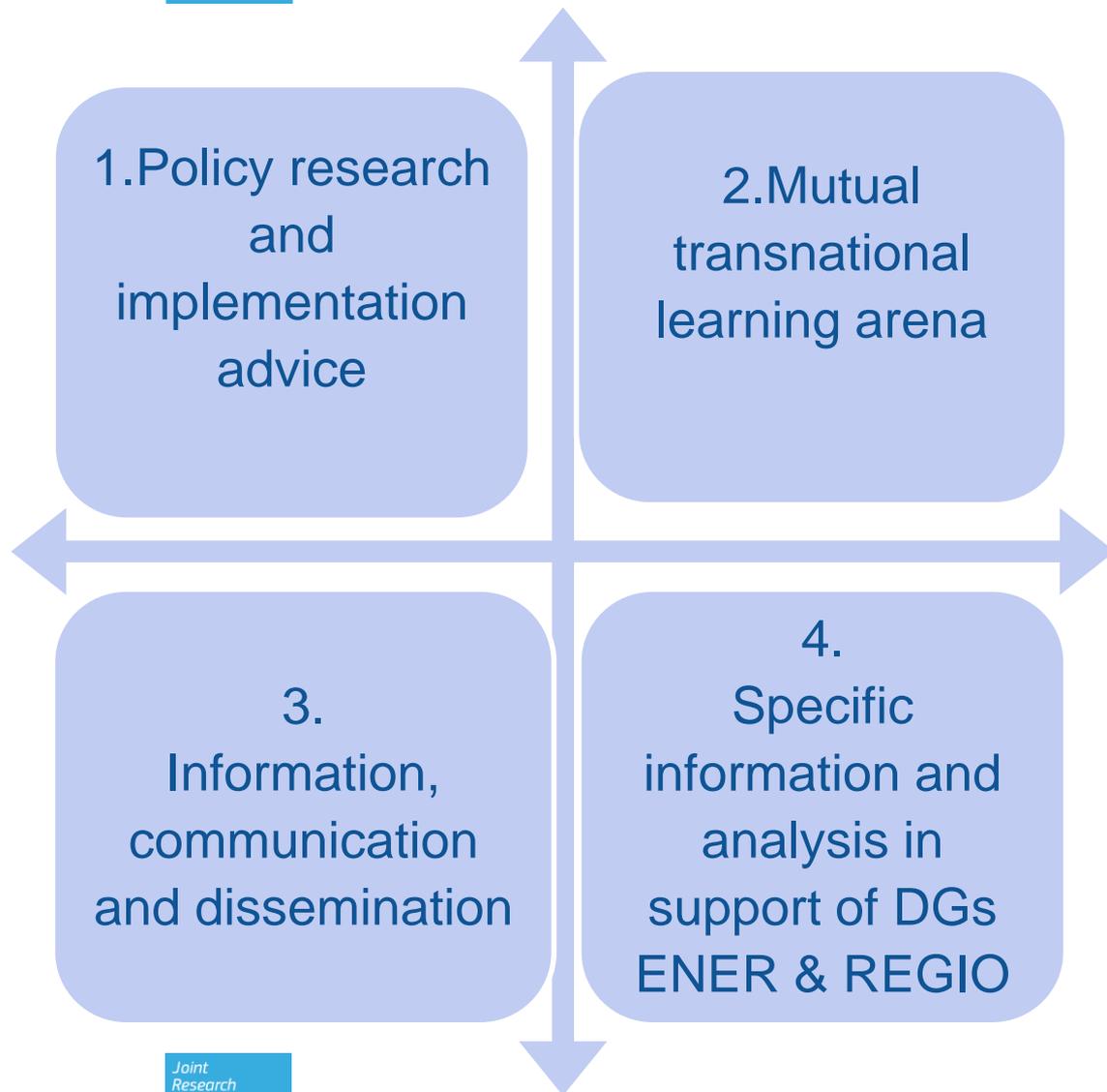
divided into

# 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



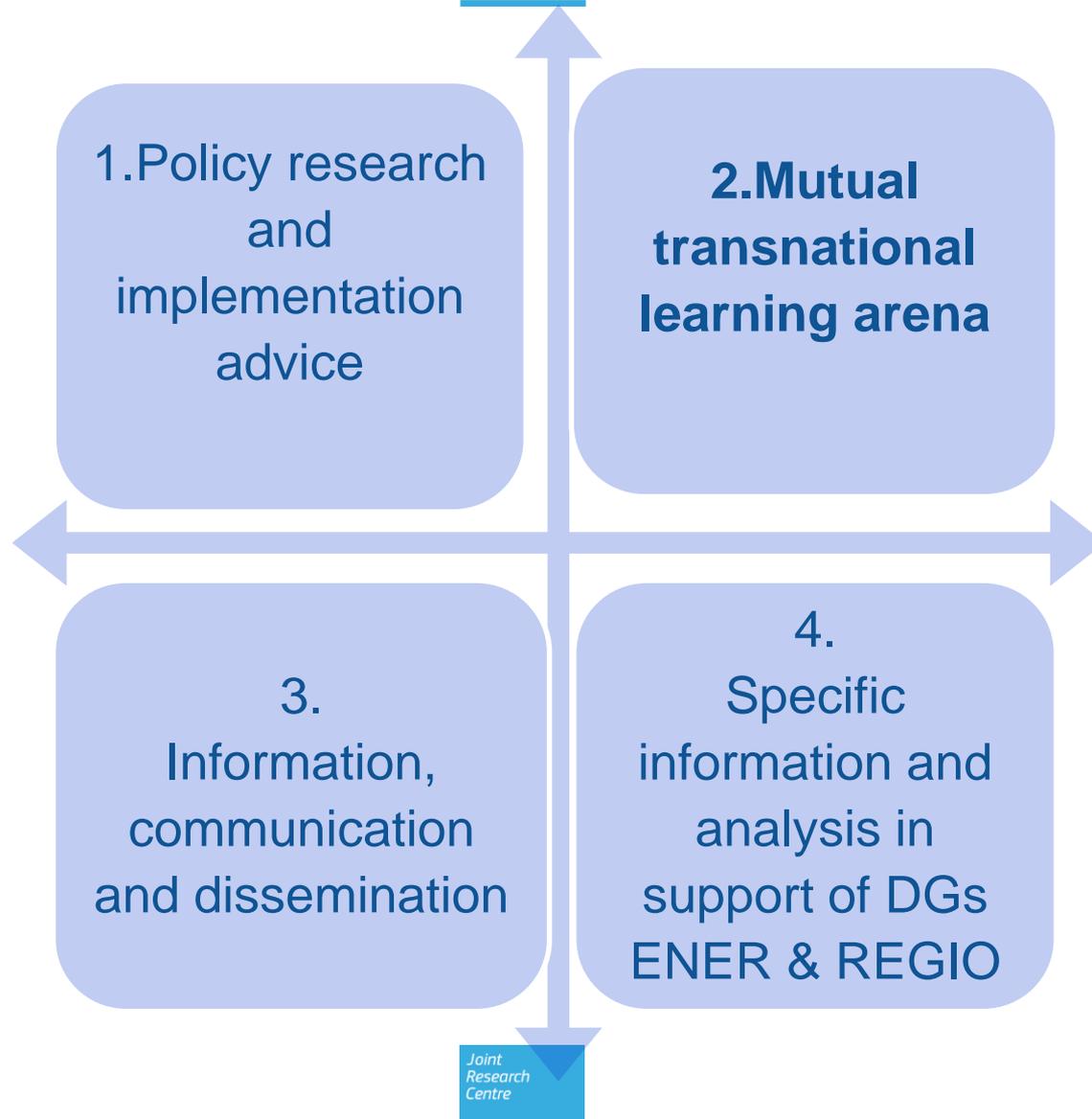
# TASKS

divided into

# Four work packages



European  
Commission



Joint  
Research  
Centre

## "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)...



European Commission



OPEN INVITATION TO EU REGIONS FOR

## Smart interregional cooperation in Energy



Bioenergy



Sustainable Construction



Marine Offshore



Smart Grids



#S3PEnergy

### **"POTENTIAL FUTURE S3 Energy Partnerships"**

offering interactive and participatory arenas for interregional cooperation

Solar

Wind

Fuel Cells and Hydrogen

Heating and Cooling?



European  
Commission

## LIST OF EVENTS OF THE S3PENEGY

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



## 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) - <a href="#">Report</a>	Brussels (BE)
April 2016	Smart Specialisation (energy priorities), ( <i>back to back with S2E with SI</i> )	Ljubiliana (SI)



European

Date	Title	City (Country)
1-2 June 2016	<b>High Level Event:</b> Thematic Session on Energy, Brussels, (co-organised JU-RA)	Brussels (BE)
16 June 2016	<i>Energy Week:</i> 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)
10-13 October 16'	<i>Open Days:</i> European Week of Regions and Cities 2016	Brussels (BE)

# TASKS

divided into

# Four work packages



European  
Commission

1. Policy research  
and  
implementation  
advice

2. Mutual  
transnational  
learning arena

**3.**  
**Information,  
communication  
and  
dissemination**

4.  
Specific  
information and  
analysis in  
support of DGs  
ENER & REGIO

Joint  
Research  
Centre

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



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

### 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](mailto: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!

## 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](mailto:jrc-ipts-s3platform-energy@ec.europa.eu)

Follow us on:

@S3Platform

#S3PEnergy

Website:

[s3platform.jrc.ec.europa.eu/s3p-energy](http://s3platform.jrc.ec.europa.eu/s3p-energy)

For registration:



The graphic features a stylized map of Europe with yellow dots representing smart specialisation hubs. A glowing lightbulb with a green wind turbine inside it is positioned above the map, with a green cord connecting it to the map. The background is a light green landscape with clouds. The European Commission logo is in the top left corner. The text 'European Smart Specialisation Platform on Energy' is written in a large, bold font. The 'Joint Research Centre' logo is in the bottom left corner, and the hashtag '#S3PEnergy' is in the bottom right corner.

European  
Smart  
Specialisation  
Platform  
on Energy

Joint  
Research  
Centre

#S3PEnergy

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



SMART SPECIALISATION PLATFORM

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## S3 Thematic Platforms

- Agri-Food
- Energy
  - S3 Energy Partnerships**
  - Strategic Energy Technology Plan
  - Technologies Factsheets
  - Related EU energy initiatives
- Industrial Modernisation
- About our methodology

## S3 Energy Partnerships

OPEN INVITATION TO EU REGIONS FOR

### Smart interregional cooperation in Energy

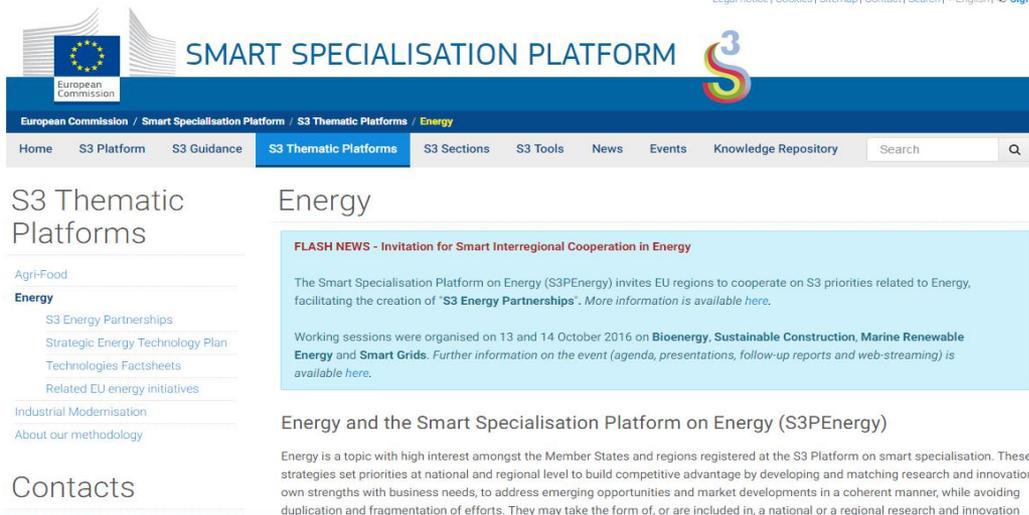


#S3PEnergy

What?

Based on a bottom-up approach, the S3PEnergy is currently facilitating the creation of 'S3 Energy Partnerships', offering interactive and

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## Energy

**FLASH NEWS - Invitation for Smart Interregional Cooperation in Energy**

The Smart Specialisation Platform on Energy (S3PEnergy) invites EU regions to cooperate on S3 priorities related to Energy, facilitating the creation of 'S3 Energy Partnerships'. *More information is available here.*

Working sessions were organised on 13 and 14 October 2016 on **Bioenergy, Sustainable Construction, Marine Renewable Energy and Smart Grids**. *Further information on the event (agenda, presentations, follow-up reports and web-streaming) is available here.*

## Energy and the Smart Specialisation Platform on Energy (S3PEnergy)

Energy is a topic with high interest amongst the Member States and regions registered at the S3 Platform on smart specialisation. These strategies set priorities at national and regional level to build competitive advantage by developing and matching research and innovation own strengths with business needs, to address emerging opportunities and market developments in a coherent manner, while avoiding duplication and fragmentation of efforts. They may take the form of, or are included in, a national or a regional research and innovation

## Contacts

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



**SMART SPECIALISATION PLATFORM**

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## 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

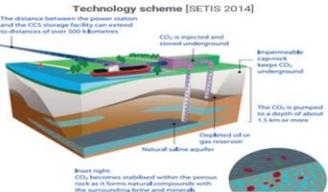
Related EU energy initiatives  
Industrial Modernisation  
About our methodology

### Carbon Capture and Storage

#### What is CCS?

Carbon capture and storage (CCS) stands for the capture and compression of the CO<sub>2</sub> 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]**



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 CO<sub>2</sub> capture at supercritical pulverised coal (SCPC) and natural gas combined cycle (NGCC) power plants, (ii) pre-combustion CO<sub>2</sub> 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). Natural gas, has the theoretical potential for negative emissions when combined with geothermal energy to reduce CO<sub>2</sub> emissions.

Contacts  
JRC-IPFS-S3PLATFORM-ENERGY@ec.europa.eu



## 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!**

