

The European Commission's science and knowledge service

Joint Research Centre



POTEnCIA and JRC-IDEES

New EU-wide energy sector tools for policy analyses

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THE POLICY CONTEXT

Energy has a fundamental role

production factor
element of welfare

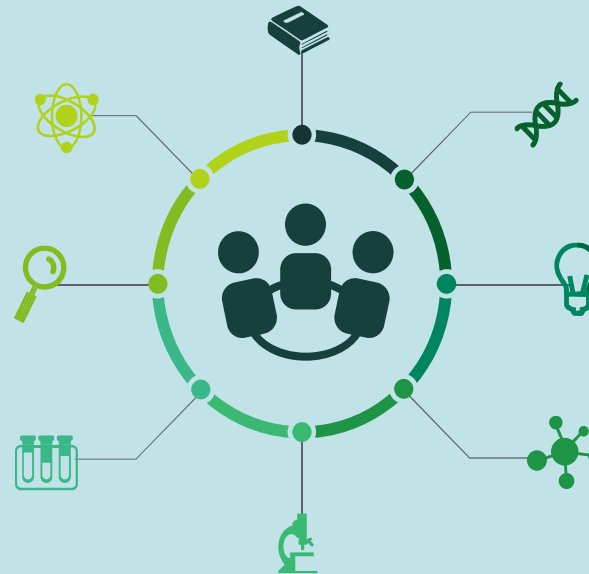
security of supply
environmental sustainability
accessibility
competitiveness

energy efficiency
decarbonisation
renewables
market integration
interconnections

EU Energy Union Strategy

THEY NEED TO BE ADDRESSED...

- With a scientifically sound approach
- In an open and transparent manner
- Involving Member States and stakeholders
- Employing fit-for-purpose instruments



- The JRC, in collaboration with the policy DGs, has made a substantial effort to develop an appropriate set of tools to cover these needs

THE ENERGY SECTOR IS RAPIDLY EVOLVING

Radical changes need to be adequately captured

- Challenging, ambitious targets
- Long-lived equipment, long-term perspectives
- Growing contribution of variable renewable energy sources
- Market integration
- The increasing role of the demand side

We need to **go beyond** a narrow definition of the energy sector

traditionally focused on production and energy technologies

and also address the role of

- Non energy using equipment, and
- Market actor's rationality and behaviour

while capturing evolving technology dynamics

JRC: ENHANCING POLICY SUPPORT

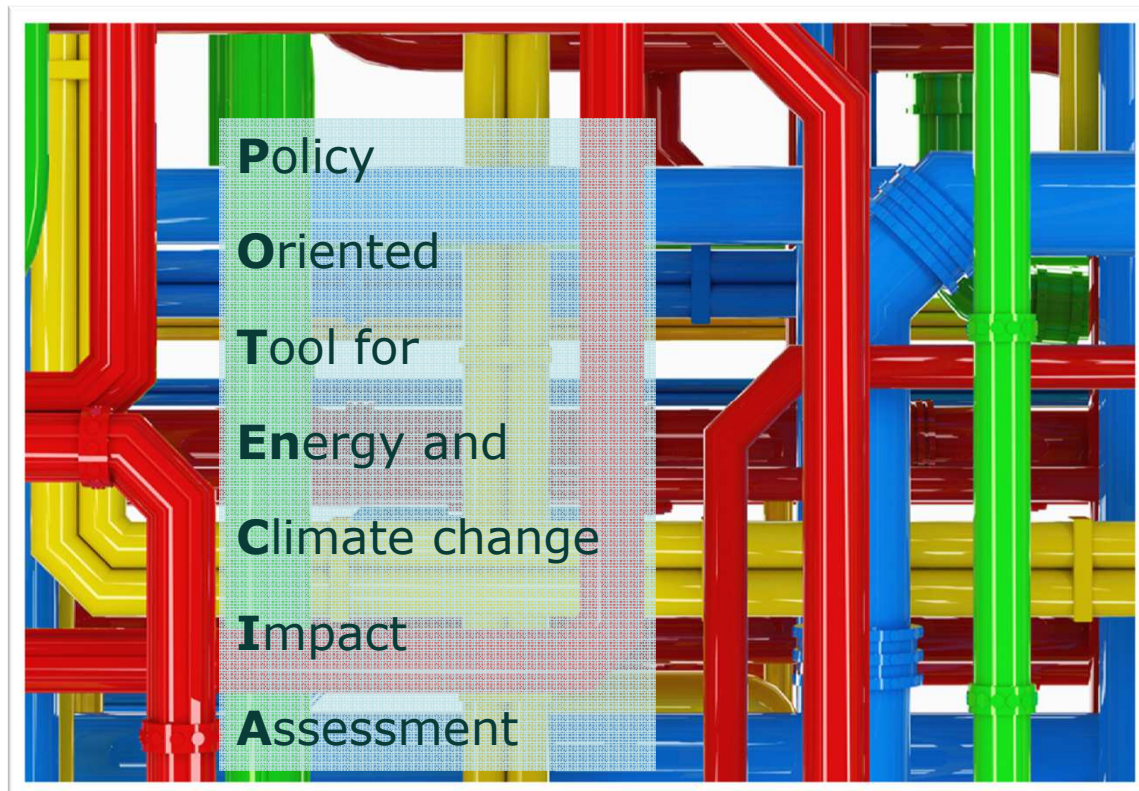
Policy impact assessment: addressing alternative possible futures...

A **new modelling tool** that improves our capacity to address the challenges that the EU energy sector will be facing:

- Energy system transition
- Domain for policy action
- Impact of market integration

...by implementing

- Accurate description of agents' choices
- Appropriate sector and technology disaggregation
- Openness, transparency and accessibility



JRC: ENHANCING POLICY SUPPORT

...requires accurate and reliable information on the past

JRC-Integrated Database for the European Energy Sector

Detailed, disaggregated scenarios require data with the same structure

Consistent data-box of energy system figures and associated techno-economic factors.

Available for discussion, improvement and public use

Official data

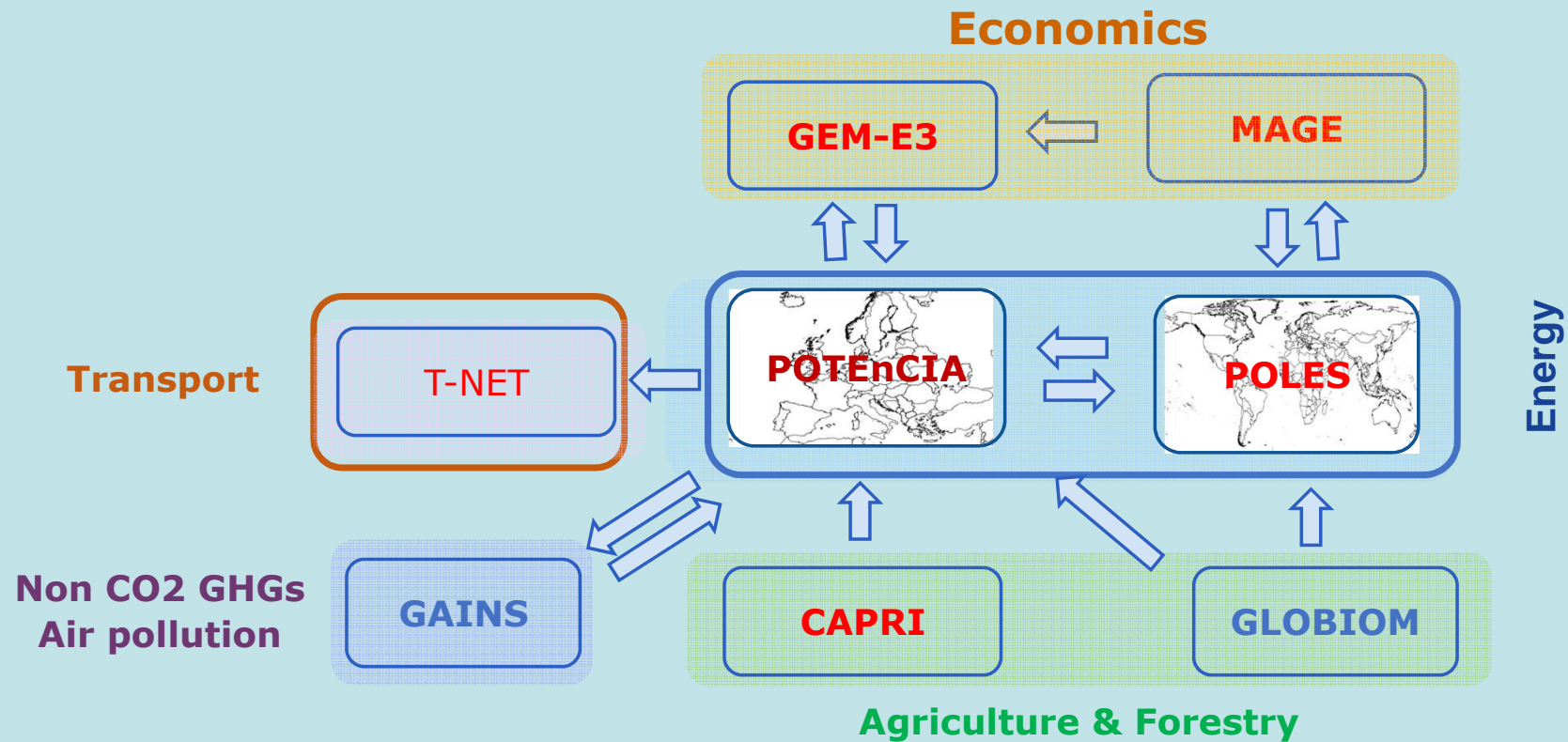
- Energy
- Economic, demographic
- Activity

Processed data

- Disaggregated energy use
- Energy equipment
- Operating characteristics



THE JRC'S TOOLBOX



CONCLUSIONS: POTENCIA AND JRC-IDEES

- A **new set of instruments** has been created
- As **in-house EC tools**, they aim at supporting the EU Energy Union policy process
- To enhance the **capacity** of analysis of changing energy markets and their emissions footprint
- and to increase the **openness** and **transparency** of policy analyses and **scenario comparability**

The **participation** of Member States and other actors is of utmost importance



Thank you



JRC Science Hub - POTEnCIA

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