

R&D storage activities in Denmark - and EU

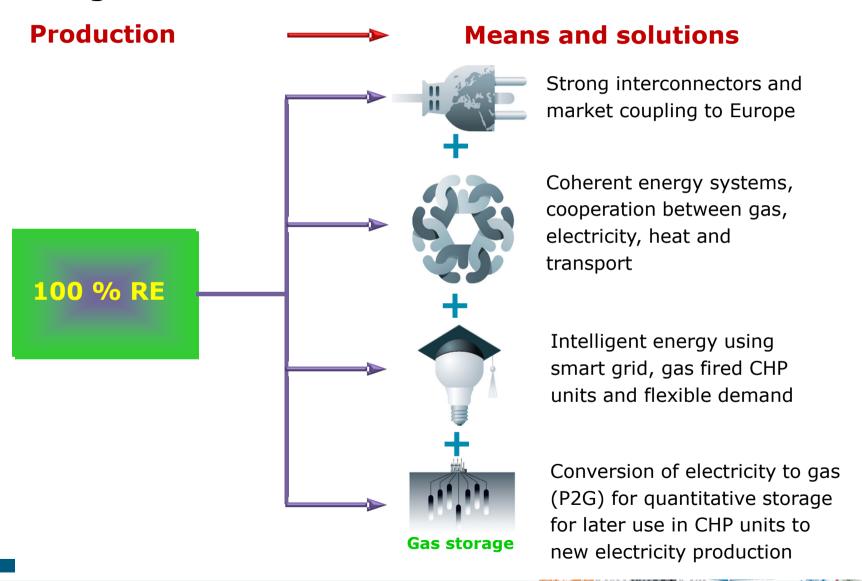
stoRE, 7th November 2013

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Energinet.dk vision for the future: $2020 \rightarrow 2030$





Danish funding programmes















- · Covering the whole value chain from research to demonstration
- Projects at www.energiforskning.dk
 - Power to heat, wheels, gas, ...









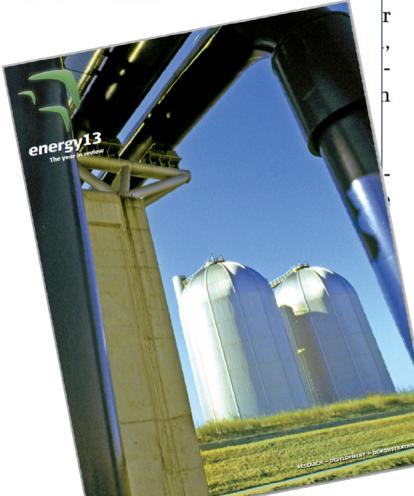












THREE FOCUS AREAS

The programmes agree that there are areas where there might be a special need to strengthen the cooperation and coordinate the effort. These are:

- Technologies for storage of energy
- Technologies for making the energy use in existing buildings more efficient.
- Smart grid technologies and solutions

The three areas are described on the opposite page.

In 2013, the programmes continue working on the possibilities for further cooperation initiatives.

ACTED AND MODE COUEDENT FINANCINC







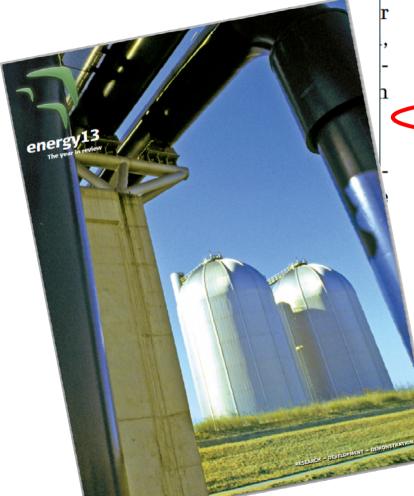












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ACTED AND MODE COHEDENT FINANCING



GAP analyses of R&D energy storage in a Danish context

- Which role can energy storage play in the future, sustainable energy system
- Where will the needs for storage/flexibility emerge in the Danish energy system
- Danish strongholds and competences within energy storage
- Potentials for energy storage technologies in a Danish perspective
- Danish efforts in an international perspective
- Recommendations for national Danish efforts
- To be published January 2014







European
Energy Storage
Technology
Development
Roadmap towards 2030

<u>Presentation by</u> <u>Allan Schroder Pedersen, DTU</u>







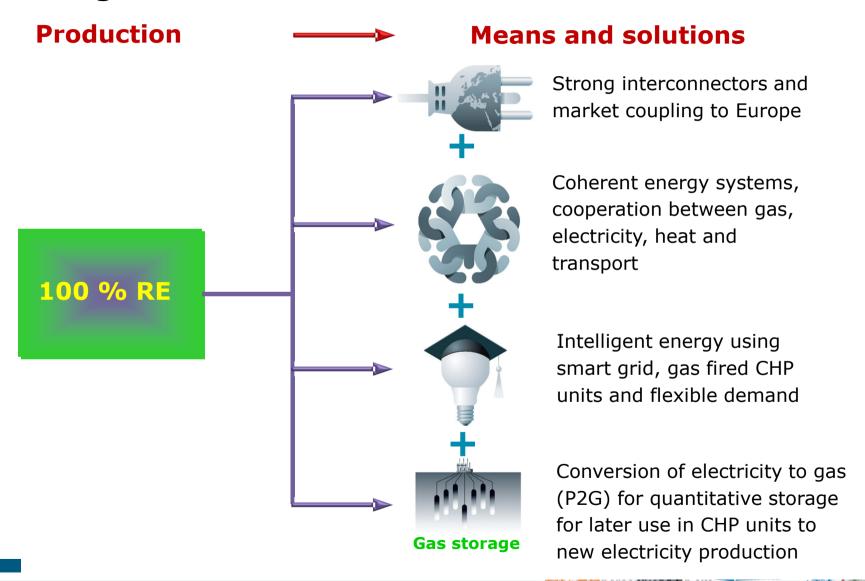
Mission and objectives

- Recommendations for R&D actions in the timeframe of Horizon2020
- Point out European needs and define technology areas for R&D
- Set up milestones
- Recommendations on strategic stakes for optimising European R&D efforts
- Identify critical energy storage technologies and/or technology gaps that must be filled to meet technology performance targets
- Identify ways to leverage R&D investments through coordination of research activities
- Identify regulatory hurdles and market failures preventing the creation of business cases for energy storage.





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