

Strategic market value and regulatory basis Storage of electricity



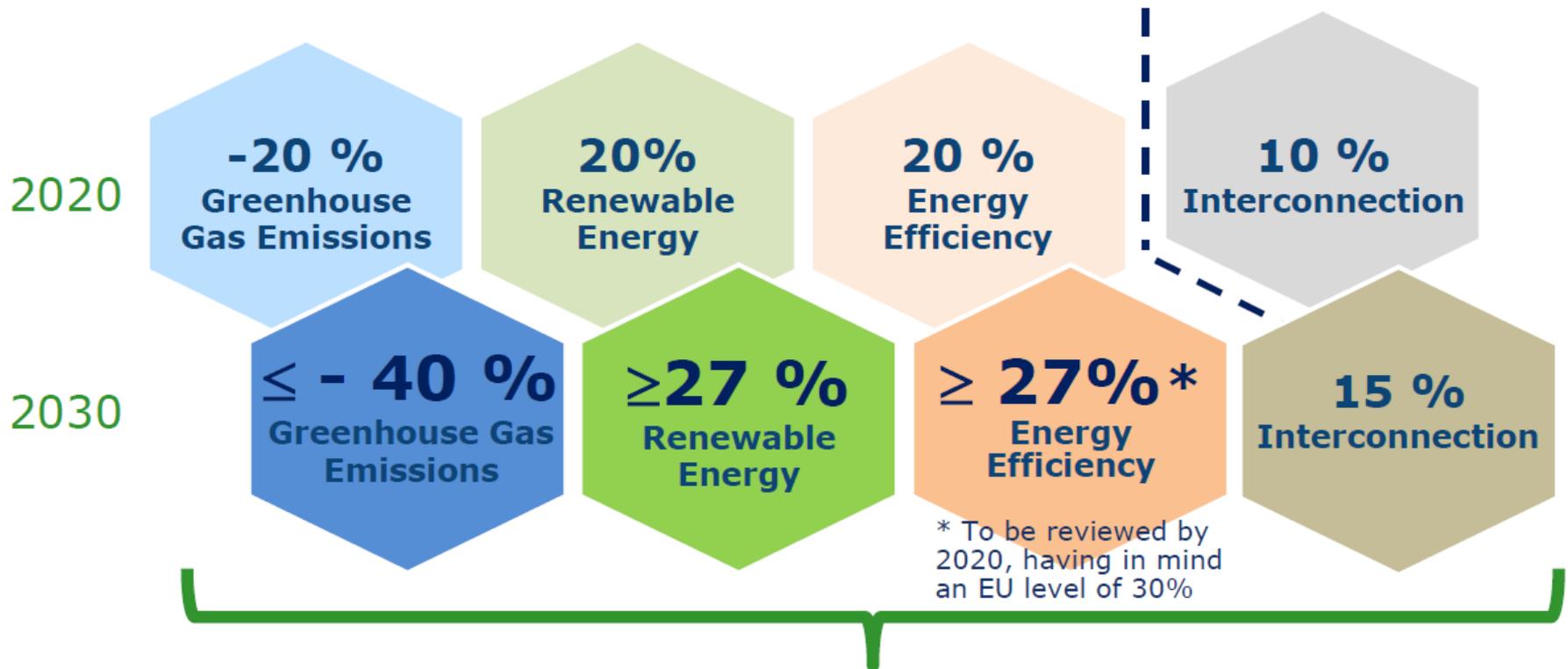
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**SGTF Expert Group 3 – Regulatory issues
Brussels, 1 July 2016**



European
Commission

2030 framework for climate and energy policies



New governance system + indicators



The way towards: **The Energy Union**

Where we want to go:

A secure, sustainable, competitive, affordable energy for every European

What this means:

Energy security, solidarity and trust
A fully integrated internal energy market
Energy efficiency first
Transition to a long-lasting low-carbon society
An Energy Union for Research, Innovation and Competitiveness

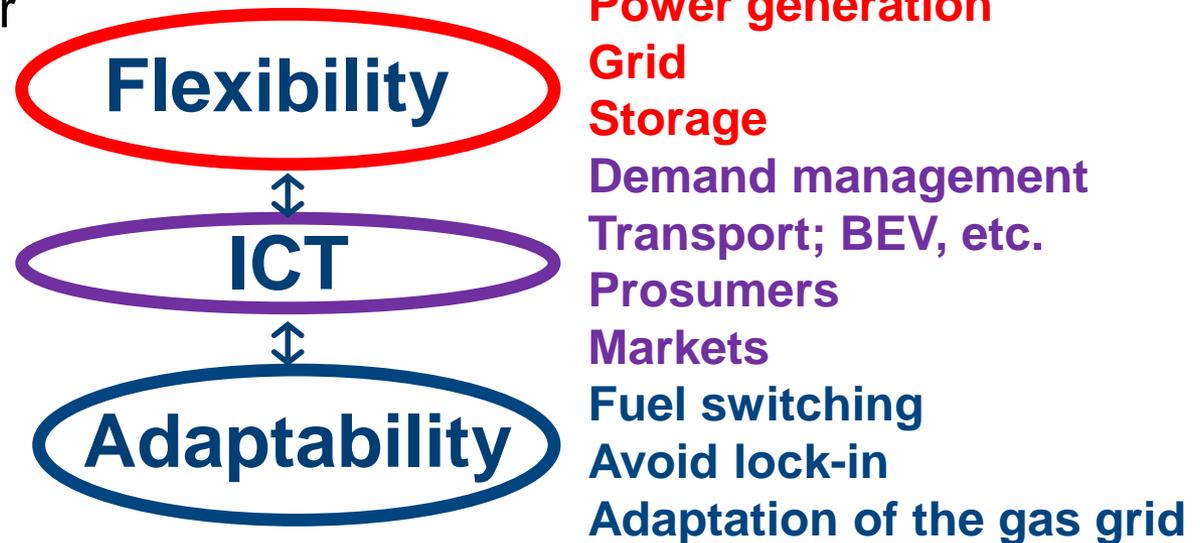
How we want to reach it:



A flexible and adaptive energy system

Smart Energy System

- **Generation** – optimisation of existing and new assets
- **Demand** – moderation and flexibility
- Electricity, gas and heat **networks** - synergies
- **Storage** - enabler



Energy storage

Differentiation of solutions

Challenge: Locations, timeframes and quantities for storage are changing.

What market and regulatory elements are necessary?

New/modified/removed tradable products? Obligations? Targets? Thresholds?

● **1. Location**

- What are the differences to be distinguished based on the location of the storage facility? At generation, in grid and at consumer

● **2. Scale – energy and timeframe**

- Need for markets for products of different timeframes – suitable for new storage solutions - from sub-second to hours (or days?)
- Could storage contribute also to strategic reserves?

● **3. Sectorial integration and contribution to reserve capacity**

- What market elements would be needed for the service of integrating the energy system: electricity, gas and thermal energy carriers/storage?
- Could a market mechanism include the value of solving the >24h variability problem?

Electricity Market Design

Storage related issues identified

Some input from various stakeholders indicates several issues related to efficient use of energy storage in the electricity system. For example:

- » Lack of Definition
- » Unclear rules on ownership
- » Access to grid
- » Not considered in grid planning
- » Grid fees and levies
- » Lack of markets for the set of services provided to the grid
- » Lack of EU level framework
- » Interlinks to other energy networks and sectors



Energy Union

Some key actions relevant to energy storage

- **A new electricity market design**
- **Strengthen European regulatory framework**
- **Alternative fuels & integration of energy and transport sectors**
- **Renewables package 2016-2017**
 - Self-consumption
 - Bioenergy sustainability
 - post 2020 RES legal framework
- **Initiative on global technology and innovation leadership on energy and climate**₇

Thank You for Your Attention!

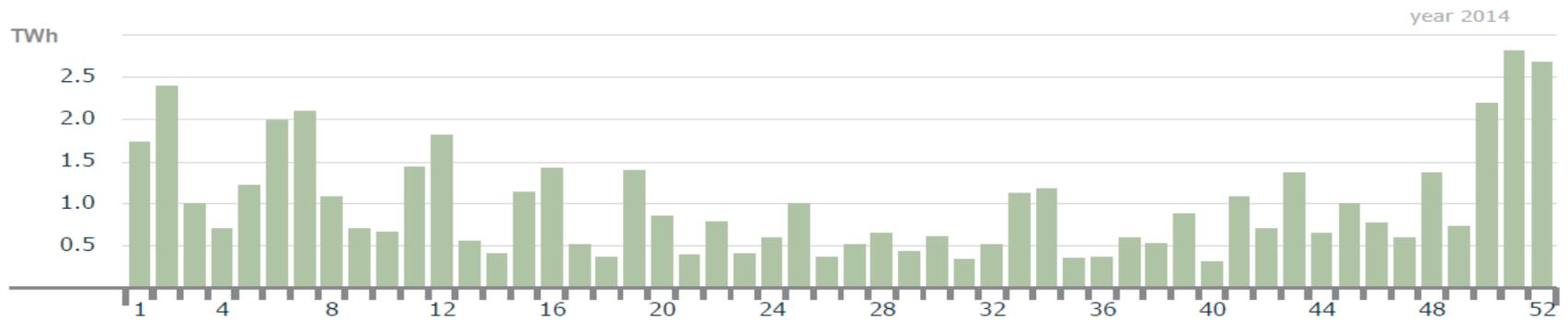
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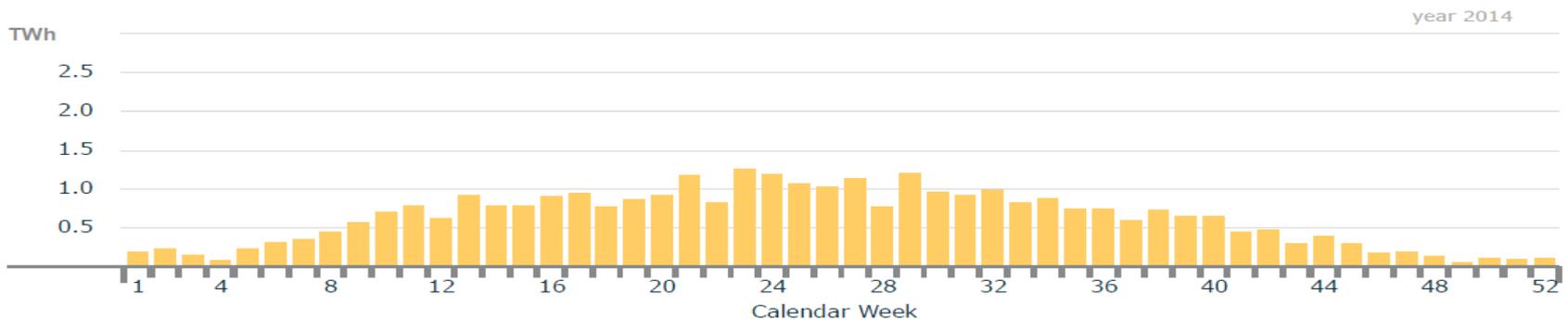


Power generation – Wind & solar – DE – 2014

Weekly Production Wind



Weekly Production Solar



Source: Fraunhofer ISE, data EEX Transparency Platform