

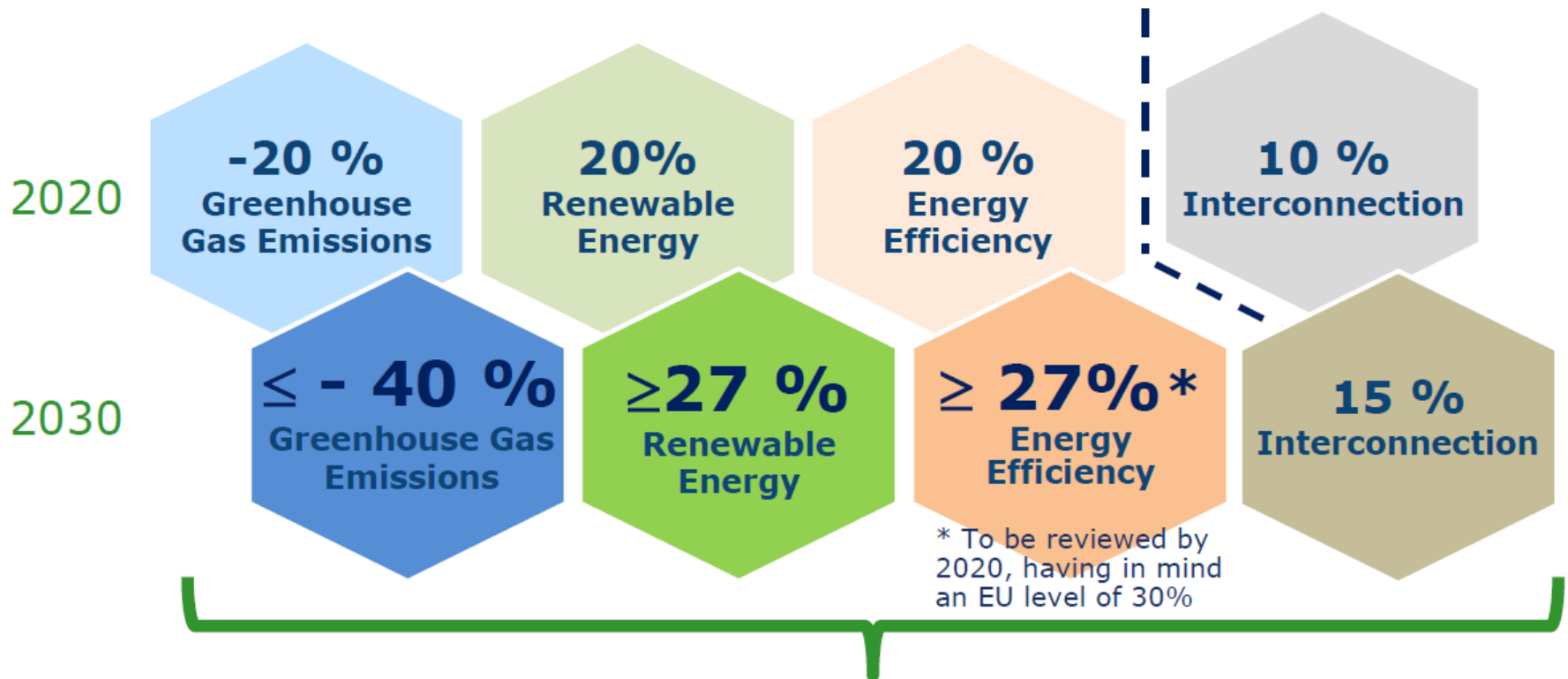
# Strategic market value and regulatory basis Storage of electricity



**Jyri Ylkanen**  
**Principal Advisors office**  
**European Commission – DG Energy**

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

# 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

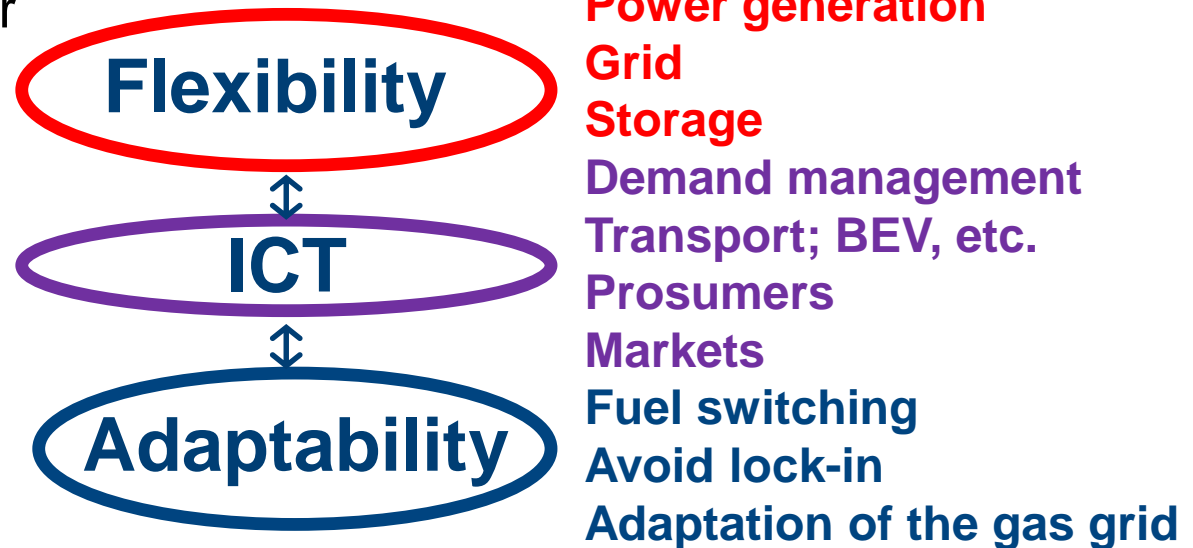
## **How** we want to reach it:



# 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**<sub>7</sub>



**Thank You for Your Attention!**

**[Jyri.Ylkanen@ec.europa.eu](mailto:Jyri.Ylkanen@ec.europa.eu)**

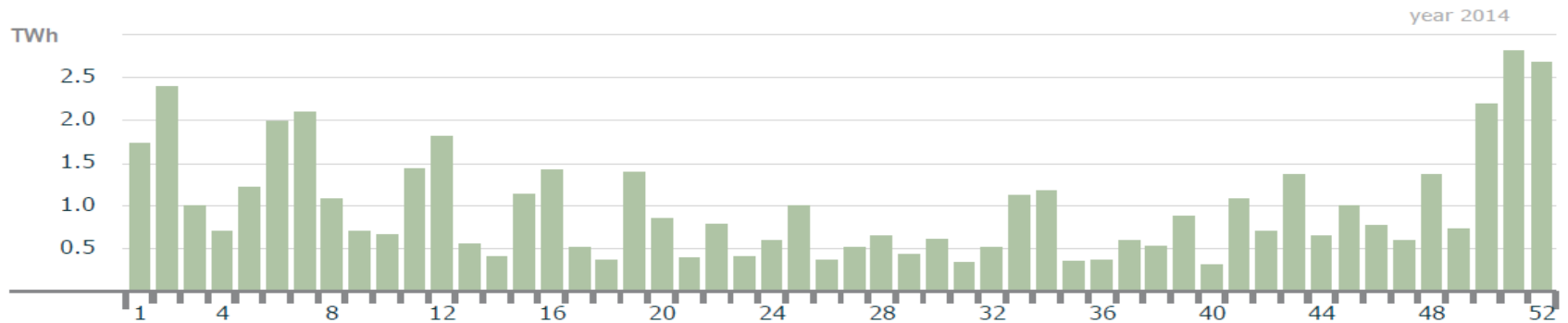
**<http://ec.europa.eu/energy>**



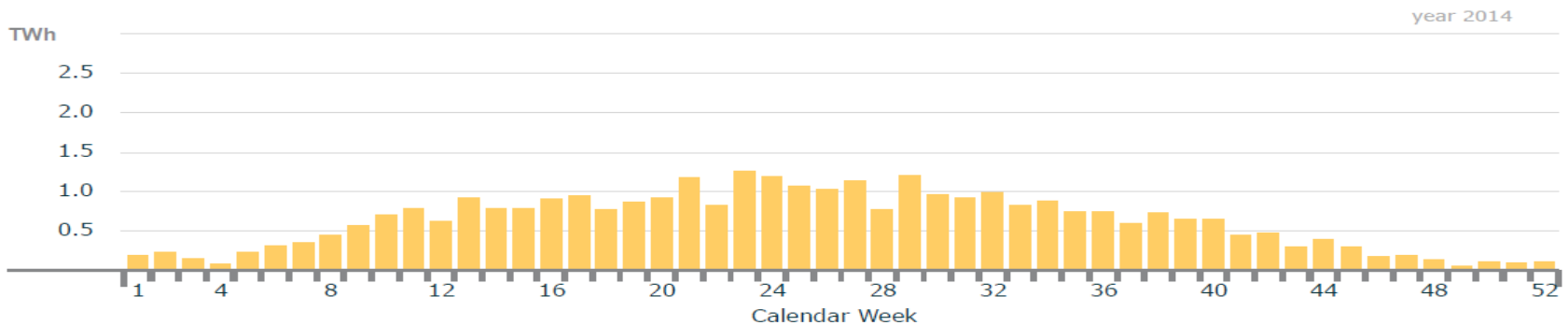


# Power generation – Wind & solar – DE – 2014

## Weekly Production Wind



## Weekly Production Solar



Source: Fraunhofer ISE, data EEX Transparency Platform