



European
Commission



2030

FRAMEWORKfor**CLIMATE&ENERGY**
#EU2030

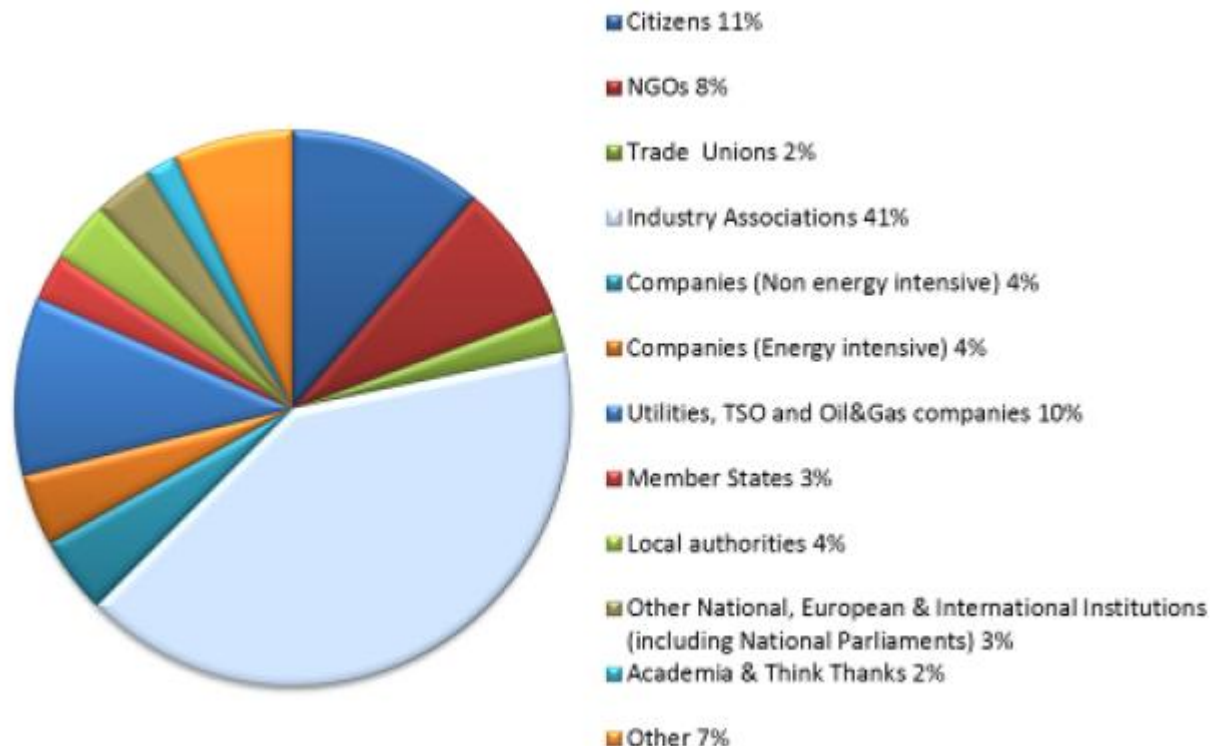


Outline

- 1. Climate and energy: where do we stand?**
- 2. Why a new framework for 2030?**
- 3. Main elements**
- 4. Challenges and benefits**
- 5. How it works**
- 6. ETS reform**
- 7. Other elements**
- 8. Next steps**

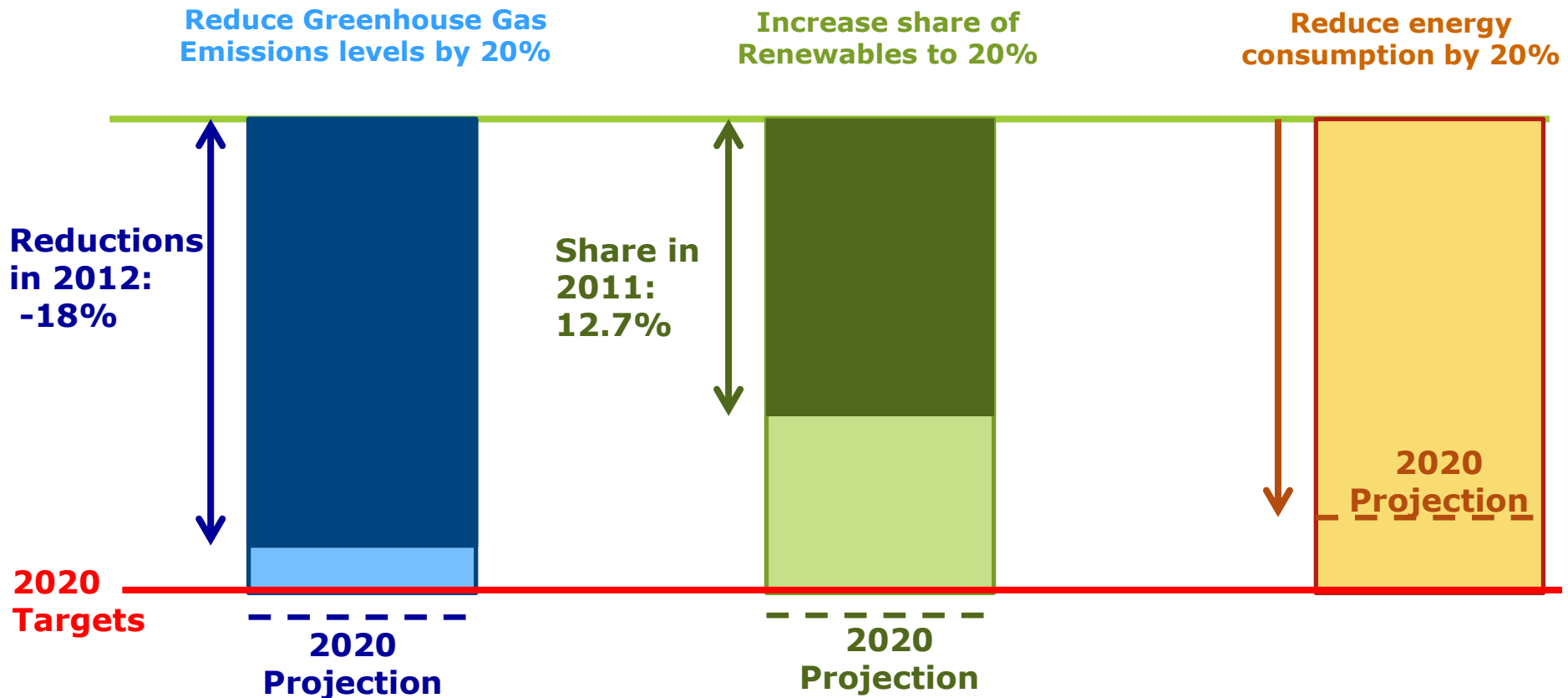
1. Climate and energy: where do we stand?

- Learning from existing experience
- Green paper and stakeholder consultation.
- 577 replies



1. Climate and energy: where do we stand?

- Progress towards the 2020 goals



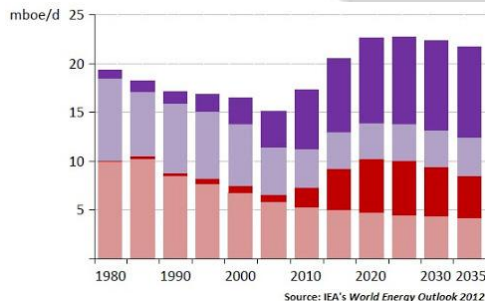
1. Climate and energy: where do we stand?

- **Main changes**

Renewable energy saw rapid cost decreases
Technologies are gradually becoming competitive

Impact of the financial crisis
Fall in private investment, tight financing conditions

Shale gas US oil and gas production



Unconventional gas
Unconventional oil
Conventional gas
Conventional oil

**Rising demand
-> rising prices**
By 2030, world economy set to double and energy demand to rise by 1/3

Fukushima



Some countries phase out nuclear power production

1. Climate and energy: where do we stand?

- **Prices and costs**

In the EU:

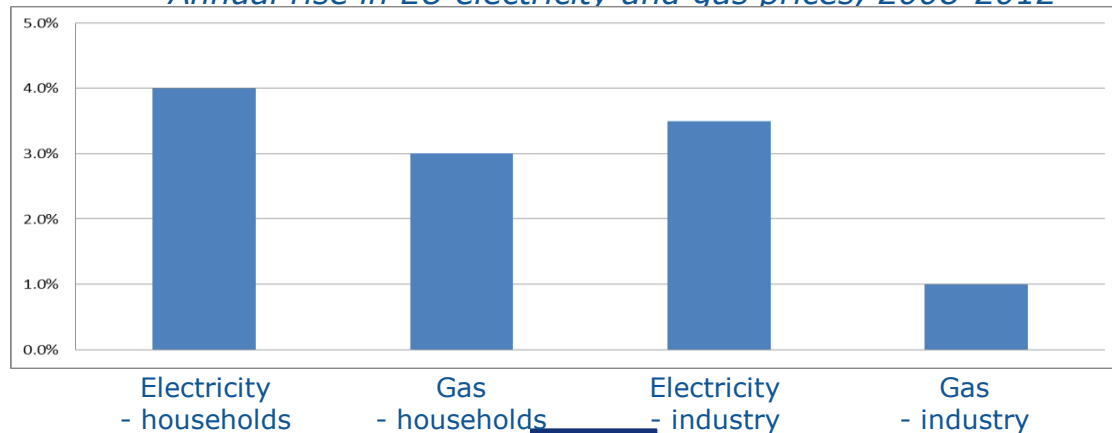
- **Wholesale prices** have been **stable or low**
- **Retail prices** have **risen**, often above inflation, mainly driven by:
 - taxes and levies, network costs and energy supply costs.

Elsewhere:

- Prices (especially gas) have **fallen**.

Europe needs to contain energy costs to remain competitive.

Annual rise in EU electricity and gas prices, 2008-2012



1. Climate and energy: where do we stand?

- **Prices and costs**
 - Minimise network costs with **best practice**
 - **Complete the internal (wholesale and retail) market:**
competition brings cost savings
 - **Switch energy supplier**
 - Use more **energy efficient products** and processes
 - Keep (energy financed) energy and climate policies cost effective
 - Ultimately, protect vulnerable households and exposed industries

2. Why a new framework for 2030?

Reducing Greenhouse Gas
Emissions (GHG) **cost-
effectively**

2050 objective: -80% to -95% GHG

2. Why a new framework for 2030?



Security of EU energy **supplies**

EU oil and gas imports:
€ 400 million per year


2. Why a new framework for 2030?



Competitive energy and
new **growth** and **jobs**

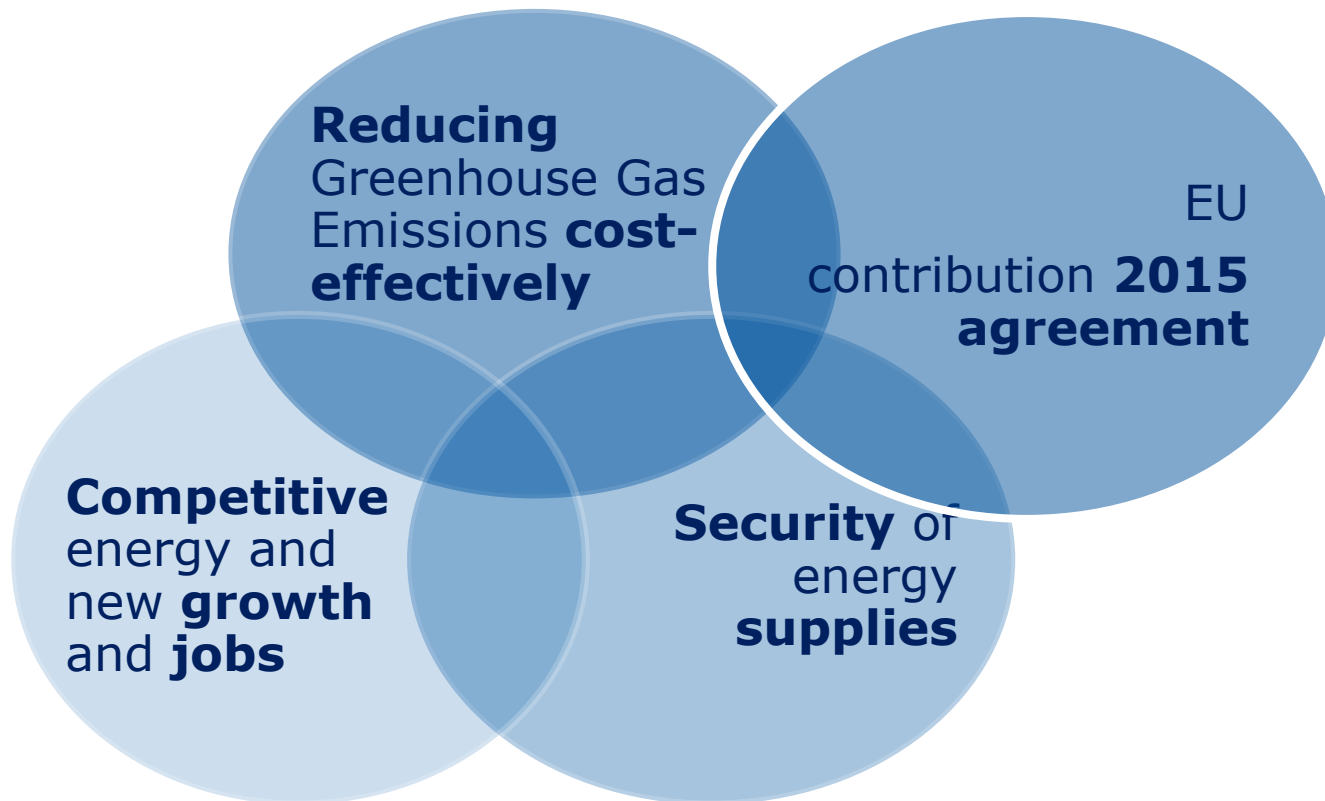
Eco-industry already employs
4.2 million

2. Why a new framework for 2030?



EU contribution to 2015
**international climate
agreement**

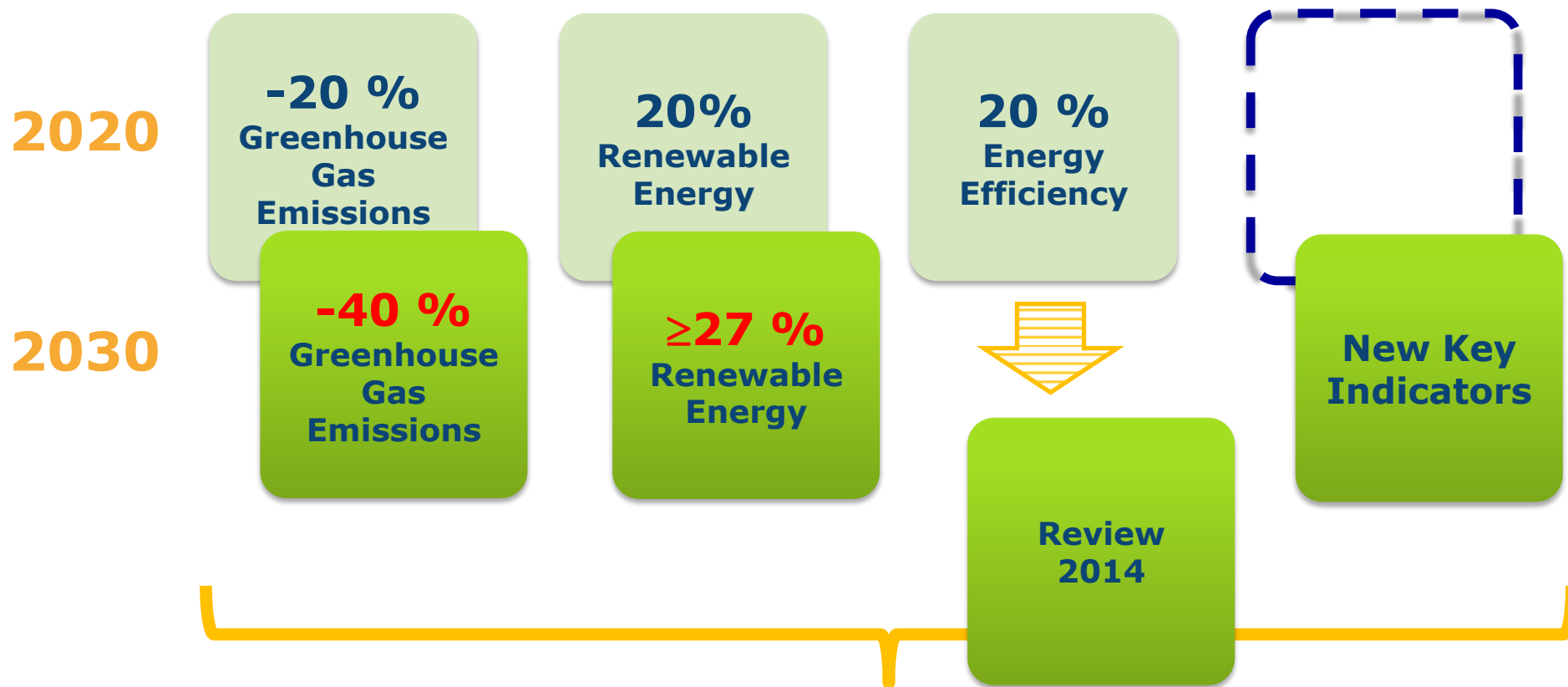
2. Why a new framework for 2030?



3. Main elements

- A Communication on A policy framework for climate and energy in the period from 2020 to 2030
- A Communication and a report on Energy Prices and Costs for the European Council
- A Recommendation on the safe and environmentally friendly exploitation of shale gas
- A Communication on industrial policy "For a European industrial renaissance"

3. Main elements



New governance system

4. Main challenges...

Energy costs

- **Increasing** in any event: renew **ageing** energy system, rising fossil **fuel prices**, adherence to **existing policies**

Additional **investments** to achieve 2030 framework

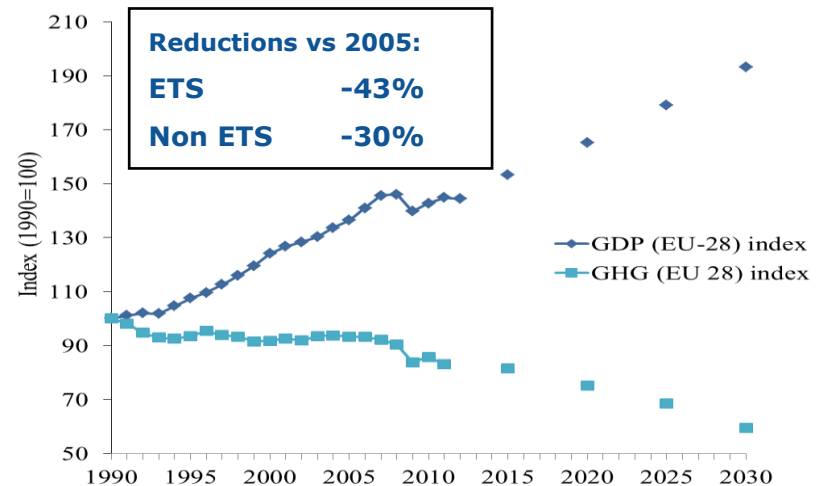
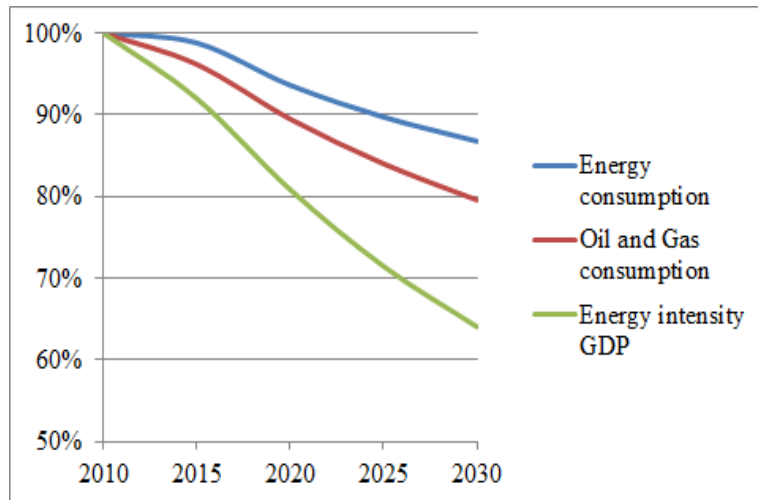
- Shift away from **fuel expenditure** towards investments, additional **€ 38 billion** investment/year 2011-2030 compared to the reference scenario

Differences between Member States

- Future discussion will have to be centred on how to ensure an **equitable burden sharing** affordable for all

4. Challenges and benefits

- **Decoupling of Gross Domestic Product growth from Greenhouse Gas Emissions** will continue



- **Energy system costs:** 0.15% of GDP in 2030
- **Investments:** additional € 38 billion per year next 2 decades
- **Fuel savings:** additional € 18 billion fuel per year next 2 decades
- **Energy security:** additional 11% cut in energy imports in 2030
- **Innovation:** jobs & growth
- **Health and air pollution benefits:** €7-13.5 billion in 2030

5. How it works

- **New Governance** system
National plans for competitive, secure and sustainable energy

Commission develops
detailed guidance

Member States prepare
plans based on an
iterative process

Commission assesses
Member States' plans
and commitments

Include **domestic objectives** on:

- non-ETS GHG emissions
- renewable energy
- energy savings
- energy security
-

5. How it works

**Overall 2030 domestic GHG target -40%
compared to 1990**



**ETS target -43% compared to 2005
Non ETS target -30% compared to 2005**



Translate into:

- Linear Reduction factor from 2021 onwards -2.2% for all ETS sectors**
- Non ETS targets for Member States**

5. How it works

- **Key indicators**



Energy price
differentials



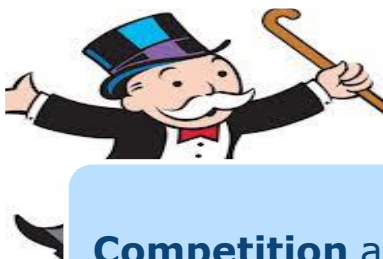
Diversification
imports,
share of
indigenous energy



Smart grids &
connectors
between Member
States



Intra-EU
coupling energy
markets



Competition and
market
concentration

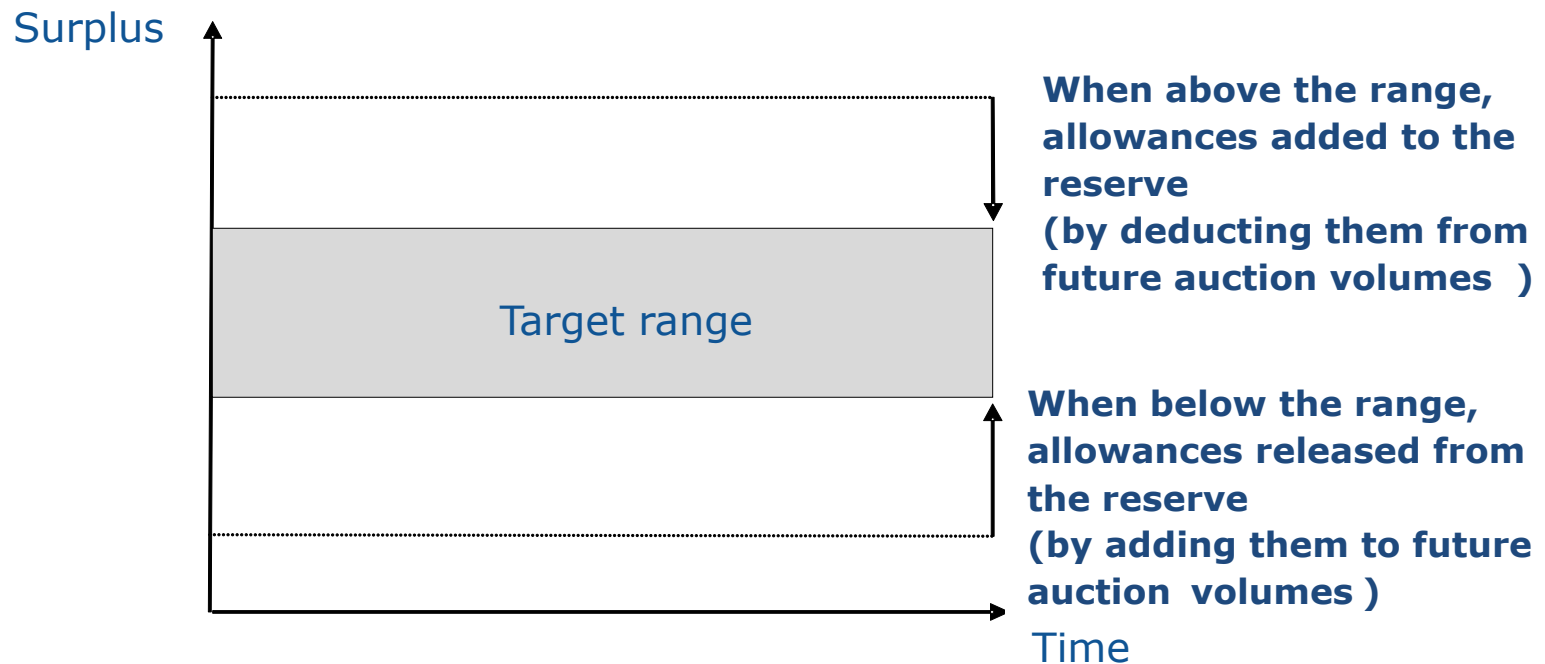


Technological
innovation

6. Reform of the EU ETS

- Large and persistent **market imbalance** (surplus >2 billion)
- **Back-loading** of auction volume only a first, temporary step
- Proposal to create a **market stability reserve** from 2021 onwards to make EU **Emissions Trading System more resilient** to demand shocks
- After decision on 40% Greenhouse Gas Emissions reduction target: Increase linear reduction factor as of 2021 from 1.74 % to 2.2% to **align the Emissions Trading System** cap to agreed 2030 target
- **Carbon leakage:** Stable framework for this decade, continued but more focused free allocation after 2020

6. Reform of the EU ETS



6. Reform of the EU ETS

Market stability reserve

- **Regular publication** of the market balance ("total number of allowances in circulation")
- In **case of large number of allowances** in circulation, i.e. not needed for compliance, **auction volume is reduced** by transferring allowances into reserve:
 - 12% of the nr of **allowances** in circulation, as long as this is equal to or larger than 100 million
- In case of **increasing demand and small number** in circulation, **auction volume is increased** by releasing **100 million** allowances from reserve
 - if number of allowances decreases to below 400 million allowances
 - if Article 29a applies
- Reserve transfers (in and out) **protect carbon market** from demand shocks

7. Other elements

Land sector

- **Agricultural non-CO₂ emissions** included in own EU 2020 target
- But this 2020 EU target does **not include** CO₂ emissions and absorptions from **land use** (e.g. CO₂ stored in forests and soil carbon)
- **Sectors are overlapping** (e.g fertiliser and tillage methods impact non-CO₂ emissions as well as soil carbon)
- Both sectors need to be included in the 2030 framework to contribute in a cost-effective way to the **mitigation efforts**
- Consider how best to **integrate both** (national GHG targets, sectorial pillar, combination?)

7. Other elements

Transport

- Transport White Paper goal to reduce GHG from the transport sector by 20% by 2030 compared to 2008.
- Will require gradual transformation of the entire transport system.
- Improving efficiency, development and deployment of electric vehicles, second and third generation biofuels and other alternative, sustainable fuels, smarter pricing of infrastructure usage, fuel and vehicle taxation, etc.
- No new targets for renewable energy or the GHG intensity of fuels used in the transport sector.
- Food-based biofuels should not receive public support after 2020.

7. Other elements

Innovation and finance

- Upscale **funding for R&D and innovation** beyond current Horizon 2020
- Use of an **expanded NER300 system** will be explored (including innovative technologies for industry)
- **EU funding 2014–2020** is available under the European Structural and Investment Funds (23 billion Euro ring-fenced for the "Shift to low-carbon economy")
- Reflections need to start on instruments for after 2020 to **leverage finance**, particularly in Member States that have less access to it, **empowering regional and local authorities** to invest and exploit low-carbon opportunities

7. Other elements

Shale gas

What?

This **Recommendation** aims at supporting Member States to ensure that the **environment is safeguarded, resources are used efficiently** and the **public is informed** about exploration and production of natural gas from shale formations.

It should enable **potential energy security and competitiveness benefits** to be reaped in those Member States who wish to explore or exploit such resources.

How?

- **Planning ahead** of developments and evaluate possible effects before granting licences
- Carefully **assessing environmental impacts** and risks
- Ensuring proper well **integrity**
- **Checking the quality** of the local water, air, soil **before** operations start, in order to monitor any changes and determine possible liabilities
- **Controlling air emissions**, including greenhouse gas emissions, by capturing the gases
- **Informing the public** about chemicals used in individual wells, and ensuring that operators apply **best practices** throughout the project.
- **Public scoreboard and review** in 18 months to assess effectiveness of this approach

8. Next steps

At **European level**

- **March 2014: European Council**
- **European Parliament**
- **Energy Efficiency Directive:** 2014 Review and proposals
- **Emissions Trading System proposal:** co-decision procedure
- Development/implementation of new governance structure
- Competitiveness and energy security indicators

And at **international level**

- 2014: Ban Ki-moon Climate Summit of World leaders
- 2015: contributions from Parties; Paris conference adopts **international agreement**

THANK YOU!

2030

FRAMEWORKfor**CLIMATE&ENERGY**
#EU2030

ec.europa.eu/energy/2030_en.htm
ec.europa.eu/clima/policies/2030

Background information

Competition in integrated markets

- Completion of the **internal energy market** continued priority
- **Households** (integrated and competitive energy market could result in cost savings of €40-70 billion until 2030)
- Reform of subsidy mechanisms for renewables to more **market oriented approach** for mature technologies
- For industries exposed to **international competitiveness**: to limit risk of carbon leakage continue system of free allocation after 2020 if other major economies do not take comparable action, but improve the system to focus it more

Background information

Other key policies

- **Transport**
 - **Transport White Paper** goal to reduce Greenhouse Gas Emissions from the transport sector by 20% by 2030 compared to emissions in 2008
 - Will require gradual transformation of the entire transport system
- **Carbon Capture and Storage**
 - Carbon Capture and Storage important for **long term Greenhouse Gas Emissions reductions**, certainly for certain industrial processes
 - Supportive EU framework with support from Member States:
 - Continued and strengthened use of **auctioning revenues**
 - Development storage and **transport infrastructure** (Connecting Europe Facility and any potential successor)