

# Elements of Europe's Energy Union



# State of affairs – Energy and Climate package

## Issues 2008:

- decarbonisation
- peak oil
- rising import dependency
- green growth



## Targets for 2020

20% renewables  
20% reduct. of GHG  
20% incr. in energy efficiency

shale

recession

Fukushima

Copenhagen

Ukraine crisis

## Issues 2014:

- competitiveness
- supply security
- decarbonisation



## Targets for 2030 (COM)

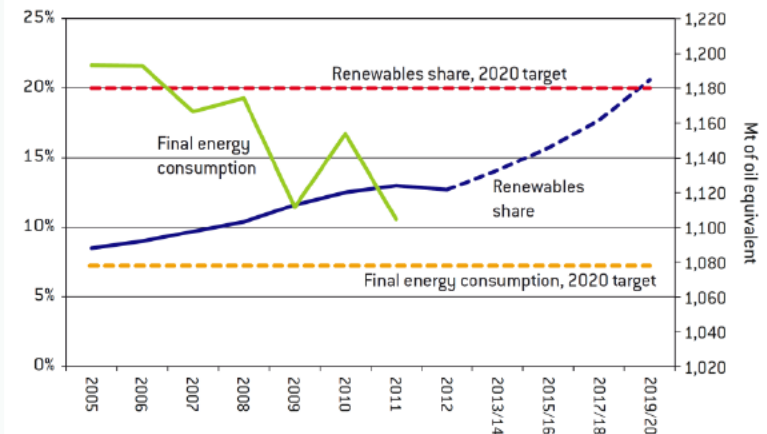
27% renewables  
40% reduct. of GHG  
30% incr. in energy efficiency

# Reaching the targets but failing the objectives?

- Security of Supply?
- Competitiveness?
- Sustainability?

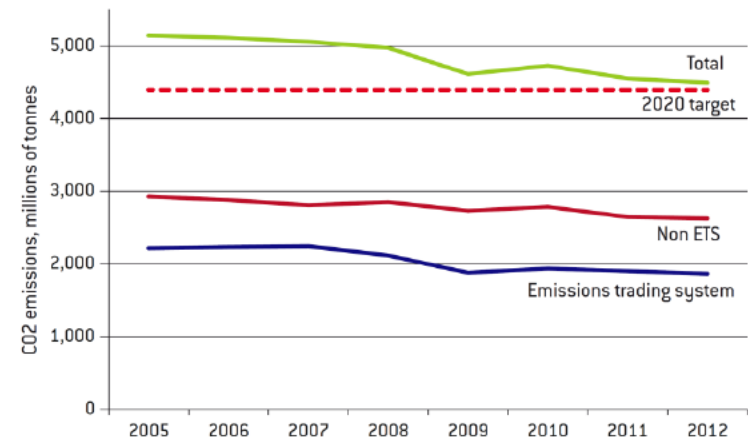
-> Wrong targets?

Figure 1: Share of renewable energy in gross final energy consumption (%; left scale); EU energy efficiency (right scale)



Source: Bruegel based on Eurostat. The target value of 1,078 Mtoe for final energy consumption was set by Directive 2012/27/EU. Both target and actual consumption refer to EU27 (thus excluding Croatia). Dotted line for renewables = projection.

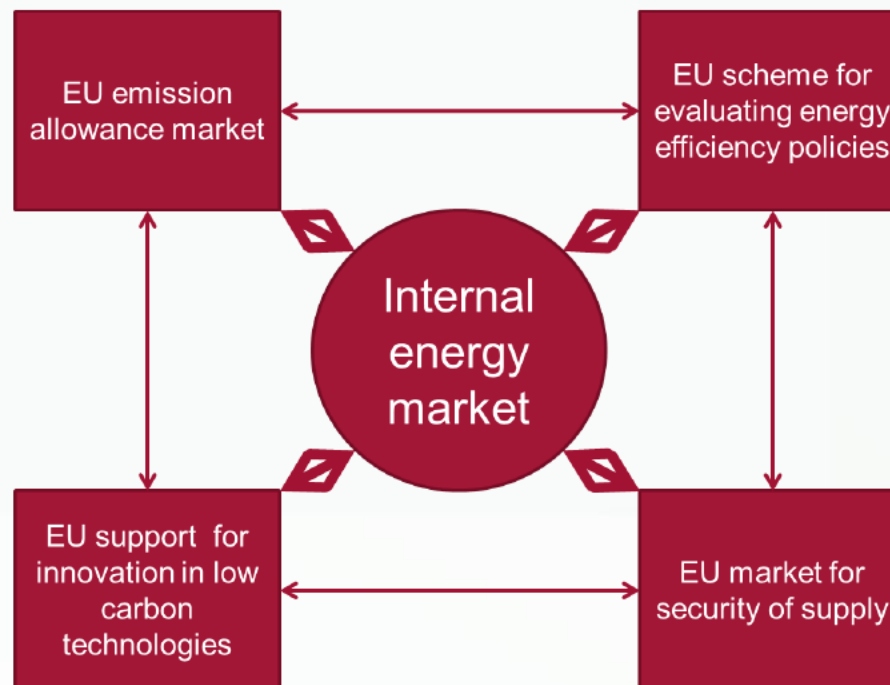
Figure 2: EU emissions



Source: Bruegel based on data from EEA [2013].

# EU Energy and Climate Policy beyond 2020(20)

- **Need a comprehensive strategy, not just extrapolating the 2020 targets**
- Maroš Šefčovič: “The time for a European Energy Union has clearly come”
- **Five key elements:**



# Core element: Internal energy market

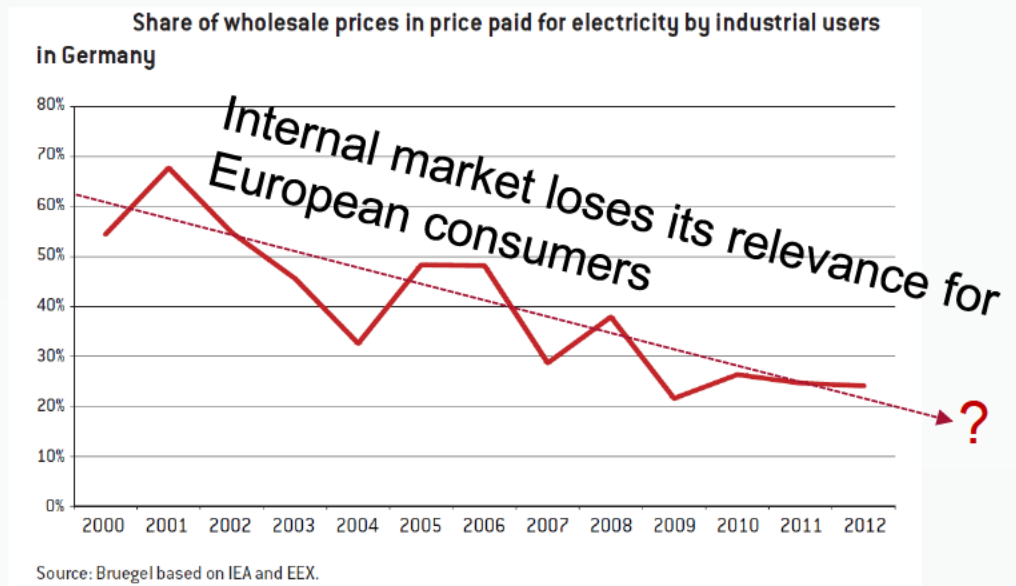


Internal  
energy  
market

# Wish vs. Reality

## Status Quo:

- Re-nationalisation
- Ad hoc incentives
- Harmonisation of short-term market stuck



-> Maroš Šefčovič : “A completed internal market will represent the backbone of the new European Energy Union.”

## Efficient solution:

- EU-wide solution
- Long-term framework

# Our proposal

- **Comprehensive ('deep') single European market design**
- **Governance structure to continually fine-tune market design**

**Requires major changes, curtailing the role of national energy policy making**

- Big intergovernmental 'horse trading'
- Only negative fuel-mix preferences

**Otherwise: back to the 1980s**

# Reducing greenhouse-gas emissions

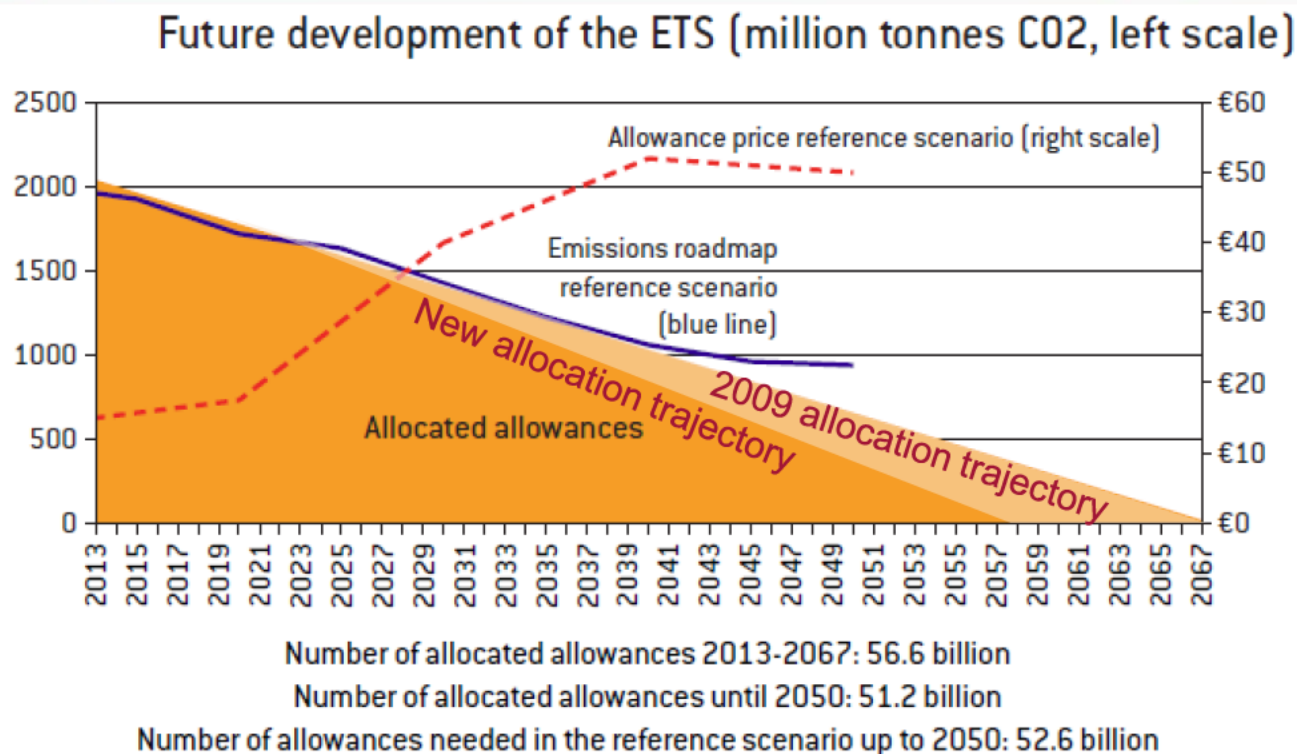
EU emission  
allowance  
market



Internal  
energy  
market

The diagram consists of a pink rectangular box on the left containing the text 'EU emission allowance market'. A small pink arrow points from the bottom-right corner of this box towards a large dark red circle on the right. The circle contains the text 'Internal energy market'.

# The existing ETS implies high prices



- System tightens constantly – moving to 40% a sensible compromise
- But neither the 40% nor the market stability reserve address the credibility issue

# Our proposal

- **We need long-term carbon price signals**

-> need to bind the hand of current and future; national and EU policy-makers

- **EIB shall sell guarantees on the 2030+ EUA price**

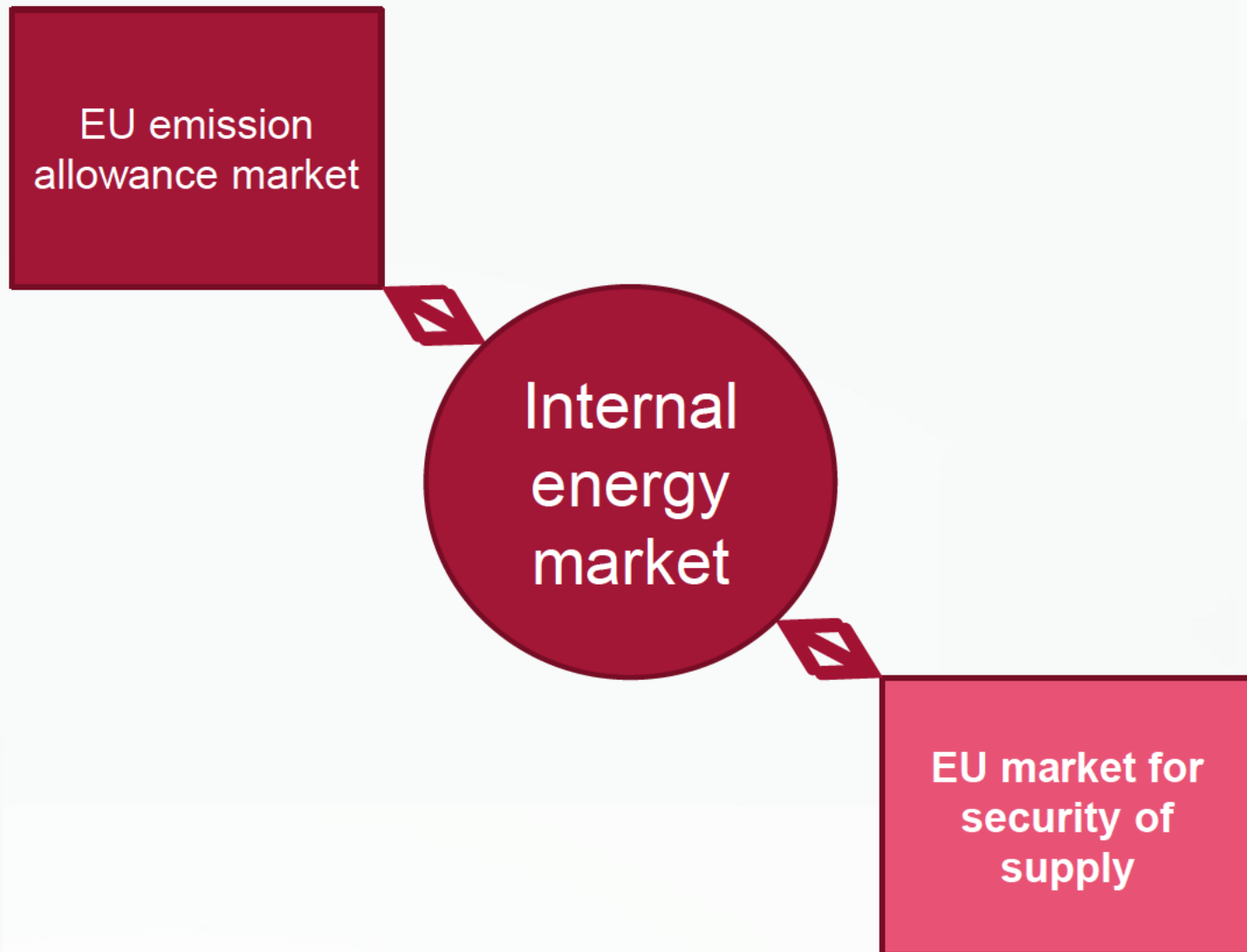
- **Each guarantee guarantees that one EUA can be sold to the EIB at a fixed price (e.g., €40)**

-> More low-carbon investments by hedged investors, today

-> income to the EIB

-> exposure of the EIB increases overall credibility of the EU ETS -> higher carbon prices today -> more low-carbon investments

# Ensuring security of supply



# Security of Supply

**The largest supplier must be allowed to fail for an undetermined period of time**

**Two approaches:**

## **1) Public investments into SoS**

- you get the diversification done
- But, Crowded-out private investments
- A myriad of options -> govt's unlikely to chose the best portfolios

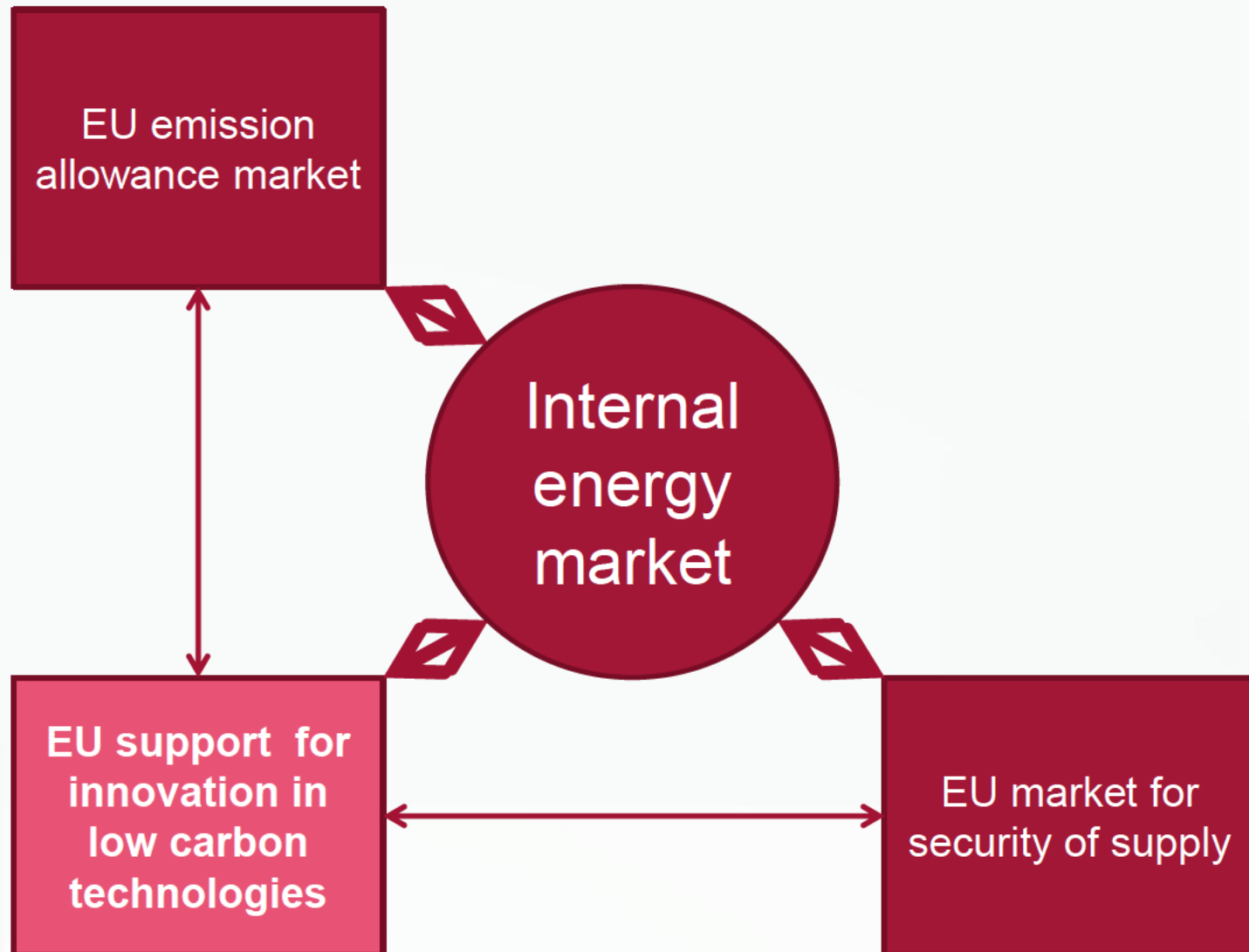
## **2) Leave it to the market**

- good rationing mechanism
- cheapest available sources -> no diversification

# Our proposal

- **Short-term:**
    - Functioning market as rationing tool
  - **Long term: Requires overbuilding the system**
    - Each supplier has a 'reserve requirement'
    - Including volumes (storage, interruptible contracts, LNG options, pipeline options, ... ) and infrastructure to bring it from the source to the respective customer
- > ensures cheapest possible reserves (insurance can have high variable, low fix cost)

# Bringing down the cost of low-carbon technologies



# Renewables target

- **In the past focus on deployment (20% by 2020)**

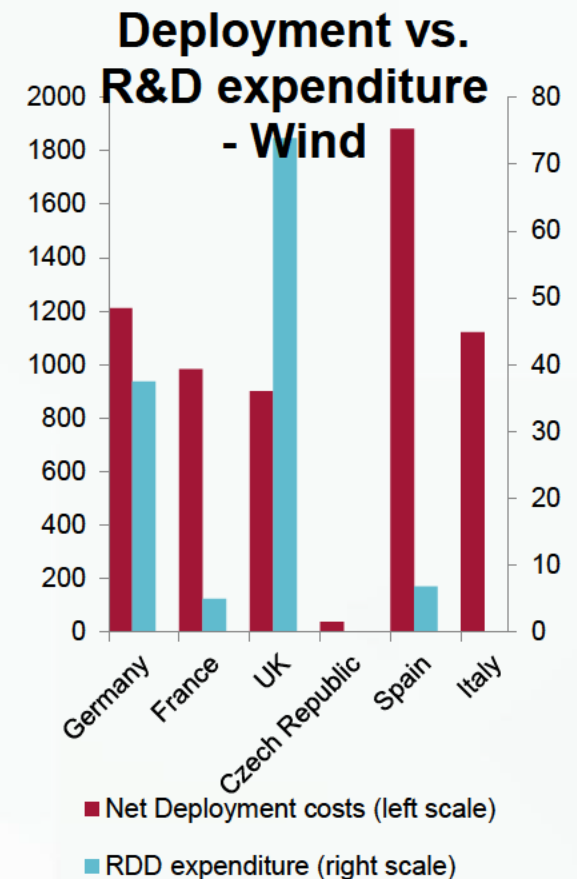
- No impact on emissions
- Limited impact on innovation
- High cost

- **Current proposal: an insignificant target**

- **Renewables are crucial to keep 'Chinese coal underground'**

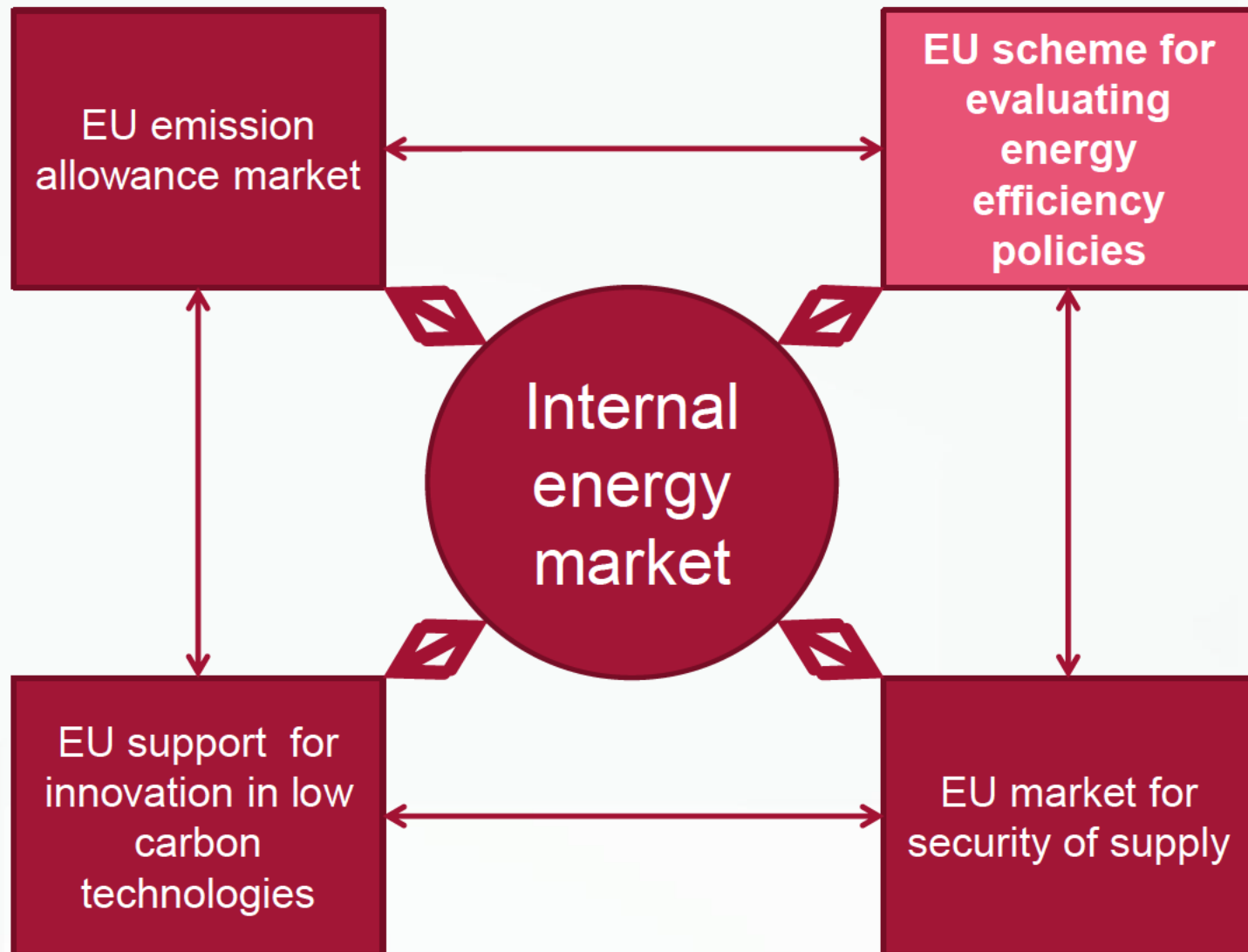
- **-> strategic innovation policy**

- Deployment and R&D
- Technology specific



in million euros

# Increasing energy efficiency



# Energy Efficiency

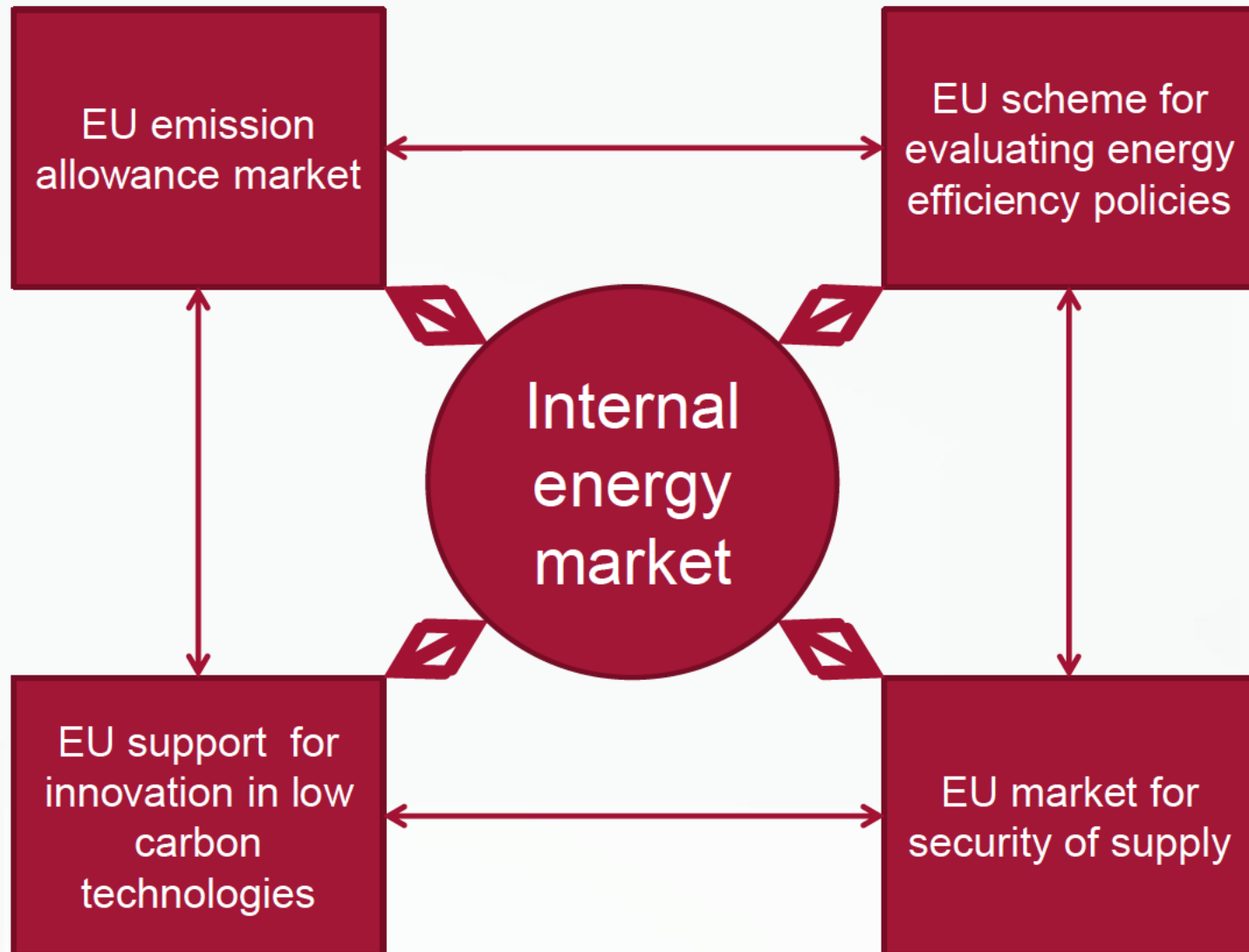
- **Price signals still underutilised**
  - Should not use energy prices for social and industrial policy purposes
  - Protecting energy-intensive industry is wrong
- **Preferred European tool, performance standards**
  - Rebound effect (need to get prices right)
  - Distortion for rarely-used items (light-bulb in basement)
  - Profile of usage sometimes more important than volume
  - > Needs to be benchmarked against alternative policies
- **Question of subsidiarity**
  - It depends (EU: standards, prices; MS: investment incentives, ...)

# Our Proposal

## Target in terms of additional energy savings and the associated cost

Measure	Total cost	Net savings
German energy efficiency programmes in the buildings sector	€ 14 bn	0.18 Mtoe/y
German subsidised loans for insulation and heating system replacement	€ 3.9 bn	0.14 Mtoe/y
81.000 new flats with insulation systems in Germany	€14.5 bn	0.03 Mtoe/y
EU light-bulb regulation	€ 0.5943 bn	3.33 Mtoe/y
<b>Total</b>	<b>€ 32.99 bn</b>	<b>3.68 Mtoe/y</b>

# Conclusion



# Conclusion

- **Targets should fit the long-term objectives**
  - Sustainability goes beyond 2030
  - Security of Supply goes beyond mitigating Russian market power
  - Competitiveness goes beyond energy-intensive industry
- **Instruments equally important as quantitative targets**
- **Deep reform and new vision necessary -> distributive effects -> high-level commitment - > 'Energy Union'**
  
- **Alternative:**
  - MS 'backseat-drive' all relevant investment decisions
  - While, having to comply with European rules (that have nothing to do with the actual national energy sectors)



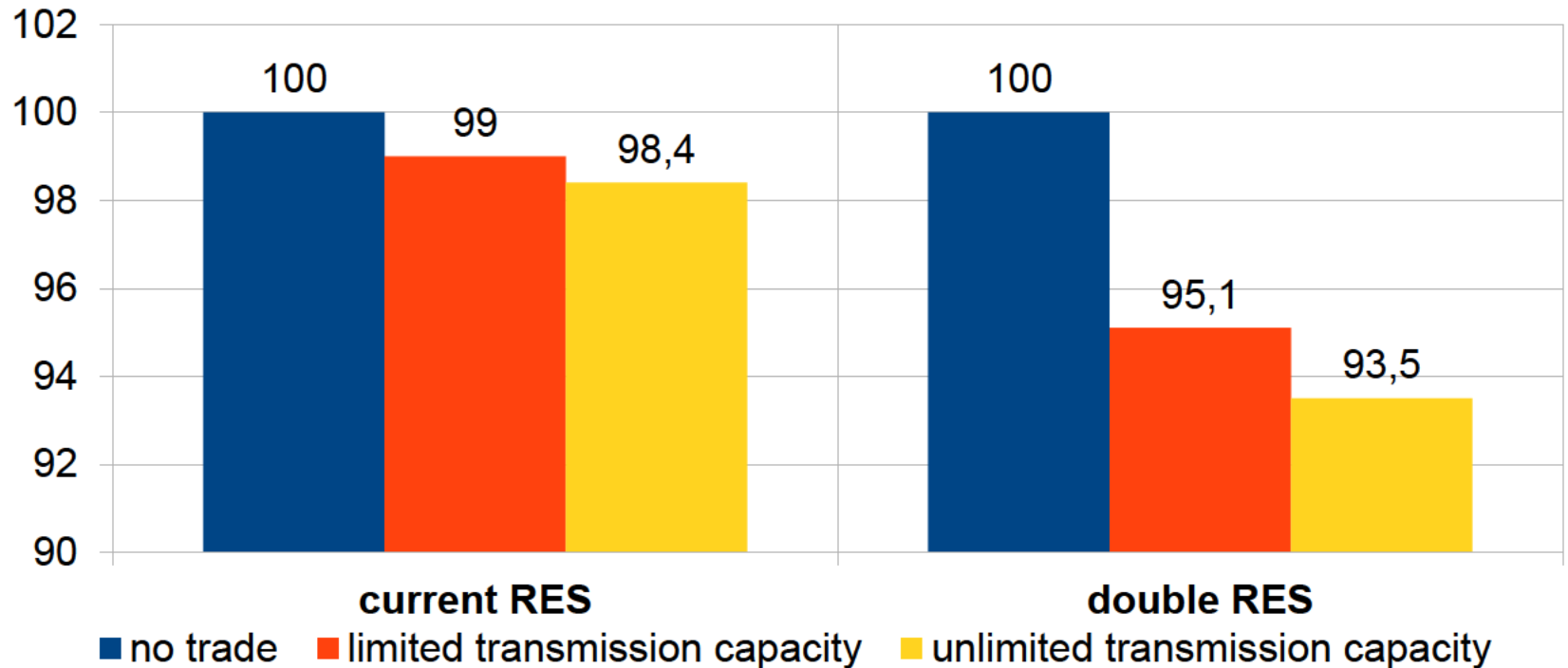
**Thank You**



**Back-up**



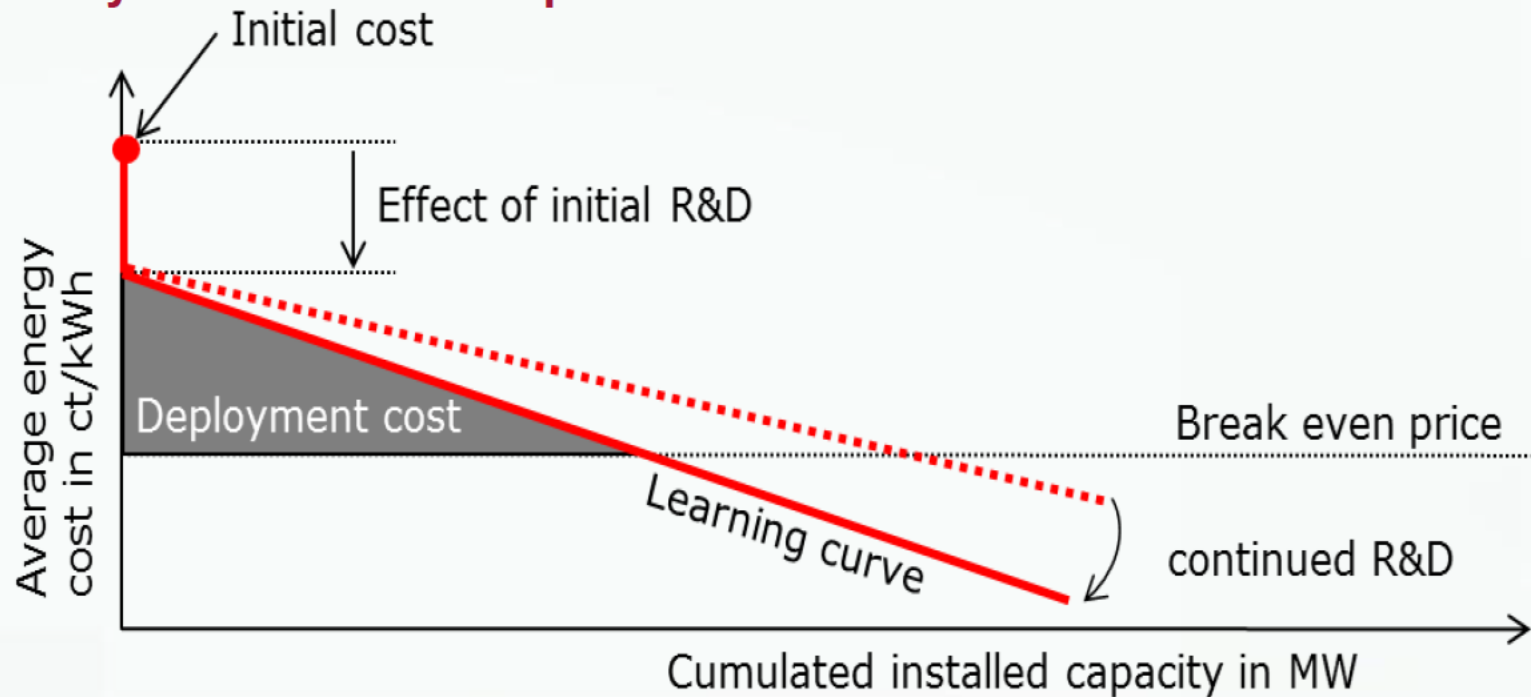
# Benefits increase with the RES share



Case: DE-ES; optimisation of dispatch and plant park

# Driving innovation in RES

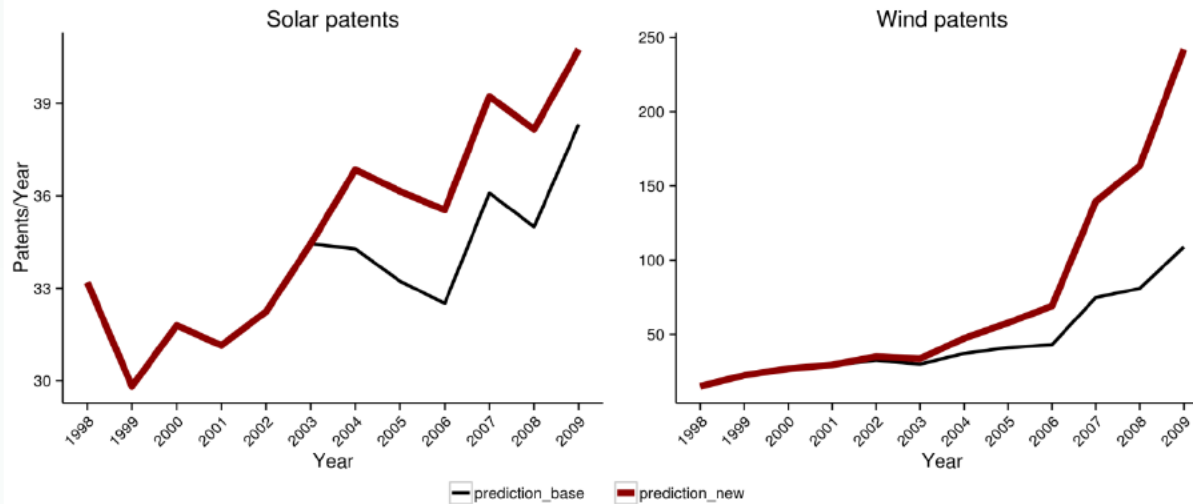
- By deployment
- Be RD&D
- By a combination of policies



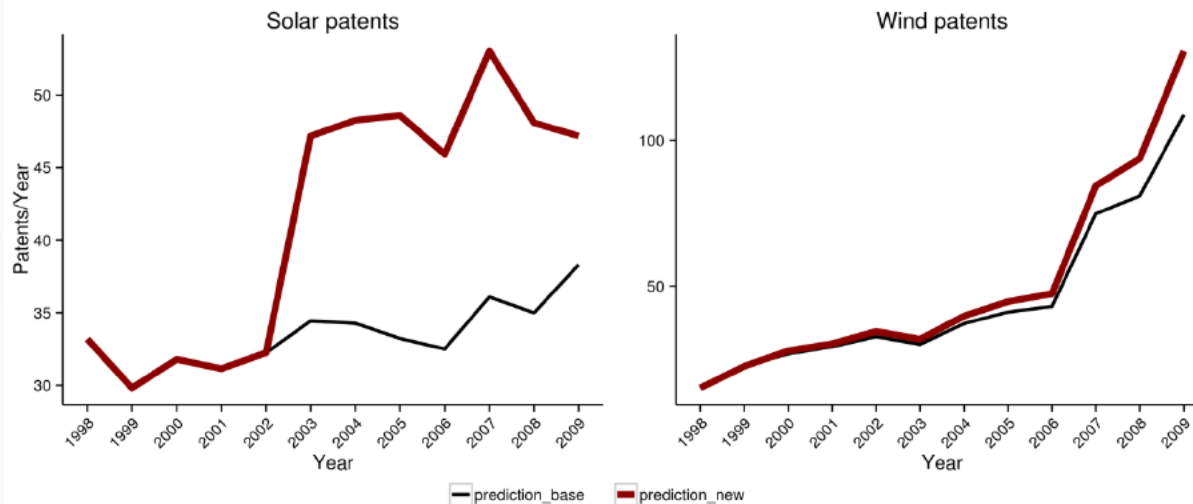
- But which timing and balance?

# Both, RD&D and deployment are needed

Increase RD&D in Germany



Increase deployment in Germany



Improve balance  
timing and  
coordination of  
research and  
deployment for  
more innovation

# Sectors that prefer high price countries, are more productive

