

***BPMR Mission Korea  
Industry to Industry Dialogue on Emissions  
Trading and Market Readiness***

***Experience sharing on broader issues dealing  
with EU ETS and overlapping policies***

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# *Alstom = low- carbon infrastructure*



Equipment & services for power generation  
***Alstom Thermal Power***



Equipment & services for power transmission  
***Alstom Grid***



***Alstom Renewable Power***



Equipment & services for rail transport  
***Alstom Transport***



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# EU ETS + Renewables + Energy Efficiency



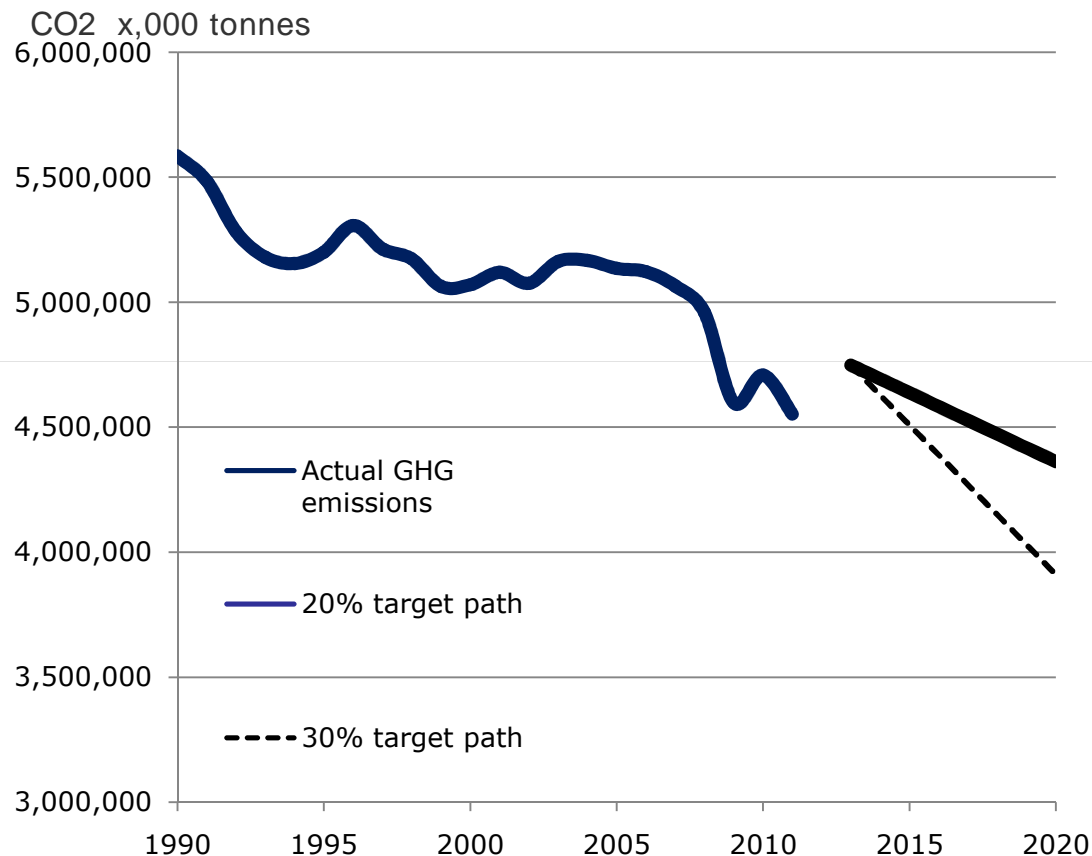
<b>Measure</b>	<b>Covers which sectors</b>	<b>Target</b>
<b>EU ETS</b>	Power and industry: 45% of EU emissions	Reduce emissions by 21% by 2020 compared to 2005  BINDING
<b>Renewables</b>	Power and transport	Renewables to be 20% of energy consumption by 2020  BINDING
<b>Energy Efficiency</b>	Whole economy	Improve by 20% by 2020 vs. business as usual  NON- BINDING

## .... and there are other policies



- **Greenhouse Gas « Effort- Sharing »**
  - 10% target to reducing for the other 55% of emissions by 2020 on 2005 levels
  - broken down by 27 binding national targets
- **Fuel Quality**
  - 6% target for reducing GHG emissions from fuels by 2020 on 2010 levels
- **Vehicle CO2 Standards**
  - cars: 130g/km by 2015 and 95g/km by 2020
  - vans: 175g/km by 2017 and 147g/km by 2020.
- **Eco- Labelling rules:** promotes products with low carbon footprint
- **Eco- Design standards:** on environmental performance of energy related products
- **Energy Taxes:** minimum rates for energy taxes in heating electricity and motor fuel

# Overall progress “good”: meeting CO2 target ...



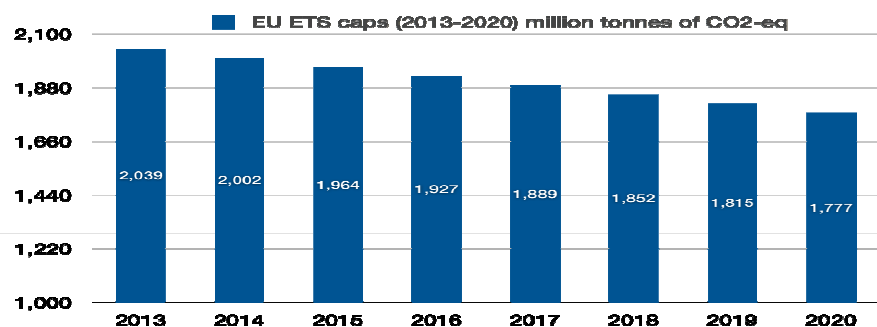
- 1990- 2011: EU GDP up 48%, emissions down 18.5%
- Close to 20% target for 2020

# Progress on EU ETS ?



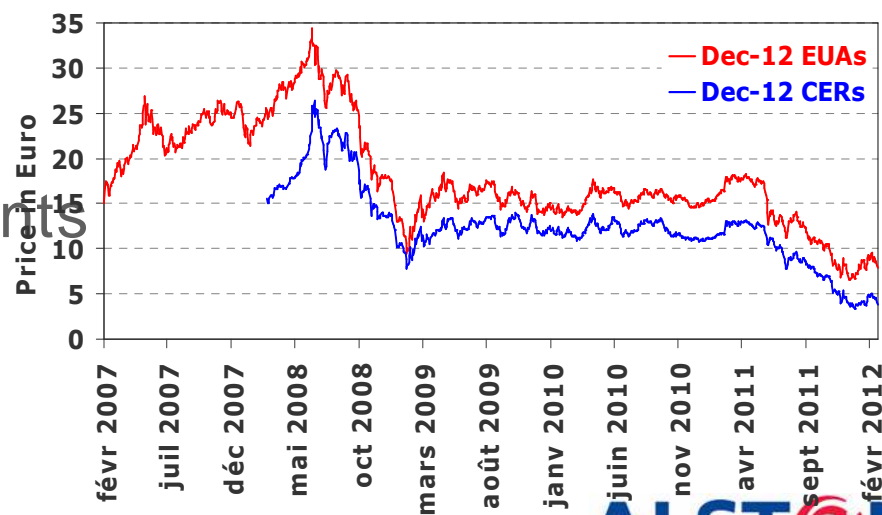
## Good

- will deliver 21% emissions reductions in sectors covered



## Not so good

- price not driving investments
- low auction revenues



# Progress on Renewables ?



## **Good**

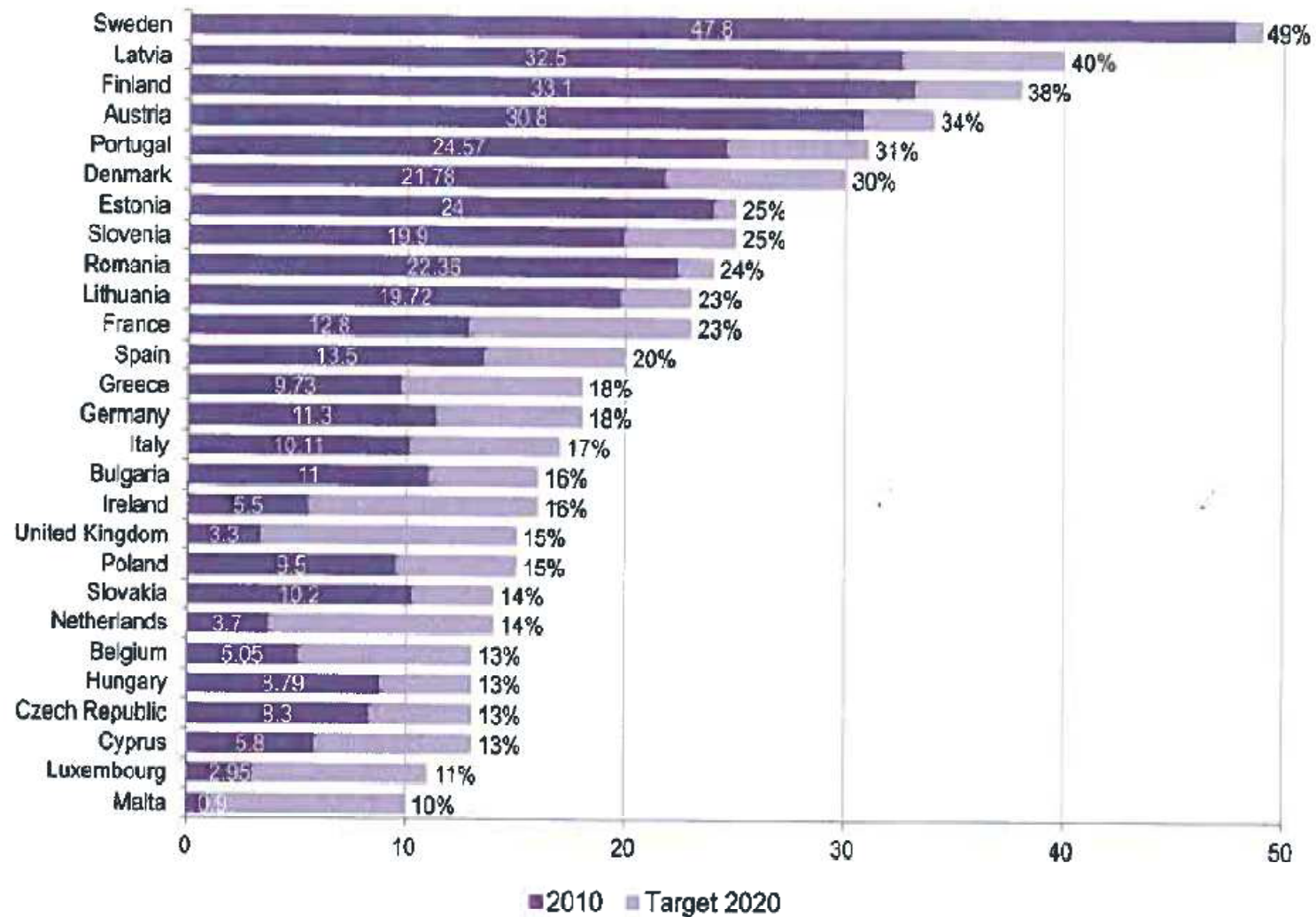
- good progress towards targets (see next slide)
- important contribution to emission reductions
- technology costs down, especially in PV and onshore wind

## **Not so good**

- high cost of support schemes not politically sustainable
  - € 23bn pa in Germany; € 10bn pa in Italy
- successful industrial policy ?
- market/grid integration challenges remain

# Progress on Renewables ....

Figure 1: Renewable energy share from final consumption in 2010 and the 2020 target (%)





# Progress on Energy Efficiency ?



## **Good**

- vehicle CO2 standards will be met
- new energy efficiency standards and labelling adopted for lighting and appliances
- recent adoption of **Energy Efficiency Directive** (October 2012)

## **Not so good**

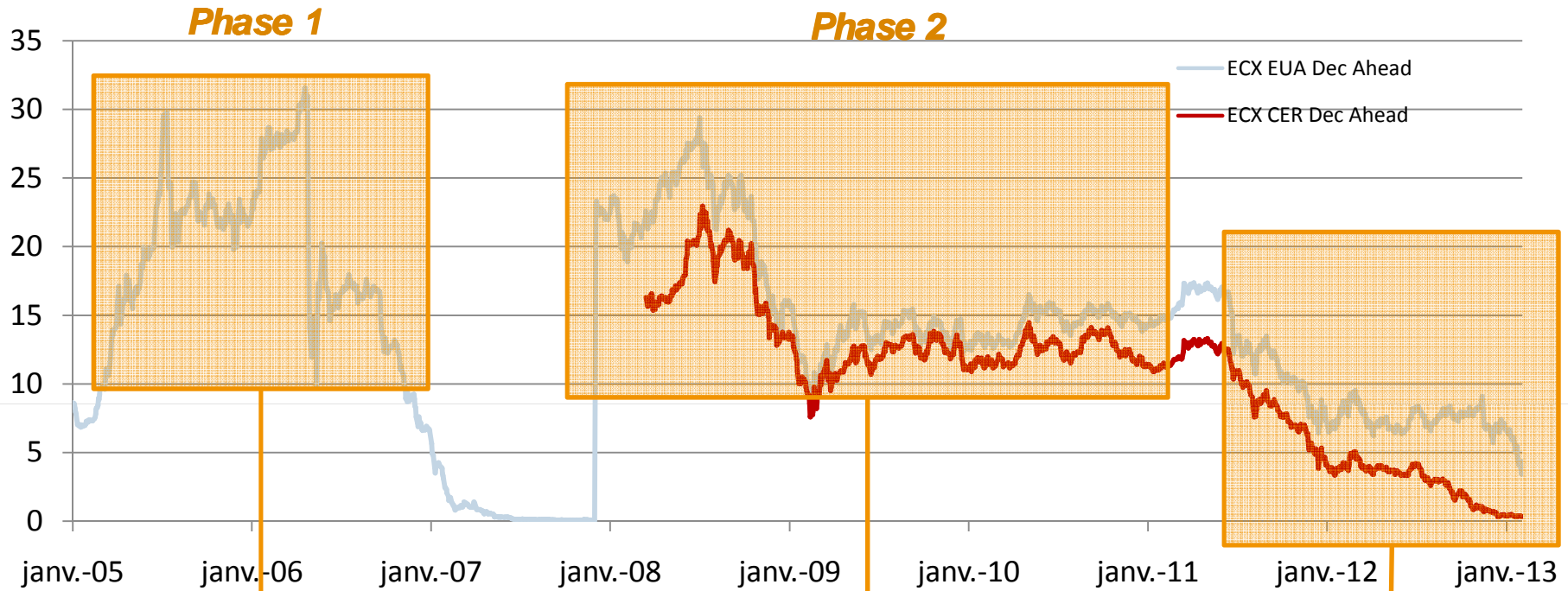
- EU unlikely to meet 20% energy efficiency target for 2020
- more finance needed, especially for the renovation of buildings
- more progress needed in overall transport energy efficiency

# Interaction of ETS with Renewables and Energy Efficiency



- **CO2 price not high enough** to drive investments in either
- **Renewables** have relied more on national support schemes: **feed-in tariffs** and green/white certificates
- **Energy efficiency** improvements have relied on **regulation**, e.g. on cars and appliances
- **ETS cap** failed to take full account of progress in renewables deployment and energy efficiency:
  - this has contributed to current surplus of allowances

# What's actually happening out there .....



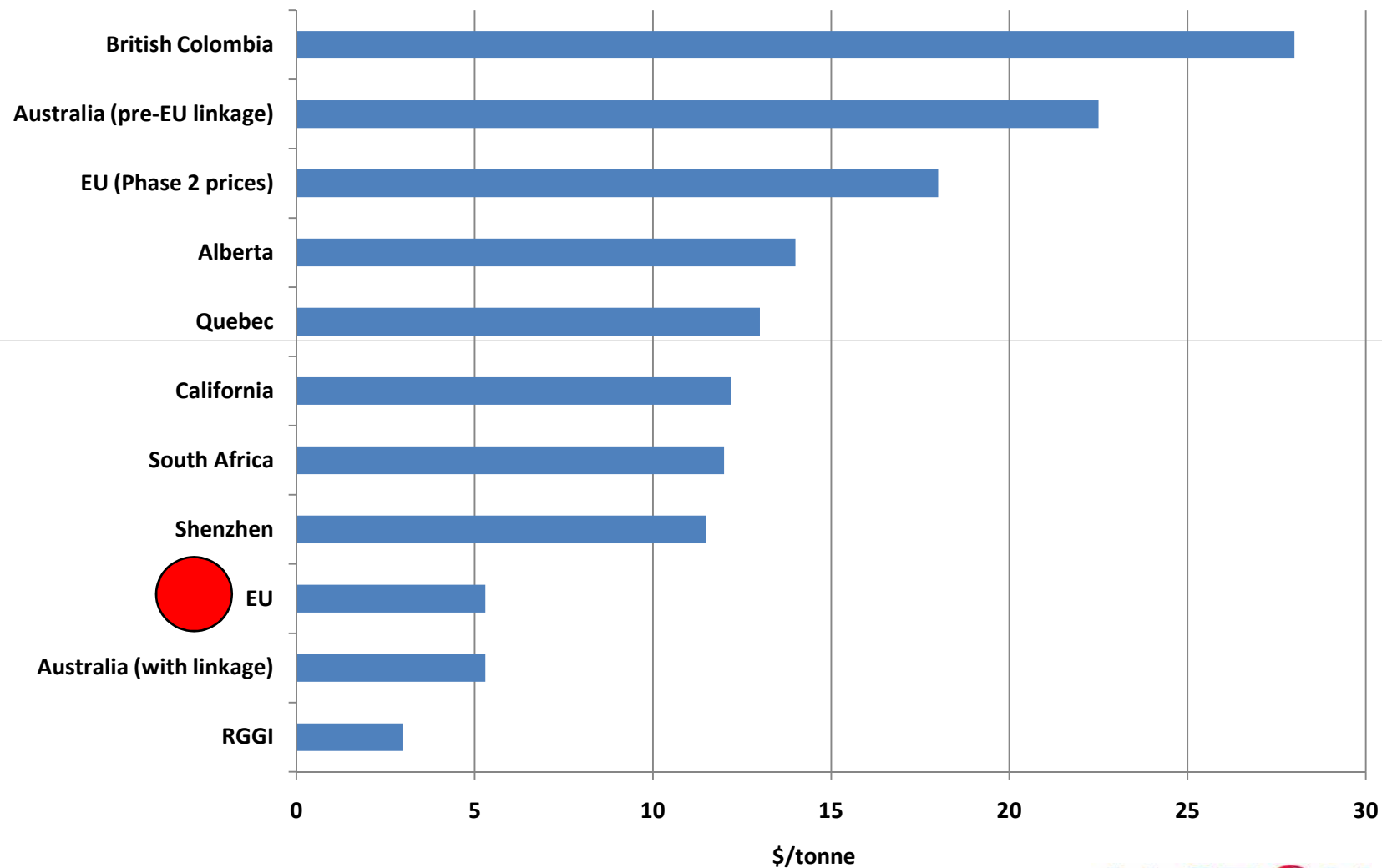
**1** Increased interest in renewables and gas

**2** Increased interest in CCS

**3** Fuel switching from gas to coal

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# EU CO2 price now well below international norm



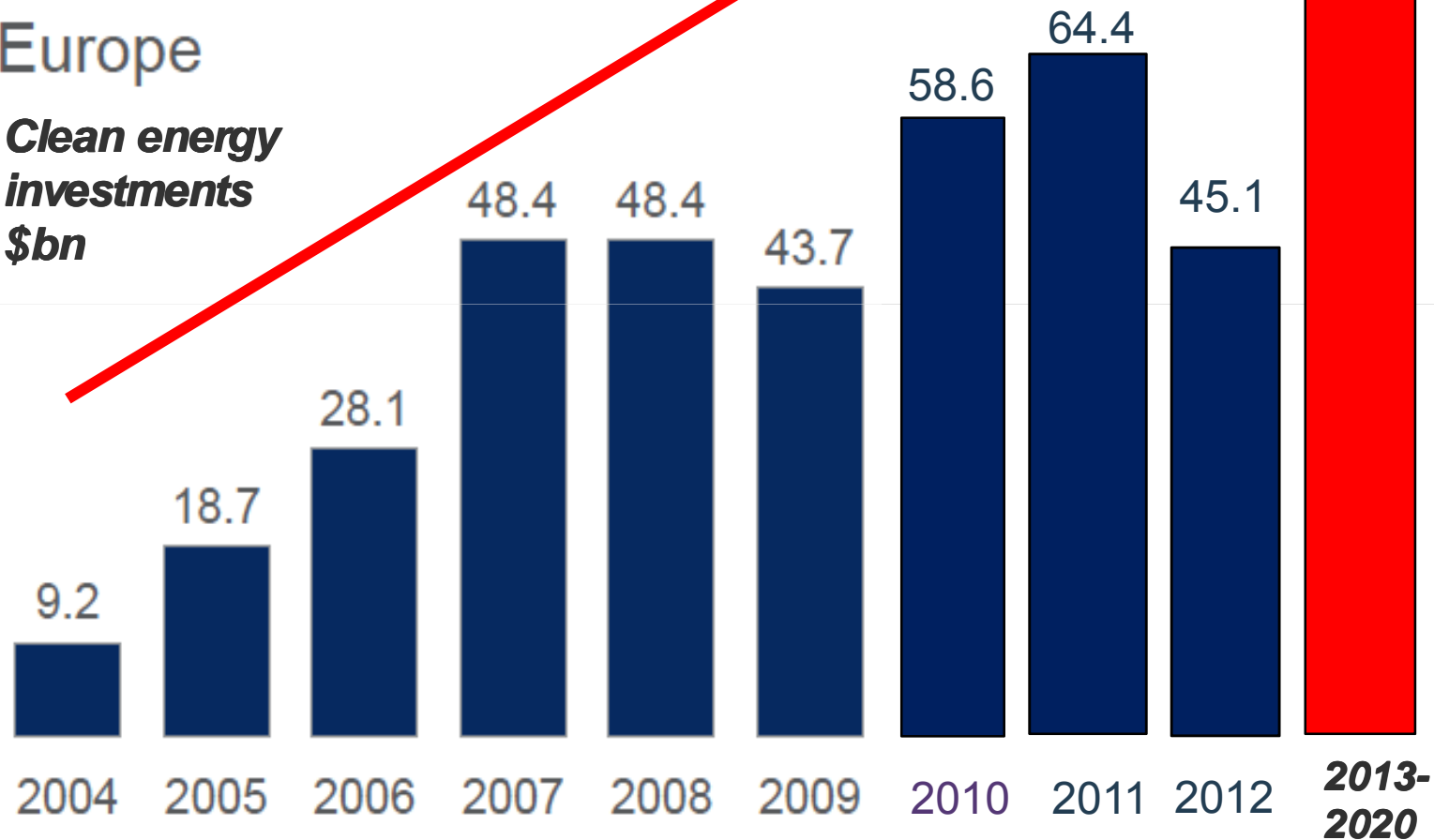
# ... and investments insufficient



**\$140  
billion**

Europe

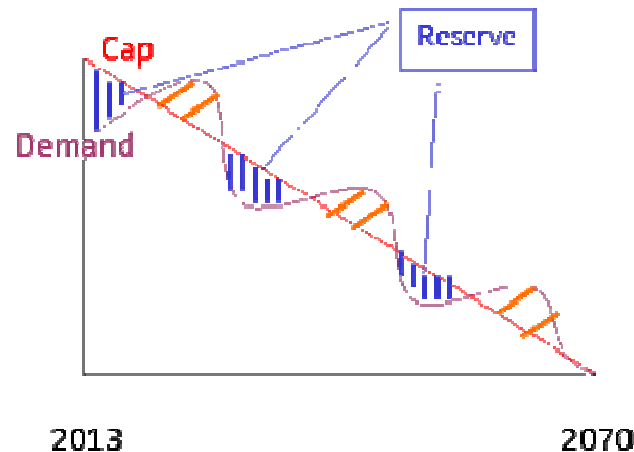
**Clean energy  
investments  
\$bn**



Source: Bloomberg New Energy Finance, UNEP, SEFI

# Lessons learned from EU policies

- ***ETS needs scarcity of allowances to give price signal for investments***
- ***This will reduce dependence on renewables support schemes***
- ***ETS need to be co-ordinated with other policies.***
- ***ETS cap needs to factor in expected progress in renewables and EE***
- ***ETS cap should be flexible enough to respond to variations in demand***



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