Simon Ede

Experience of the EU ETS, CCRE, April 2017

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Timeline of EU ETS

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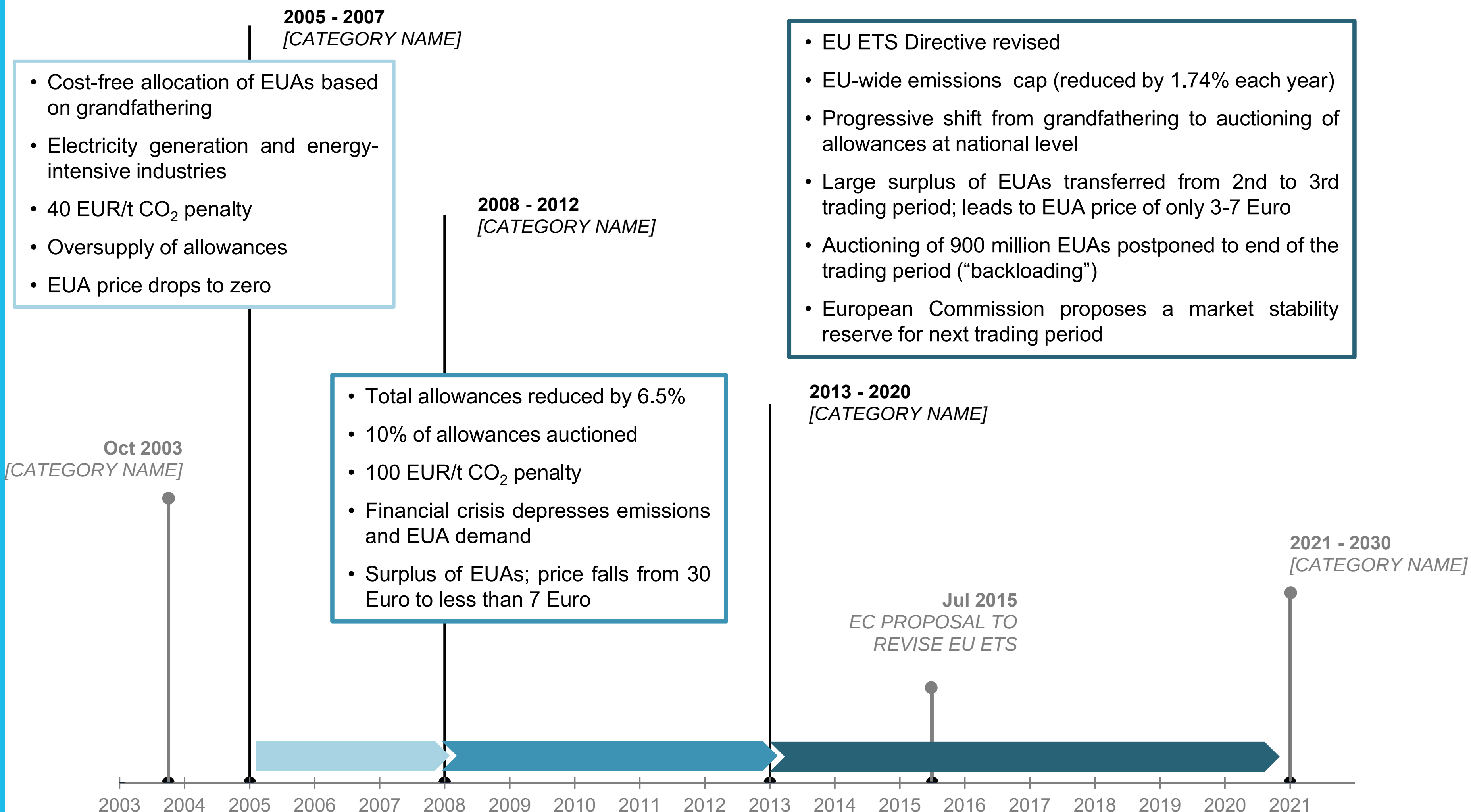
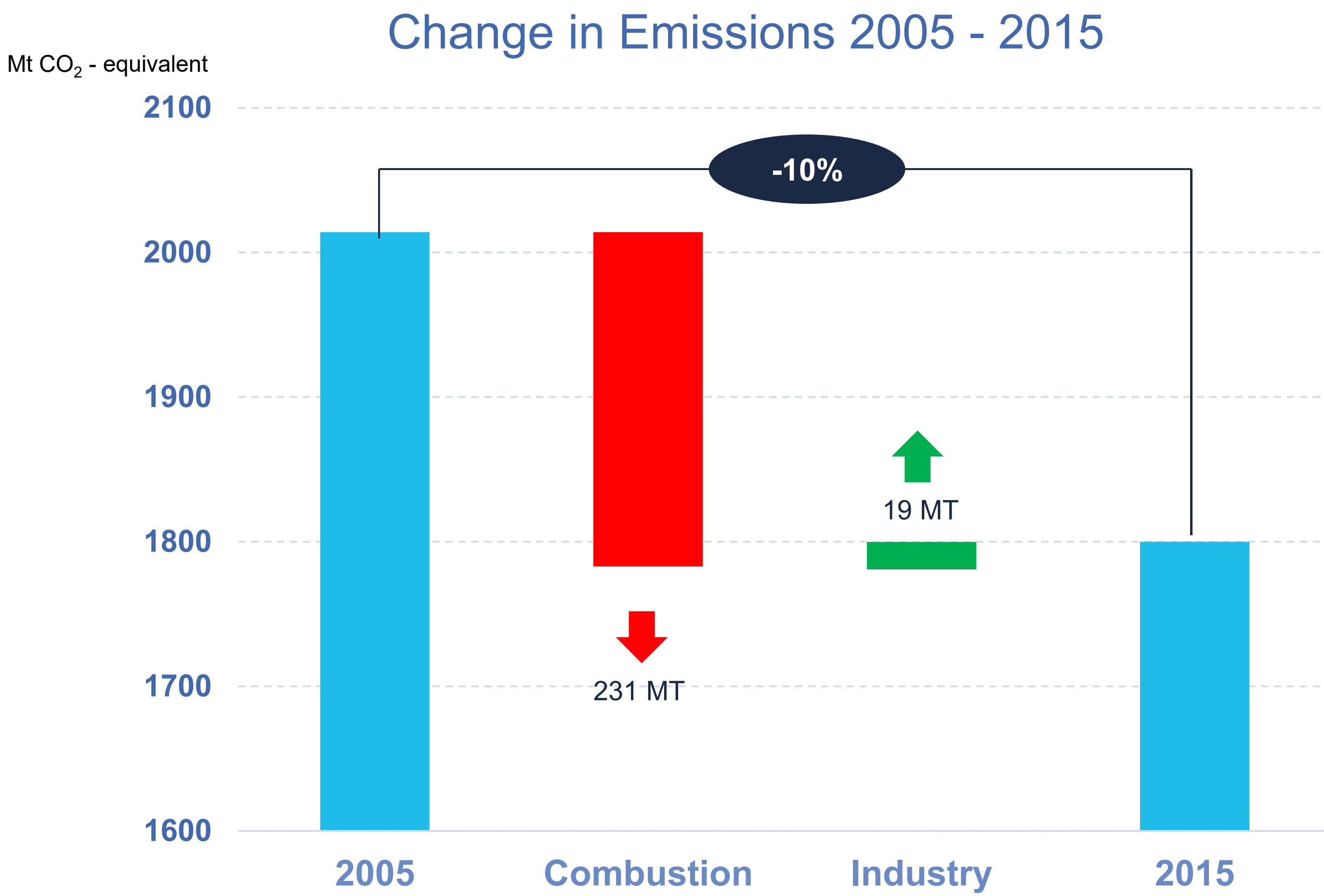
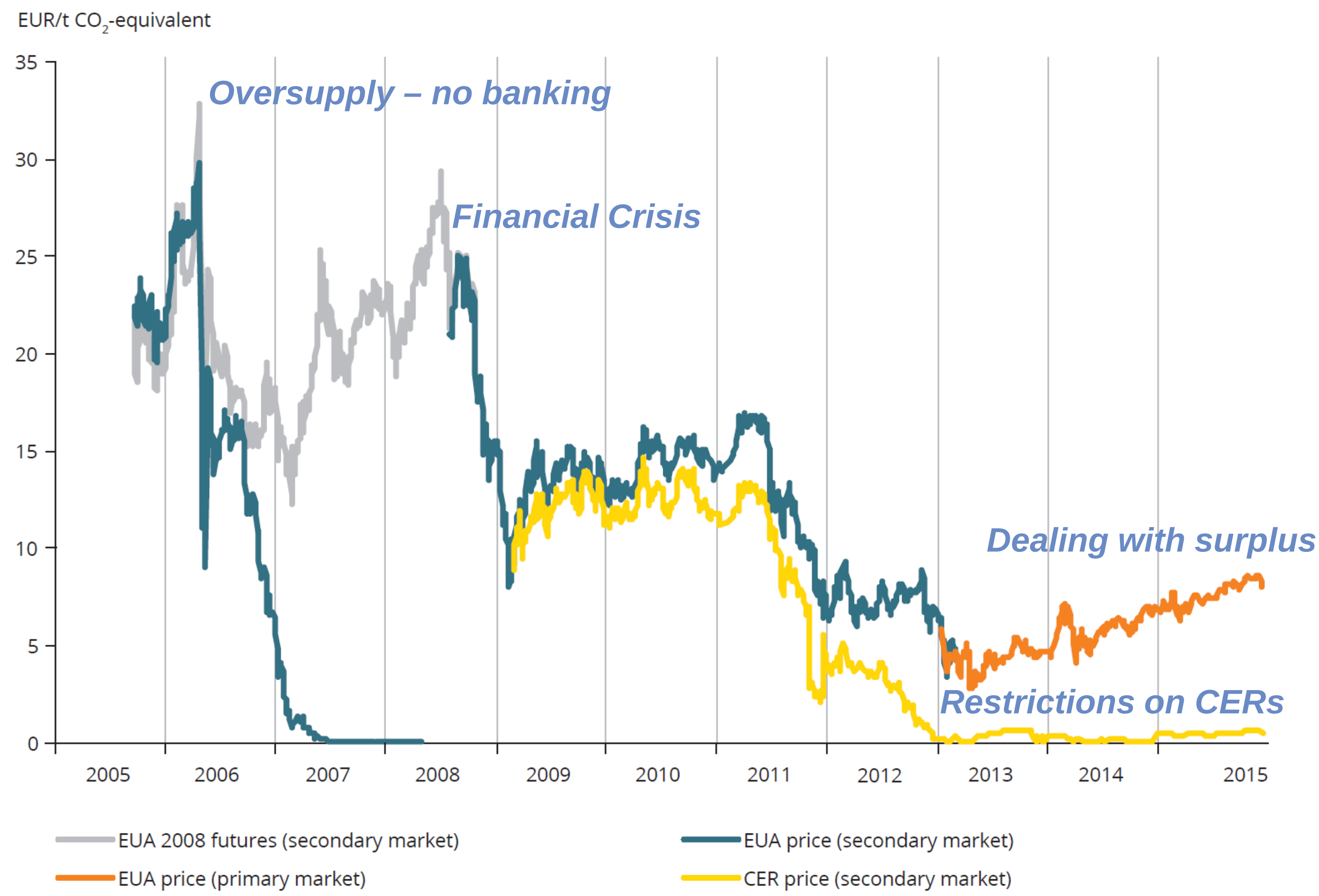


Emissions have fallen, primarily in the power sector



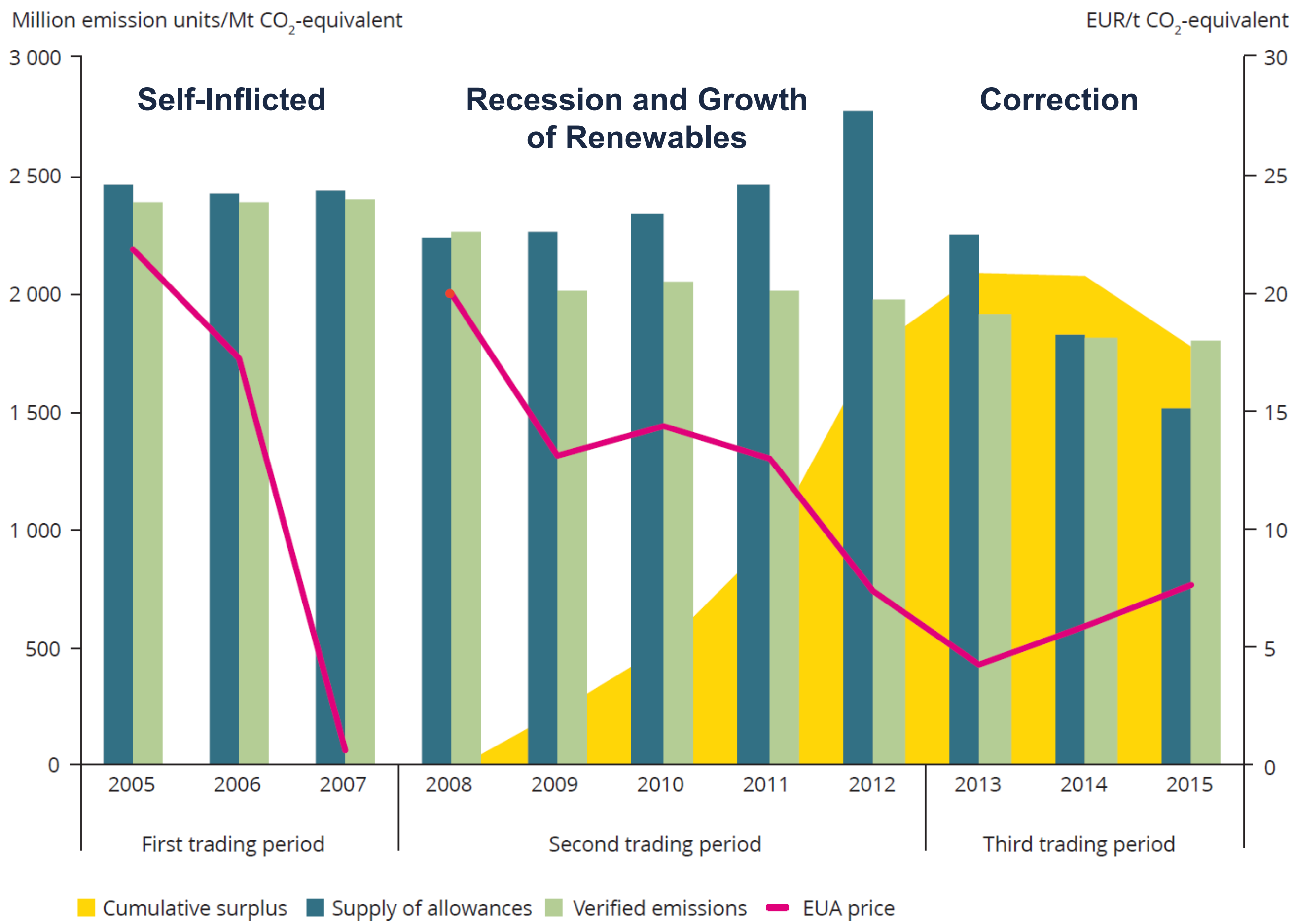
Source: European Environment Agency. Data excluding aviation sector which joined in 2012, data excludes effect of changes in scope of emissions and allowances

EUA prices have fallen to low levels and the credibility of the ETS is frequently challenged



Sources: Point Carbon, 2012; EEA, 2016a; EEA/EU ETS Data viewer, 2016; EEX, 2016; ICE, 2016.

The market has responded to policy design error and external shocks to the system

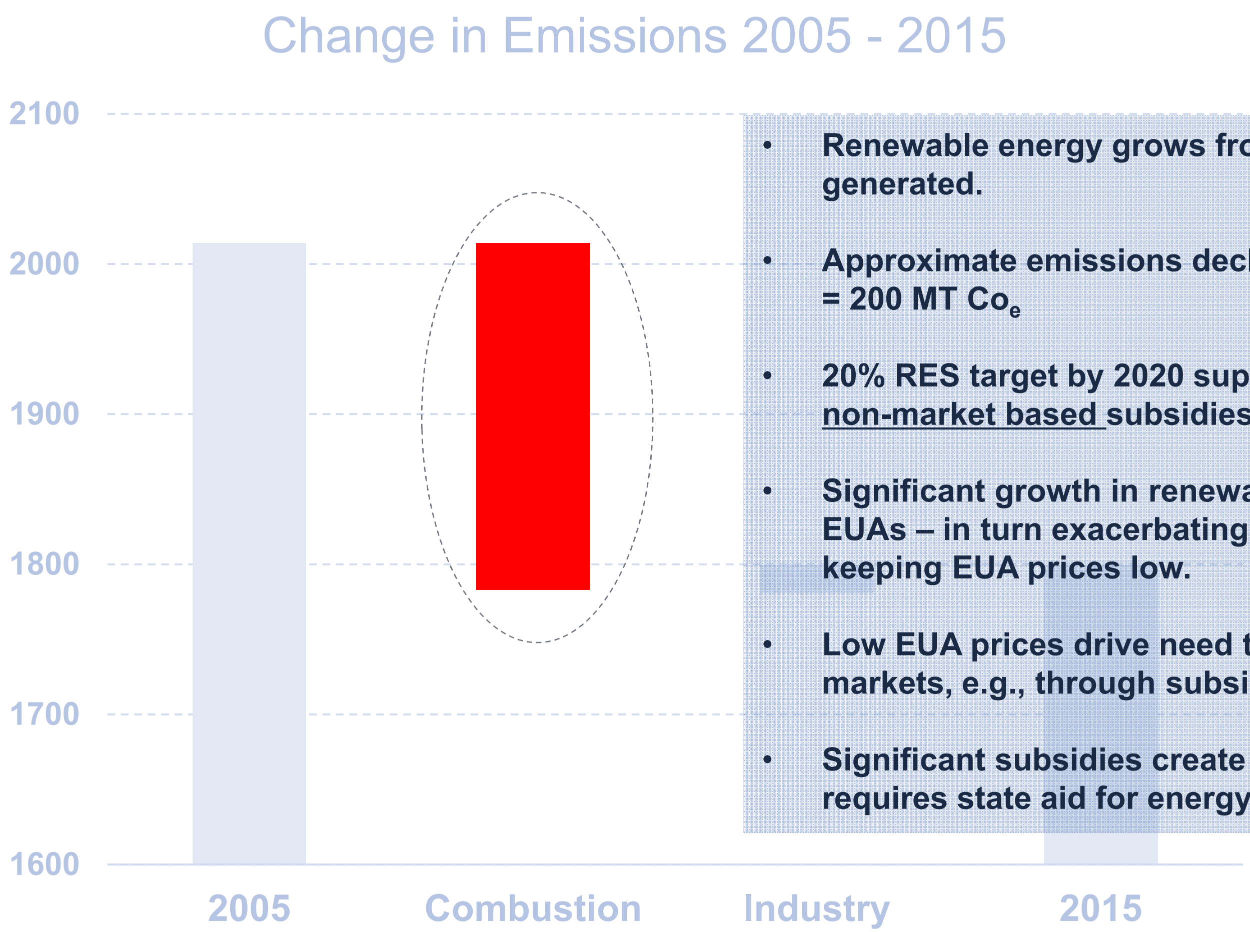


Sources: Point Carbon, 2012; EEA, 2016a; EEA/EU ETS Data viewer, 2016; EEX, 2016; ICE, 2016.
Note these numbers include an adjustment for changes in scope for allowances and emissions

Estimated multi-billon euro windfall profits accrued to EUA holders

- Windfall profits emerged from
  - over-allocation of free EUAs.
  - passing through the opportunity costs of freely obtained allowances.
  - using cheap CDM/JI credits for compliance and re-selling freely obtained EUAs.
- The initial phase of EU ETS incorporated an unrealistic premise that the opportunity cost of EUAs would not be passed – even if EUAs were granted for free
- Policy-makers also failed to understand the possibility of arbitrage
  - Financialisation brings profit motive to emissions reductions

Emissions reductions driven by renewables policy rather than ETS create considerable distortions



- Renewable energy grows from 3 to 15% of gross electricity generated.
- Approximate emissions decline due to wind /solar generation = 200 MT Co_e
- 20% RES target by 2020 supported by significant and mostly non-market based subsidies.
- Significant growth in renewables drives down demand for EUAs – in turn exacerbating surplus created by recession and keeping EUA prices low.
- Low EUA prices drive need to intervene in low carbon energy markets, e.g., through subsidy
- Significant subsidies create burden on energy bills which requires state aid for energy intensive industries

Note: 200 MT CO2e is An approximate calculation based on TWh increase in wind and solar renewable generation as substitute for average thermal generation in EU.

Low EUA and coal prices drives increase in coal generation – counter to ex-ante expectations

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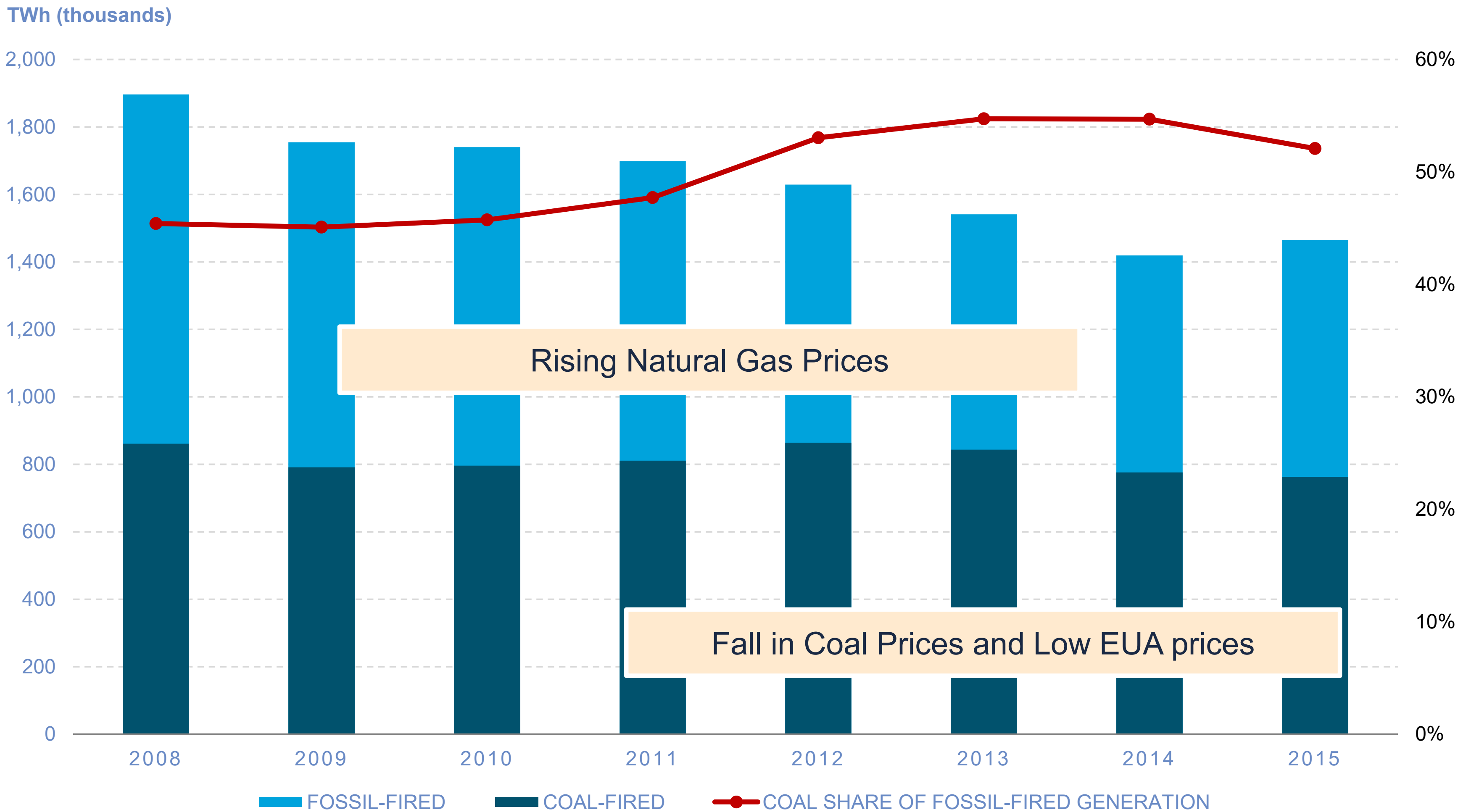
Coal's share of thermal power generation, 2008 – 2015



Source: European Environment Agency.

Responses and Lessons

Responses

- Expansion of EUA Auctions
- Restrictions on CERs
- Backloading
- Market Stability Reserve
- Single EU cap not national targets
- Intervention in carbon price (e.g., UK carbon price floor)

Lessons

- Scarcity is fundamental
- External shocks need to be dynamically addressed – need to avoid entitlement culture
- Either pick a market approach <u>or</u> pick a tax and subsidy pathway but mixing is hard
- Seams issues