Energy and Carbon Pricing Policy Packages:
Key Elements of Coordination

Partnership for Market Readiness (PMR) Technical Meeting
» Interactions between Energy and Carbon Pricing Policies «

Dr. Felix Chr. Matthes
Santiago de Chile, November 5, 2014

Climate and carbon pricing policies
A reminder

- **Carbon pricing instruments are effective**
  - If the price signal is significant (with regard to key abatement options)
  - If potential revenues are recycled purposefully
- **Carbon pricing instruments are efficient**
  - If the carbon price signal is uniform and non-distorted
- **Carbon pricing instruments are means of internalization**
  - It will create price effects at the demand side (≠ effects on bills)
  - It will create revenues at the supply side
  - It may create revenues from windfall profits
- **Carbon pricing instruments are new instruments**
  - In societies and economies which are structured by incumbent policies and incumbent policy targets
  - Which will often require adjustments for incumbent policies and for incumbent policy targets
  - Which often need legitimation in terms of innovation & modernization

Climate and carbon pricing policies in a complex and coordination-intensive policy framework

- **Strong interrelations from carbon pricing to other policies**
  - Energy policy (strategic sector in most countries, characterized by long-lived assets, specific industry structures and industry regulation)
  - Economic/industrial policy (competitiveness, targeted structural change, targeted structural conservation, economic integration)
  - Distributional policy (social and economic structures)
- **Sector fundamentals for the (planned) scope of the instrument**
  - Sectors in a competitive environment (with/without ability to pass-through carbon costs – relevant for the competitiveness)
  - Sectors in a regulated environment (with/with limited/without ability to recover carbon costs – relevant for effectiveness & efficiency)
  - Sectors with limited responses to prices (by many reasons)
- **“Tinbergen approach” (one target = one instrument) vs. explicit policy integration: many differences but a common challenge, managing the complexity and policy coordination**
- **Not to forget: political cultures & traditions & political windows**

Beyond policy coordination: a dynamic market environment requires dynamic responses

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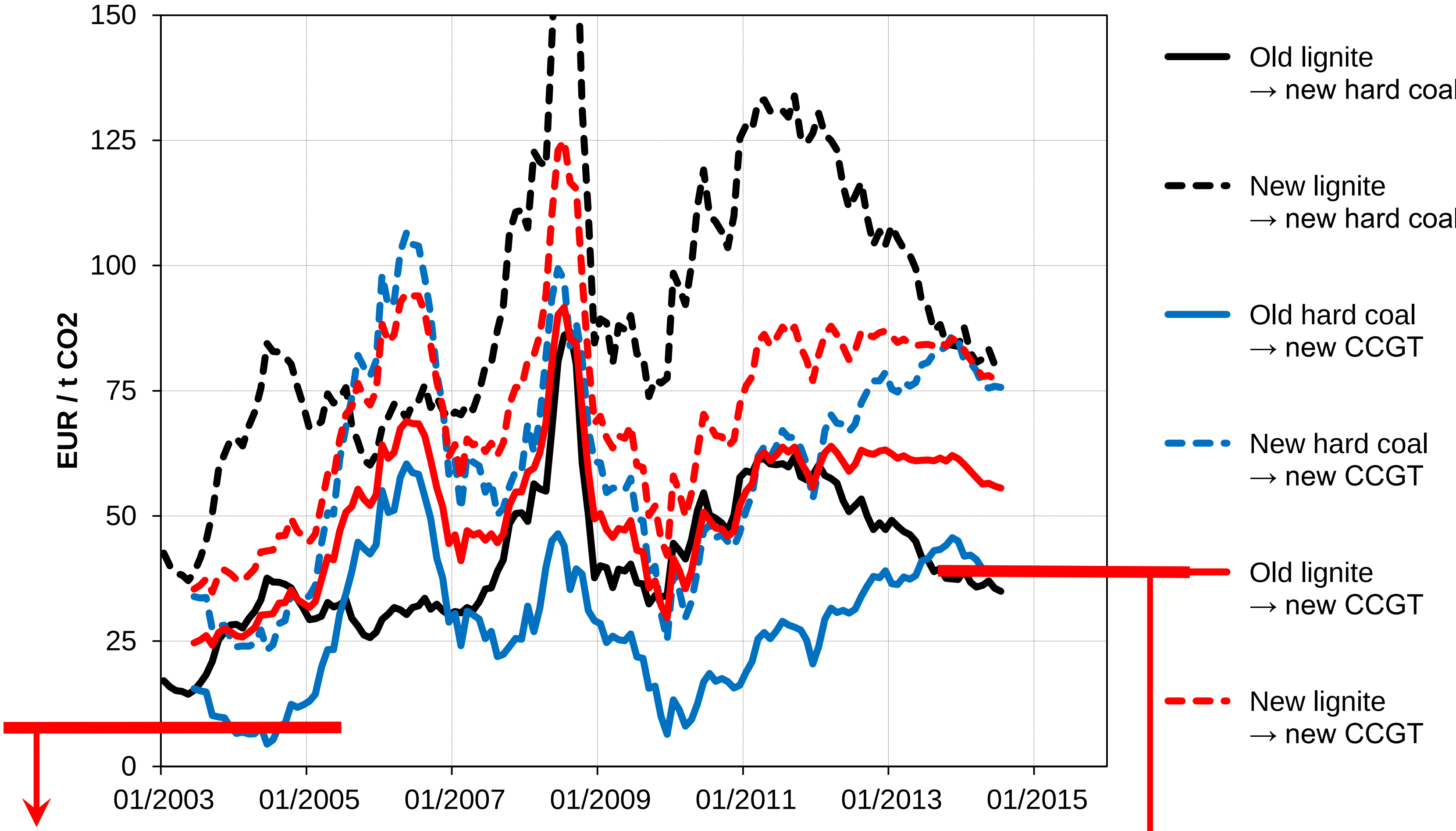

2005: Cheap abatement options from 5 to 10 €/t CO2

2014: Cheap abatement options from 35 €/t CO2

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Carbon pricing in a competitive electricity market
CO2 price signal goes through the value chain

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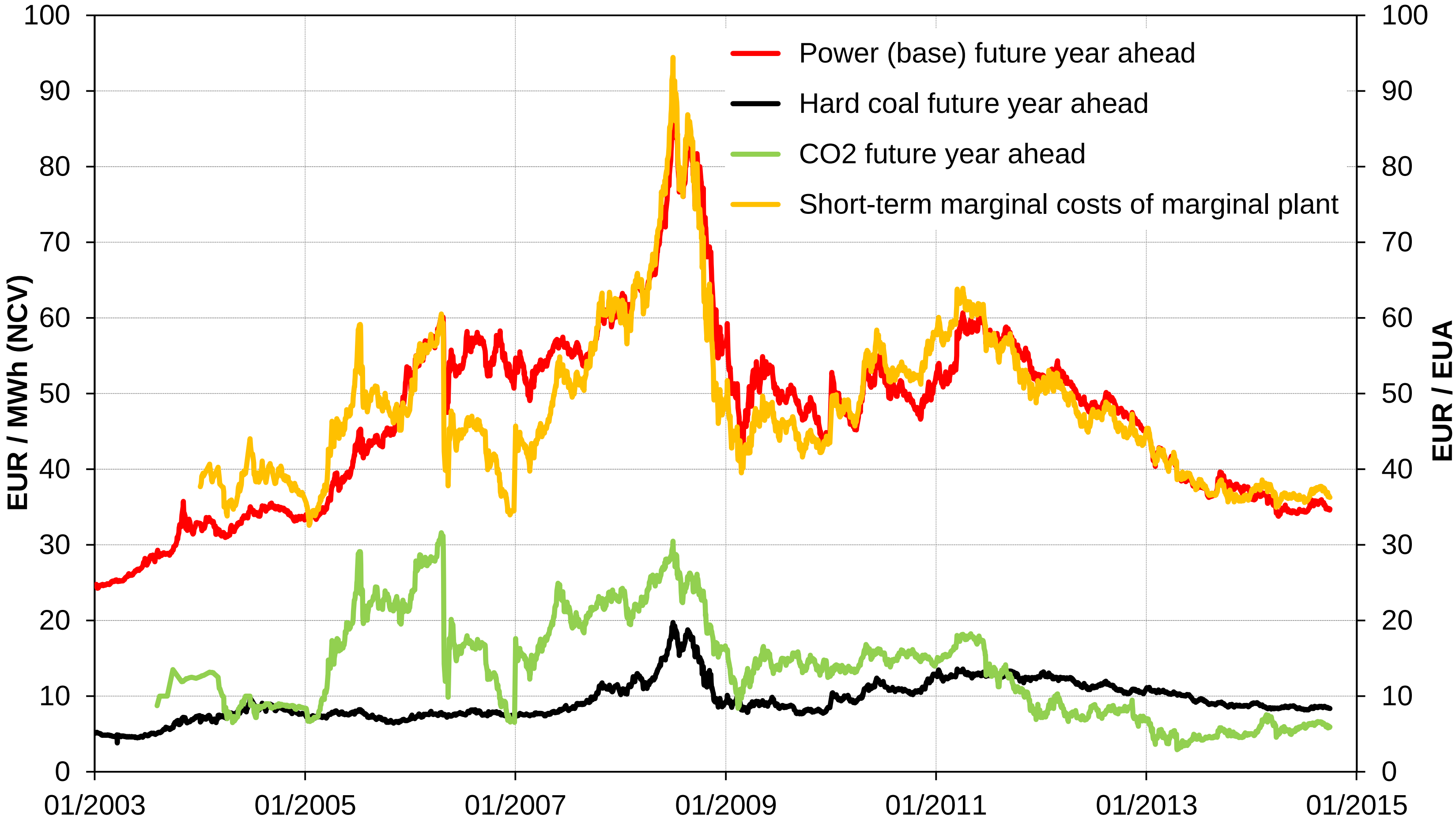

- **Opportunitiy costs work**
- **Windfall profits occur(red)**

EEX, ECX, EvoMarkets, McCloskey Coal, Öko-Institut

Beyond market failures: market design failures
Climate strategies based on options /w low STMC

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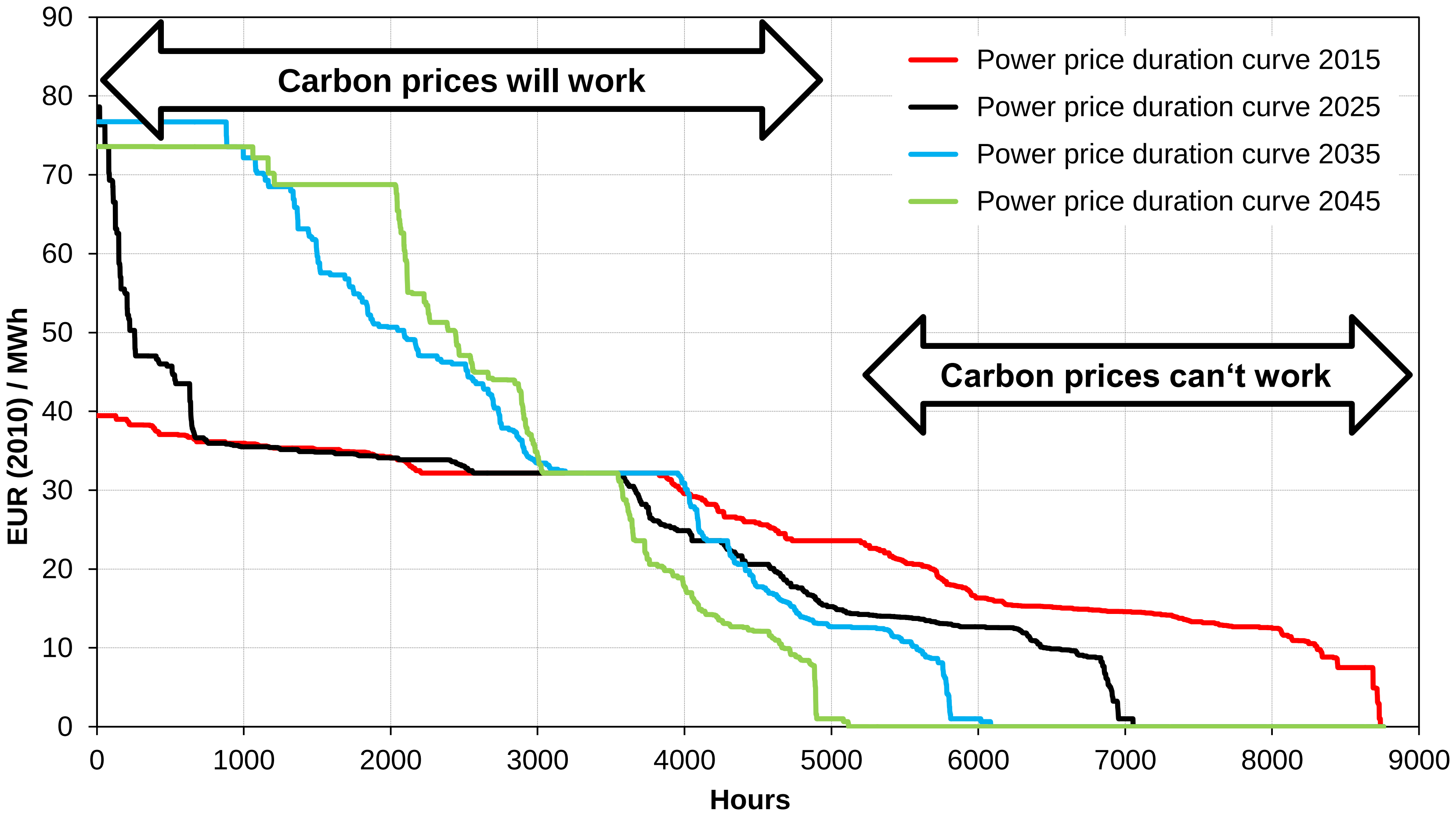

- **(Economic) characteristics of the capital stock**
- **Time horizon / levels of ambition over time**
- **Primarily addressing investments and/or operations**

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- **Effects of complementary policies to climate/carbon pricing policies**
  - Reinforcing effects, emission abatement from other policies (e.g. energy efficiency, renewables etc.)
  - Countervailing effects for emission abatement (subsidies, regulatory barriers)
  - Distorting effects (influencing economic efficiency in a broader framework)
- **Effects on other policies or policy goals**
  - Distributional effects (e.g. free allocation, windfall profits, spending of tax or auctioning revenues)
  - Reinforcing effects (e.g. spending of tax or auctioning revenues for innovation, industrial policy)
  - Ancillary benefits (e.g. other environmental benefits, energy security)
  - Fiscal policy implications
  - Competition policy & sector regulations

Climate and carbon pricing policies and different options of policy coordination (1)

- **Policy coordination by design of the policy mix**
  - Comprehensive policy planning: systematic design of policy mixes
  - Reflecting all dimensions (effectiveness, economic efficiency and distributional issues)
  - Reflecting low-carbon investments and carbon-minimizing operations

A comprehensive and well-designed policy mix needs comprehensive and well-designed analysis

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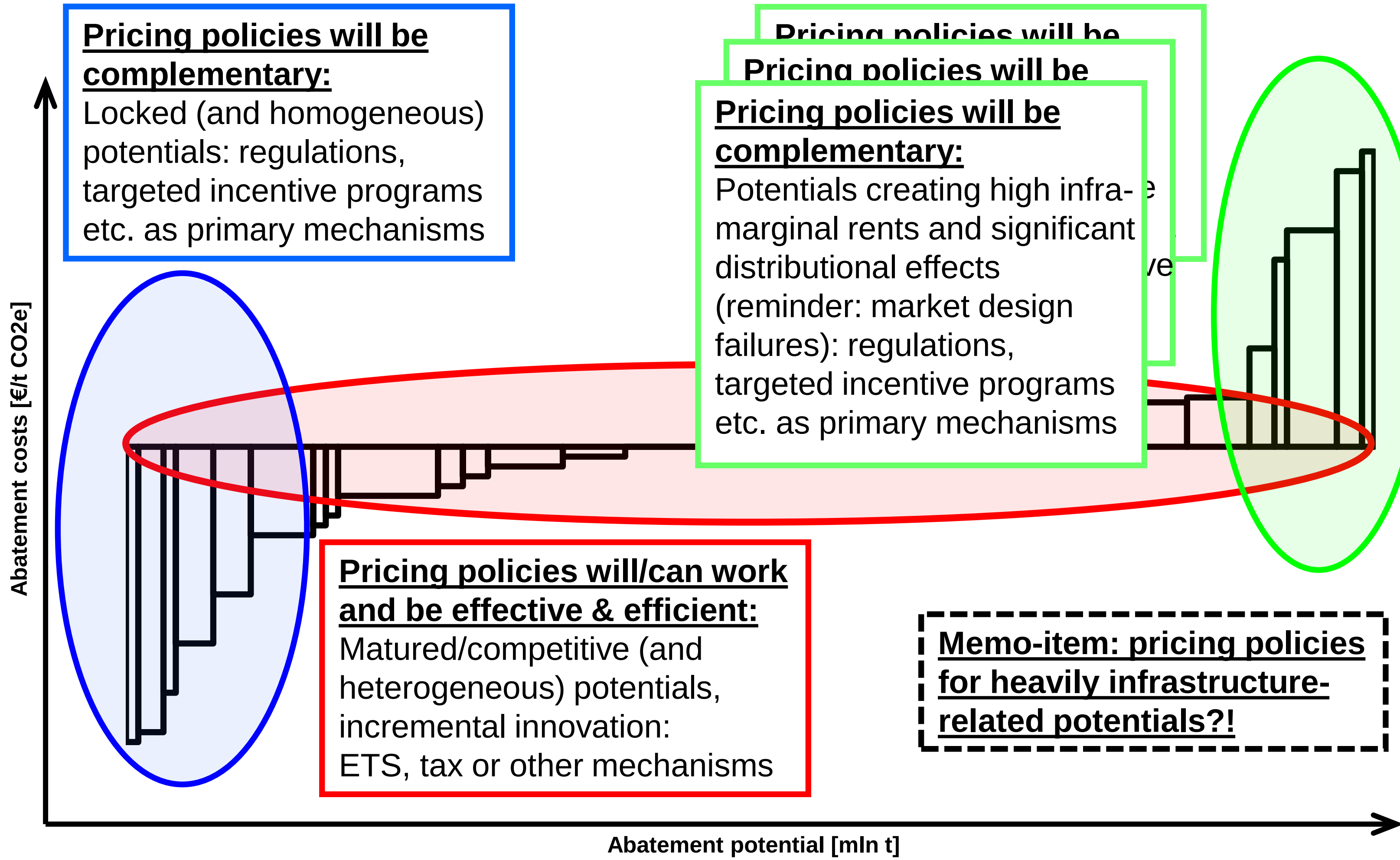
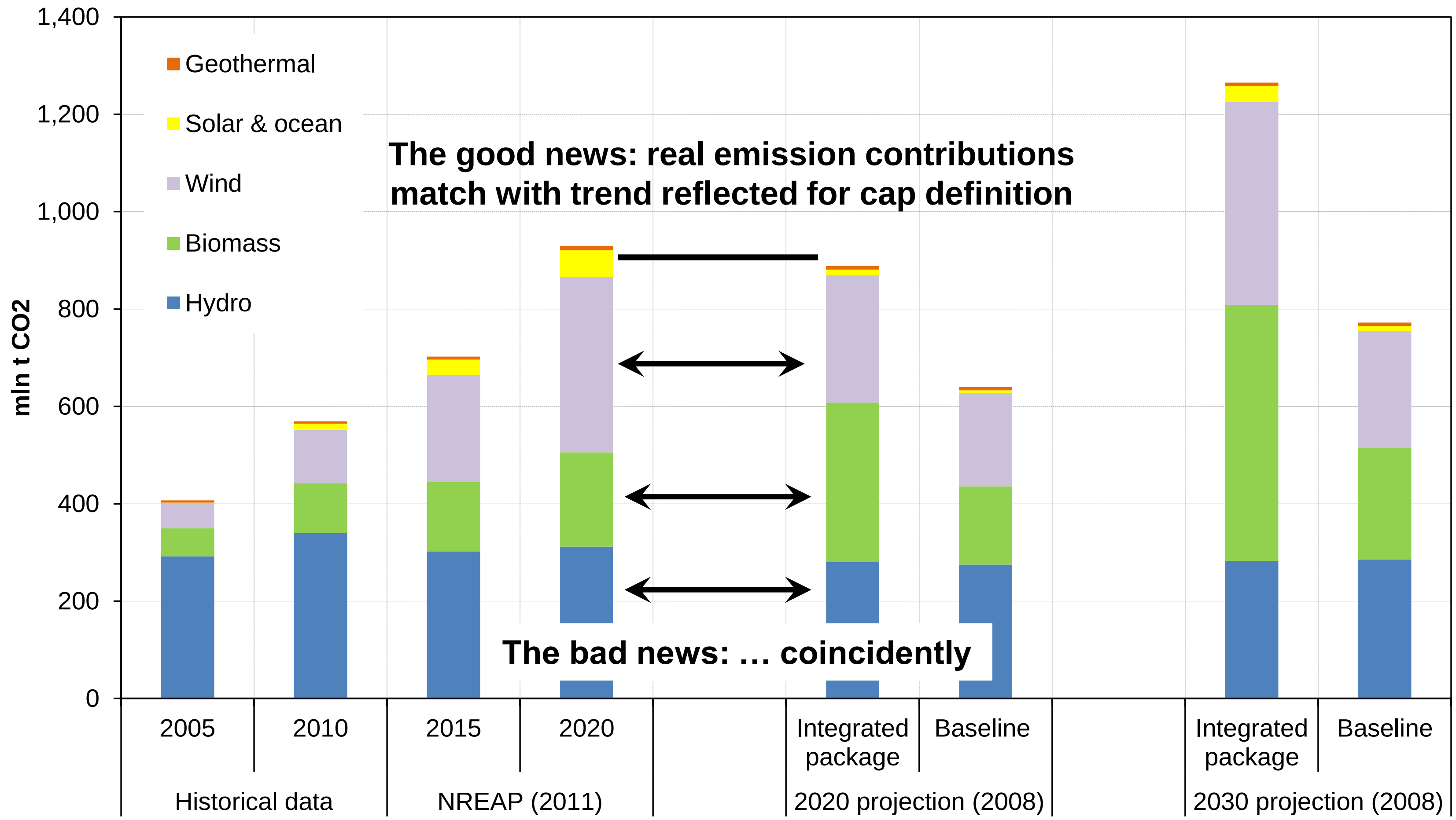


Policy interactions: Support of RES & the EU ETS
Merits and limits of coordination by planning



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Climate and carbon pricing policies and different options of policy coordination (2)

- **Policy coordination by design of the policy mix**
  - Comprehensive policy planning: systematic design of policy mixes
  - Reflecting all dimensions (effectiveness, economic efficiency and distributional issues)
  - Reflecting low-carbon investments and carbon-minimizing operations
- **Policy coordination by designing responsive carbon pricing tools**
  - Price control with quantity-based elements (tax instruments with offsetting instruments)
  - Quantity control with explicit price elements (price floors etc.)
  - Quantity control with quantity/scarcity-based price elements (MSR of the EU ETS)
  - Other flexibility designs (conditional allowance cancellation, etc.)
- **Policy coordination by integrating the longer-term horizon**
  - Explicitly: long-term caps (if appropriate and possible)
  - Complementary: other framing options (long-term contracts etc.)

Long-term framing to enable low-carbon investments
Long-term caps and/or other long-term mechanisms

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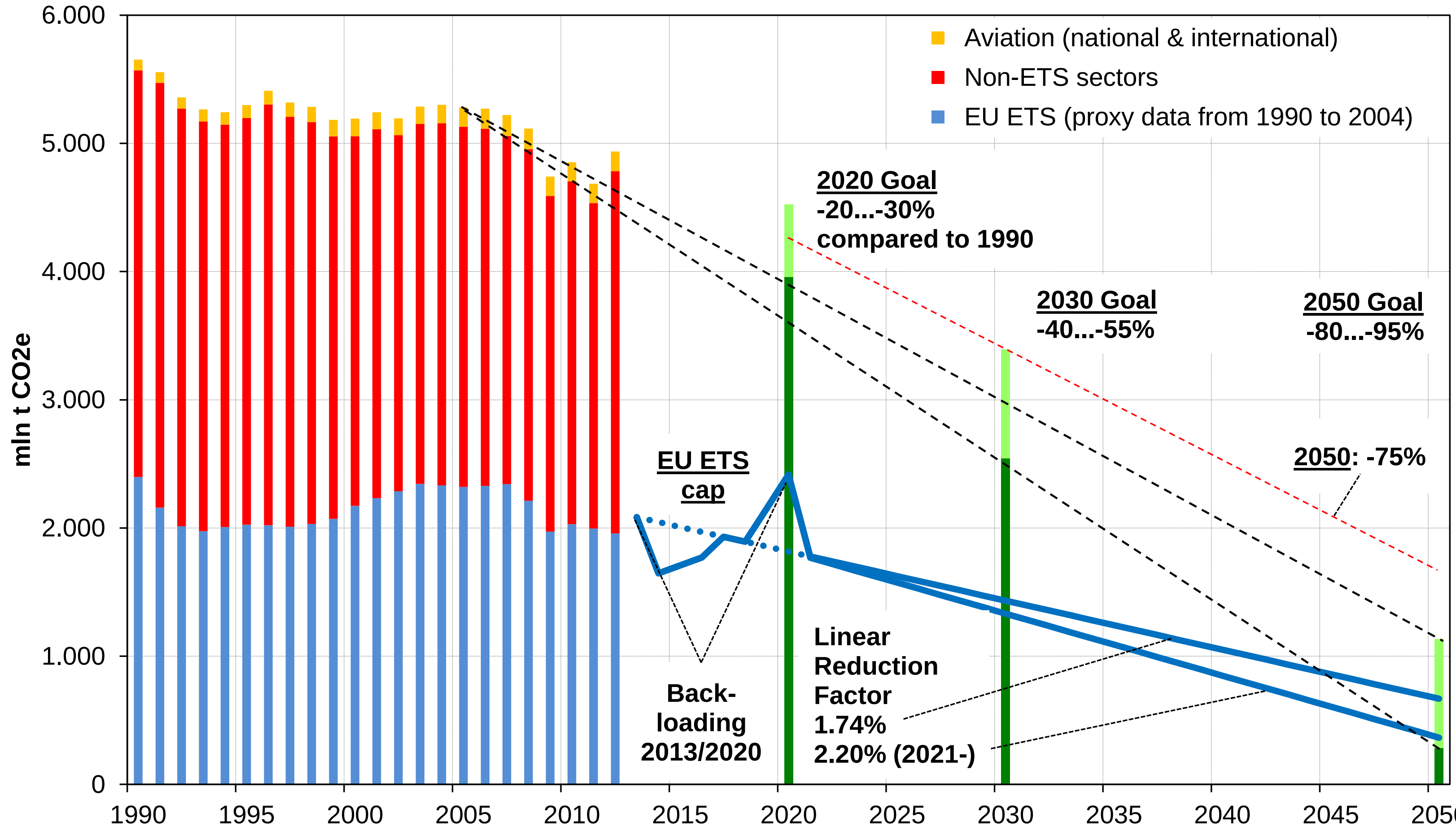

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Climate and carbon pricing policies
Last but not least: Revenue recycling

- **Key role of revenue recycling**
  - Enabling the double or triple dividend (labor cost, removal of structural barriers, triggering innovation, addressing targeted structural change)
  - Managing distributional challenges (affordability, competitiveness)
  - Fostering political buy-in
  - Not to forget: international integration
- **The key challenge: maintaining incentives from pricing instruments and enabling appropriate compensation strategies**
  - Lock-in effects from a wide range of compensation provisions which can distort or erode the price signals (free allocation, tax deductions etc.)
  - The preferential but much more difficult approach: using (more targeted) revenue recycling approaches for compensation purposes

Thank you very much

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