Next steps for the European Union Emissions Trading Scheme (EU ETS): Structural Reforms

Berlin Seminar on Energy & Climate Policy (BSEC)

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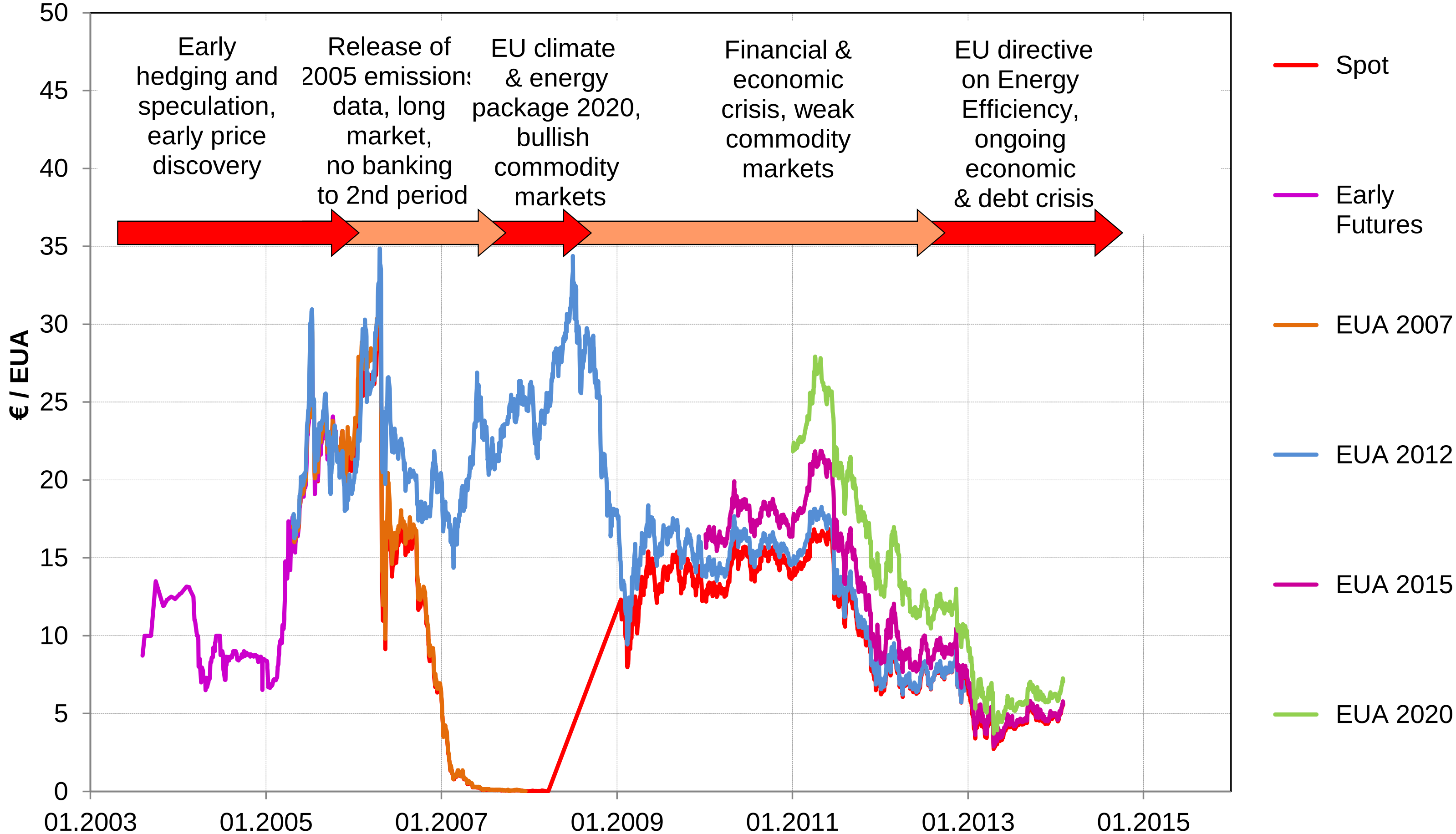
- **Started in 2005**
- **A pilot phase (2005-2007): Learning**
- **The first phase (2008-2012): (very) mixed experiences**
  - significant emission reductions trackable (from changing operation patterns for the period of significant prices in 2008)
  - significant investments in high carbon assets: partly triggered by the bet of (some) market players on significant revenues from free allocation based on fuel-specific benchmarks (they however failed: construction delays, low EUA prices, phase-in of auctioning)
  - price crash as a result of the financial & economic crisis as well as the massive inflow of CERs/ERUs (marginal prices apply …)
- **The third phase (2013-2020): major improvements but (heavy) burdens from the past remain to be there**
  - transition towards auctioning
  - long-term cap (linear reduction factor)
  - … but no price (paradox situation leading to no investments)

European Union Emissions Trading Scheme
Historical allowance price trends



- **Recent surplus approx. 2 bln EUA (incl. offset credits)**
- **Projection to 2020: comparable size**
  - temporal decrease of surplus due to backloading: 1.7 bln EUA by mid of this decade
  - more offsets to be surrendered (existing entitlements of approx. 500 mln credits)
  - reintroduction of backloaded allowances by the end of the decade: surplus exceeds 2 bln EUA again
  - reminder: air traffic and its anticipated (net) demand disappeared
  - no scarcity by 2020 – and beyond (depending on baseline emissions)
- **In fact the EU ETS is a inter-temporal hybrid stage**
  - limits on quantities: existent but not relevant for price formation on the short- and medium-term
  - recent price levels: speculation on long-term scarcity, based on confidence that the system will survive for the next two decades

European Union Emissions Trading Scheme
Emissions, allocation, credits & surplus

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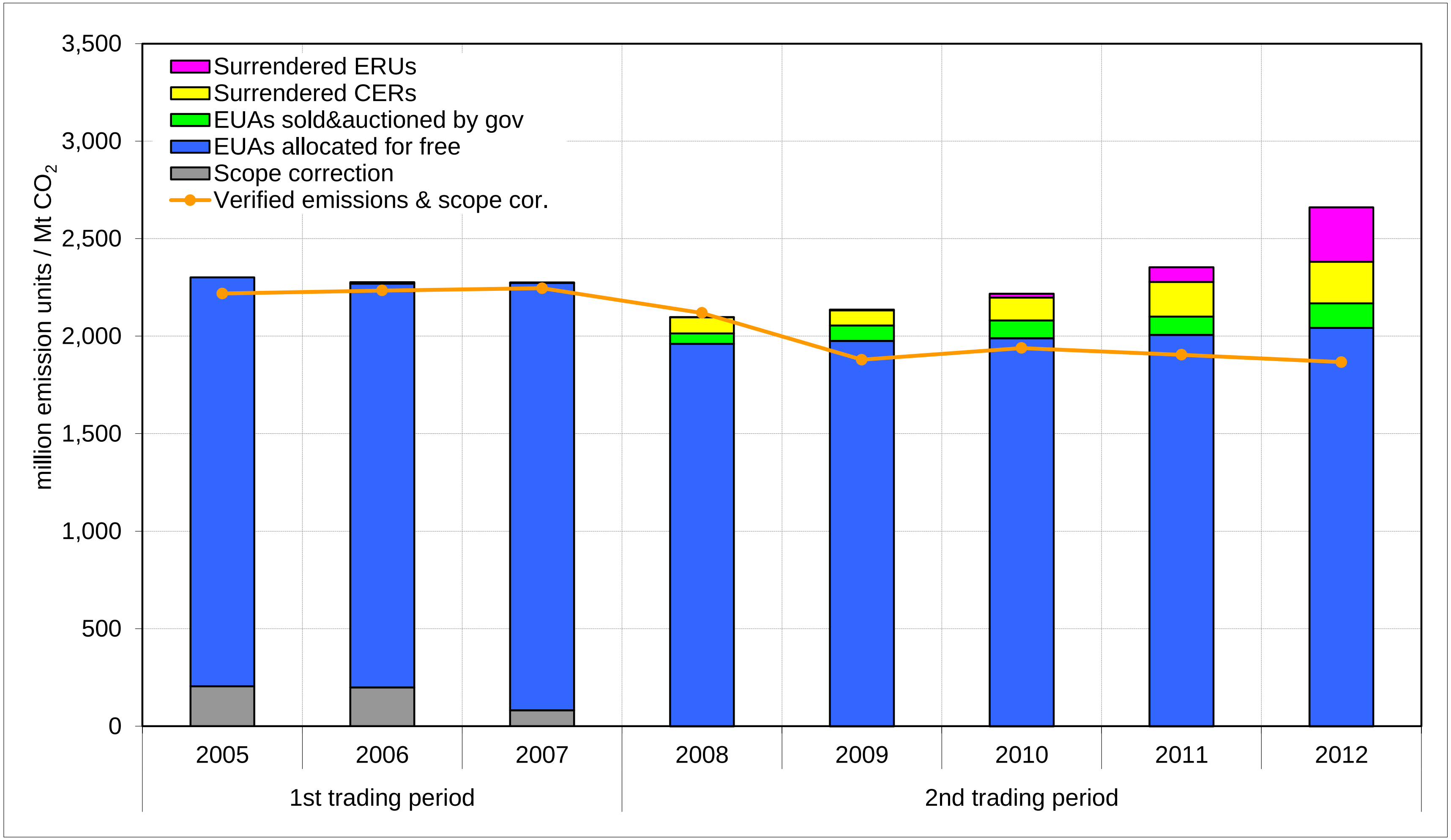

European Union Emissions Trading Scheme
Projections for the surplus by 2020

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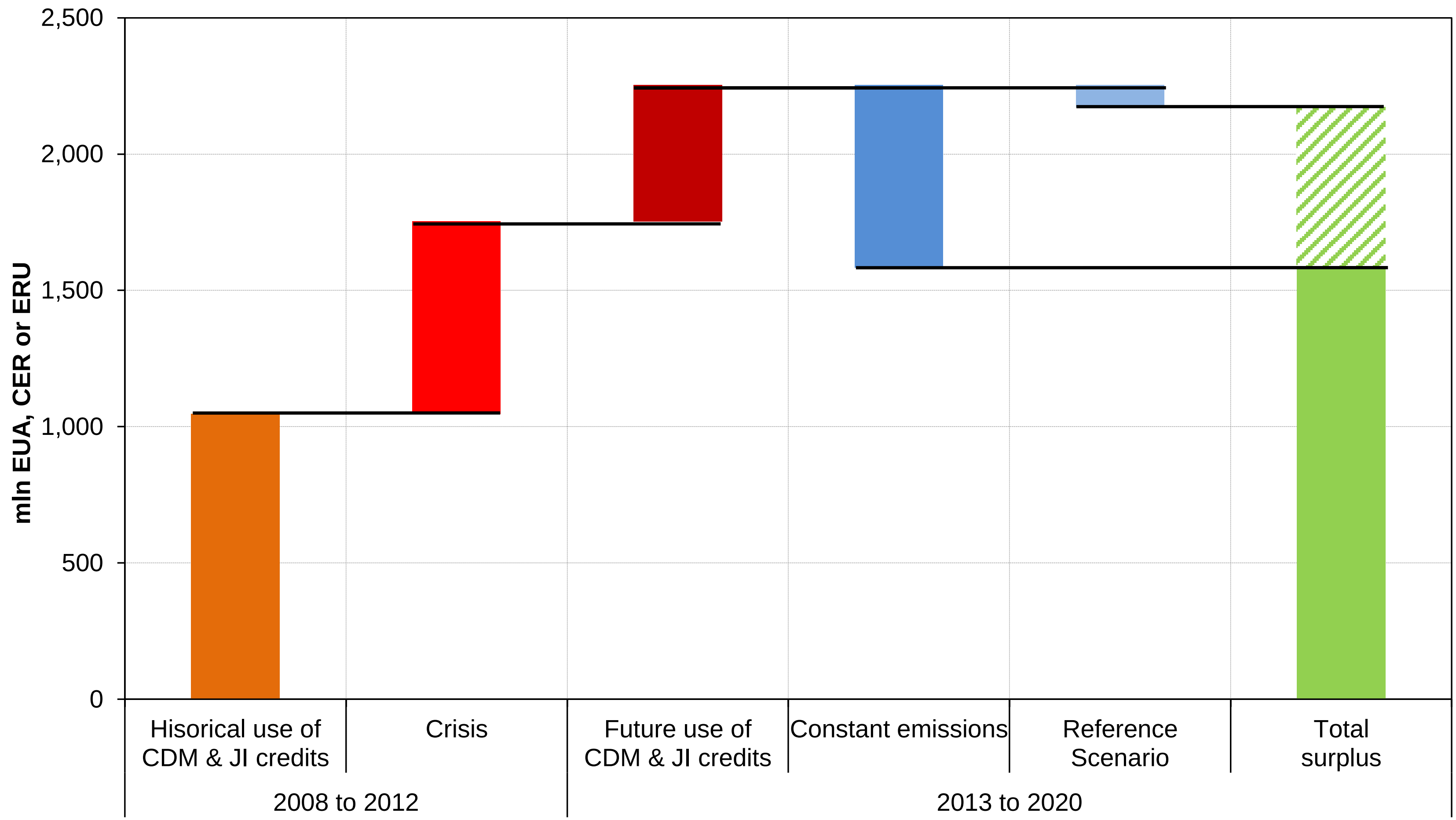

- **Emerging consensus (of a majority): Activities to maintain (and save) the EU ETS are needed**
- **Backloading as a first step: rebuilding confidence**
- **The broader framework for post-2020**
  - 2030 targets: the 40% GHG emission reduction proposal
  - respective adjustments of the (long-term) cap (linear reduction factor): the proposed adjustment from 1.74% to 2.2% from 2021 onwards
- **Structural reform of the EU ETS – beyond the linear reduction factor**
  - removing the surplus
  - implementing measures to avoid similar situations – resulting from macroeconomic and policy uncertainty

Proposed GHG targets not on the long-term track
Will the EU ETS deliver too late?!

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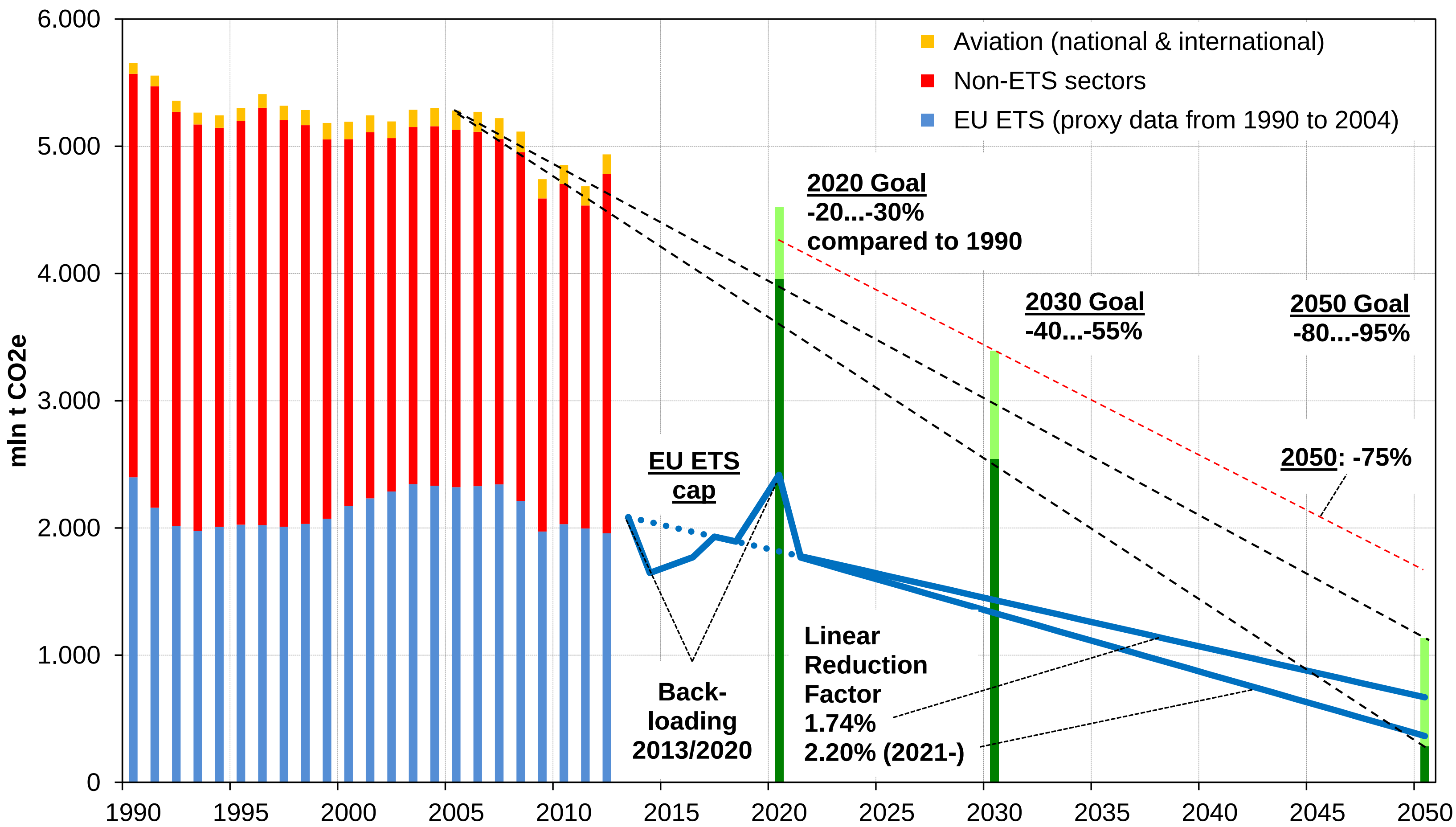

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Modeling the impacts of different models
Key role of assumptions on baseline trends

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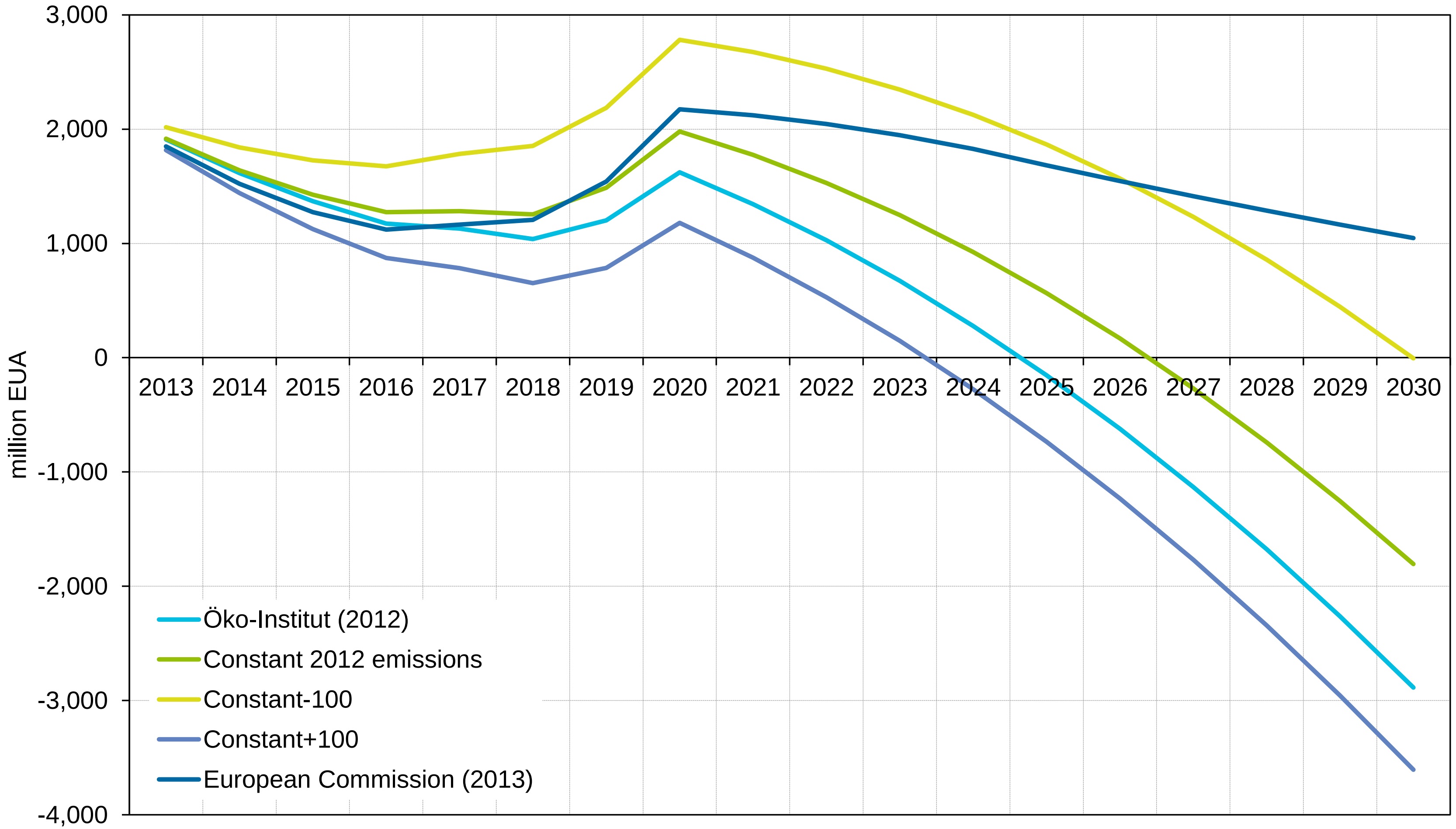
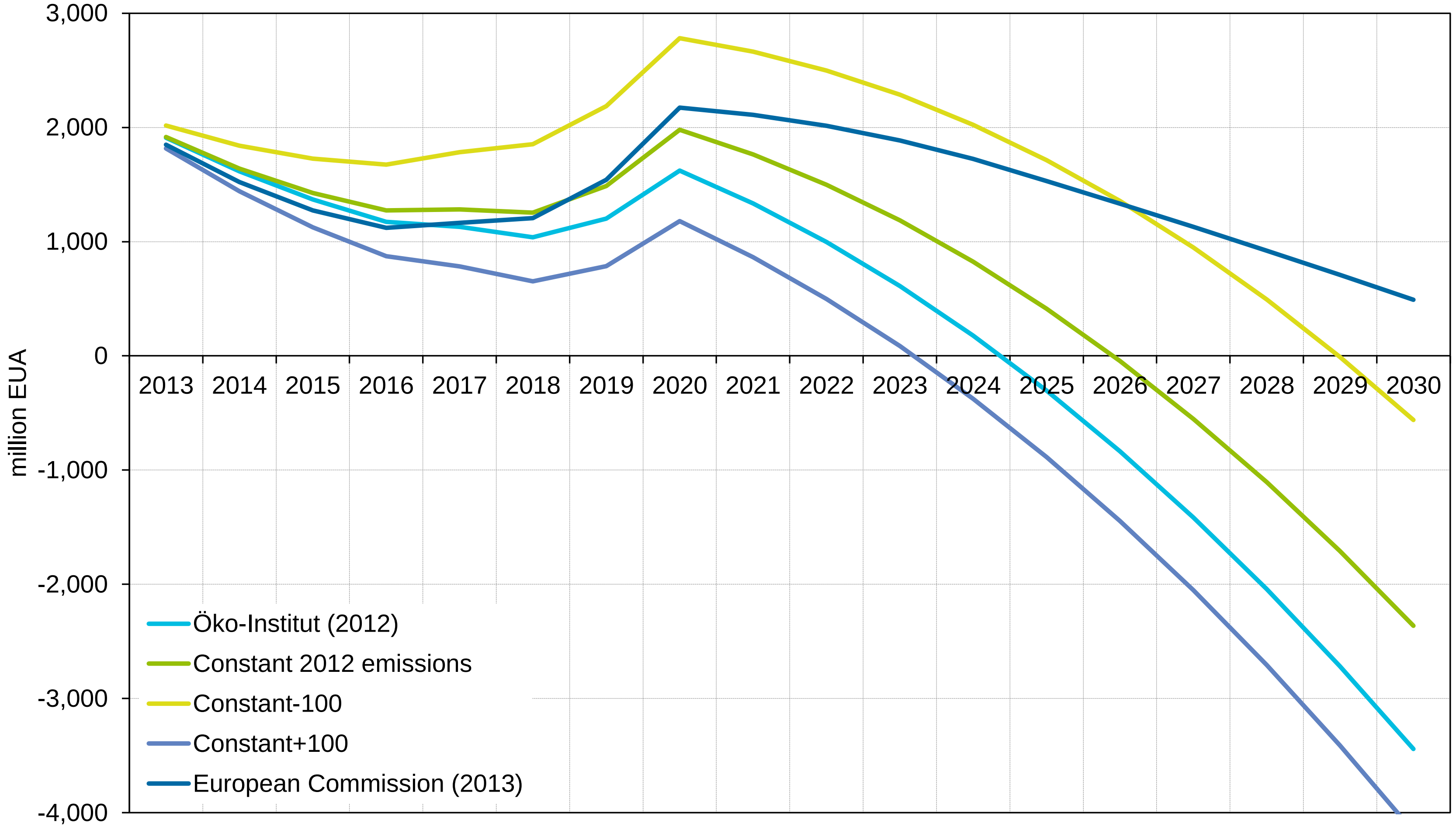
- **Öko-Institut (2012)**
  - Energy & Climate Package modeling, adjusted for GDP and expansion of renewables, no significant CO2 prices
- **Constant 2012 emissions**
  - scope adjustmens for new sectors and gases – and Croatia (+118 Mt CO2)
- **Constant 2012 emissions -100Mt**
- **Constant 2012 emissions +100Mt**
- **EC Reference Scenario (2013)**
  - 2020 targets for greenhouse gas emissions, renewables, energy efficiency will be met
  - significant CO2 prices: 10€/t in 2020, 35€/t in 2030, 100€/t in 2050 (is this consistent to assess a surplus situation???)
  - adjusted baseline, aviation excluded, NO / IS / LI included
  - “worst case scenario” – from the surplus perspective

LRF only strategies: Total cumulated surplus (Existing) LRF of 1.74%



LRF only strategies: Total cumulated surplus LRF of 2.2% from 2021



LRF only strategies: Total cumulated surplus
LRF of 2.6% from 2016 (100% in 2050)

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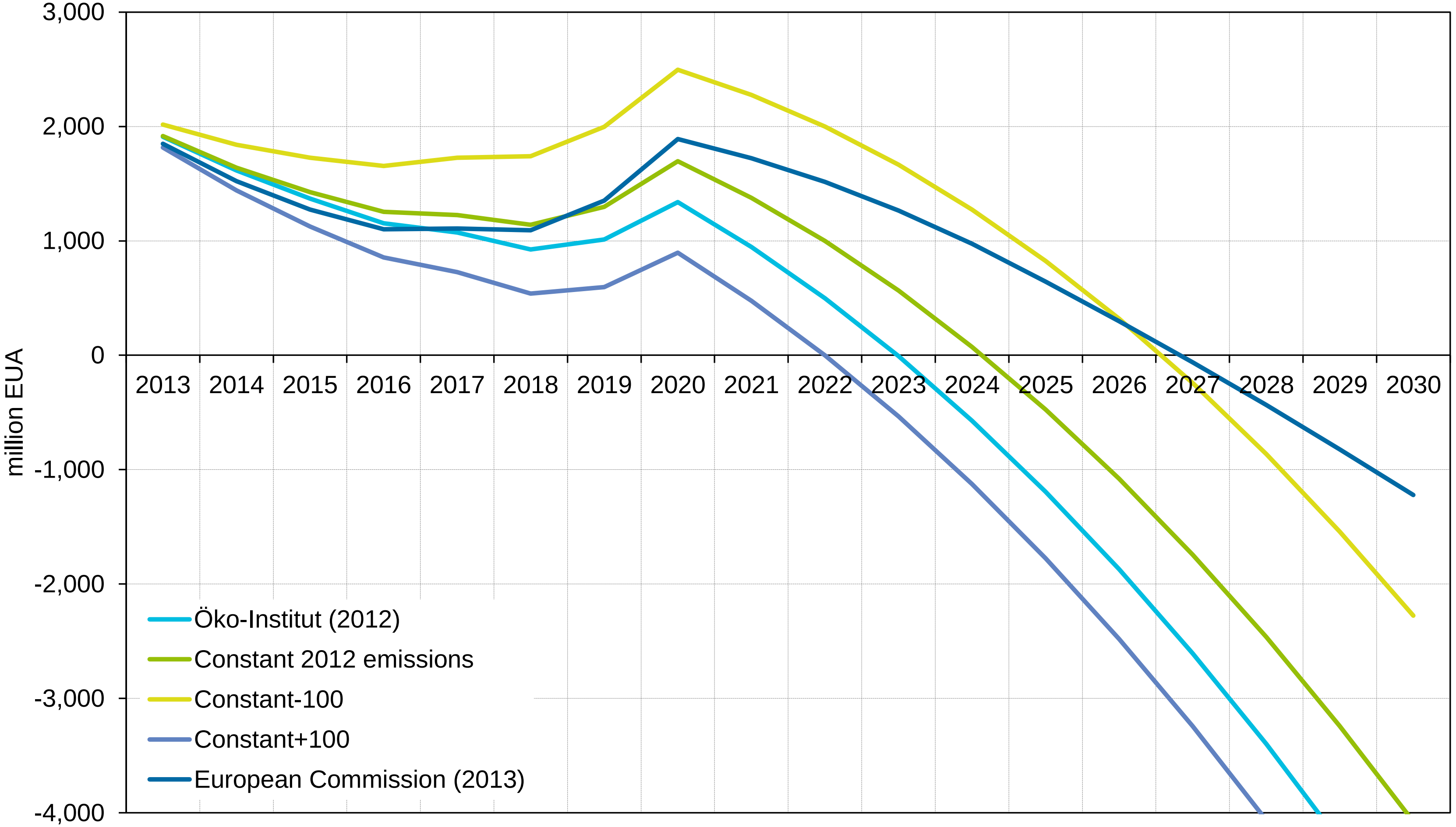

- **Adjustments of linear reduction factor will not be sufficient to solve the surplus problem**
- **Proposal for a Market Stability Reserve (MSR)**
  - introduction of a new indicator: “Allowances in circulation” (AiC)
  - Methodology for a year t (release of t-1 data in May of year t)
    - \+ total number of EUA issued from 2008 to t-1
    - \+ total number of CER/ERU surrendered from 2008 to t-1
    - – total verified emissions from 2008 to t-1
    - – number of allowances in the MSR
    - = allowances in circulation (formerly known as surplus …)
  - if AiC exceeds 833 mln. t CO2e, 12% of AiC are shifted to the MSR in year t+1 (deducted from auctioning budget)
  - 100 mln. allowances from the MSR will be released for auctioning
    - if AiC is below 400 Mt CO2e
    - if a price trigger is met (6 m 3 x avg price of two precending yrs)

- **The idea behind the market stability reserve**
  - the power sector represents a major share of the EU ETS-regulated emissions and is subject to full auctioning
  - the power sector relies on conservative hedging strategies: sales and purchases up to three years in advance (almost total annual production is sold in futures markets)
  - hedging creates a demand for physical allowances (no cross-commodity hedging) – even in a surplus situation (long market) scarcity prices will be generated
  - MSR represents a tool to maintain a hedging corridor of 400 to 833 Mt CO2e (for a long period of time), the size of the corridor is based on industry statements
- **The concept of the MSR is a bet that the hedging corridor idea & parameterization represents reality**
  - at present
  - in future (especially in a lower carbon and/or high renewables world)

MSR Commission proposal
LRF 2.2% (from 2021) & EC reference baseline

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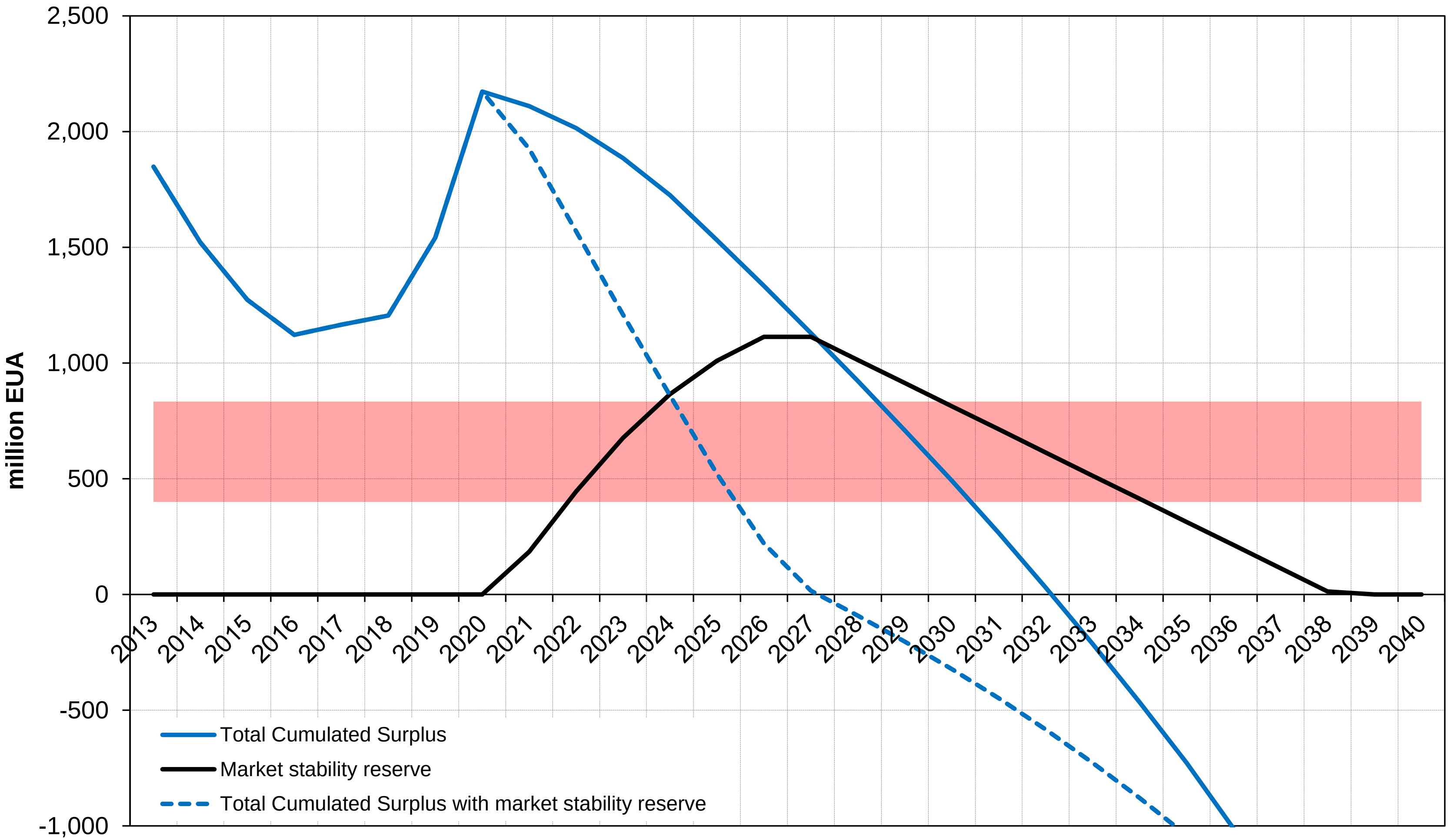
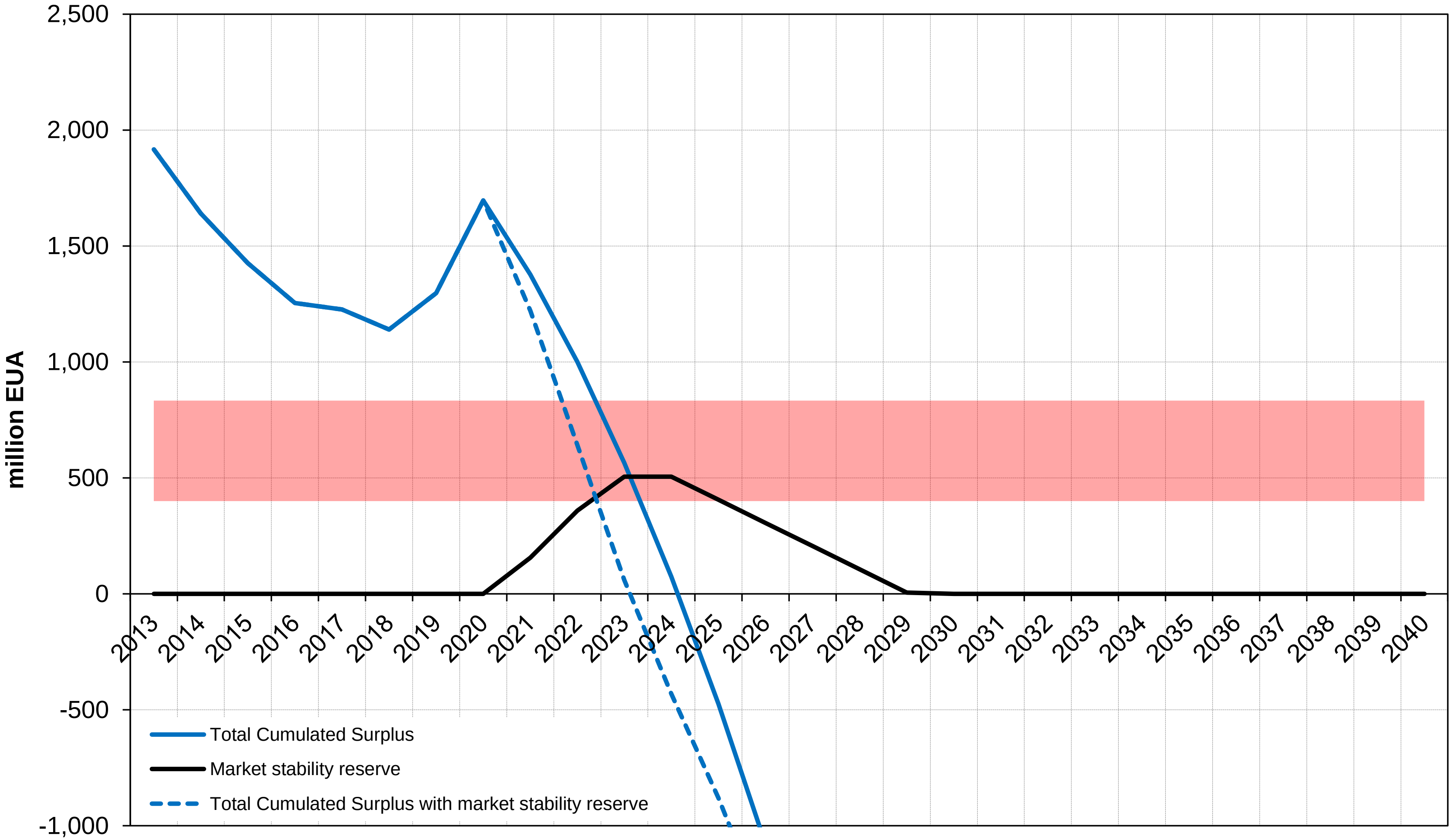


MSR Commission proposal
LRF 2.6% (from 2016) & Constant 2012 baseline



MSR (0-400 mln EUA hedging corridor)
LRF 2.2% (from 2021) & EC Reference baseline

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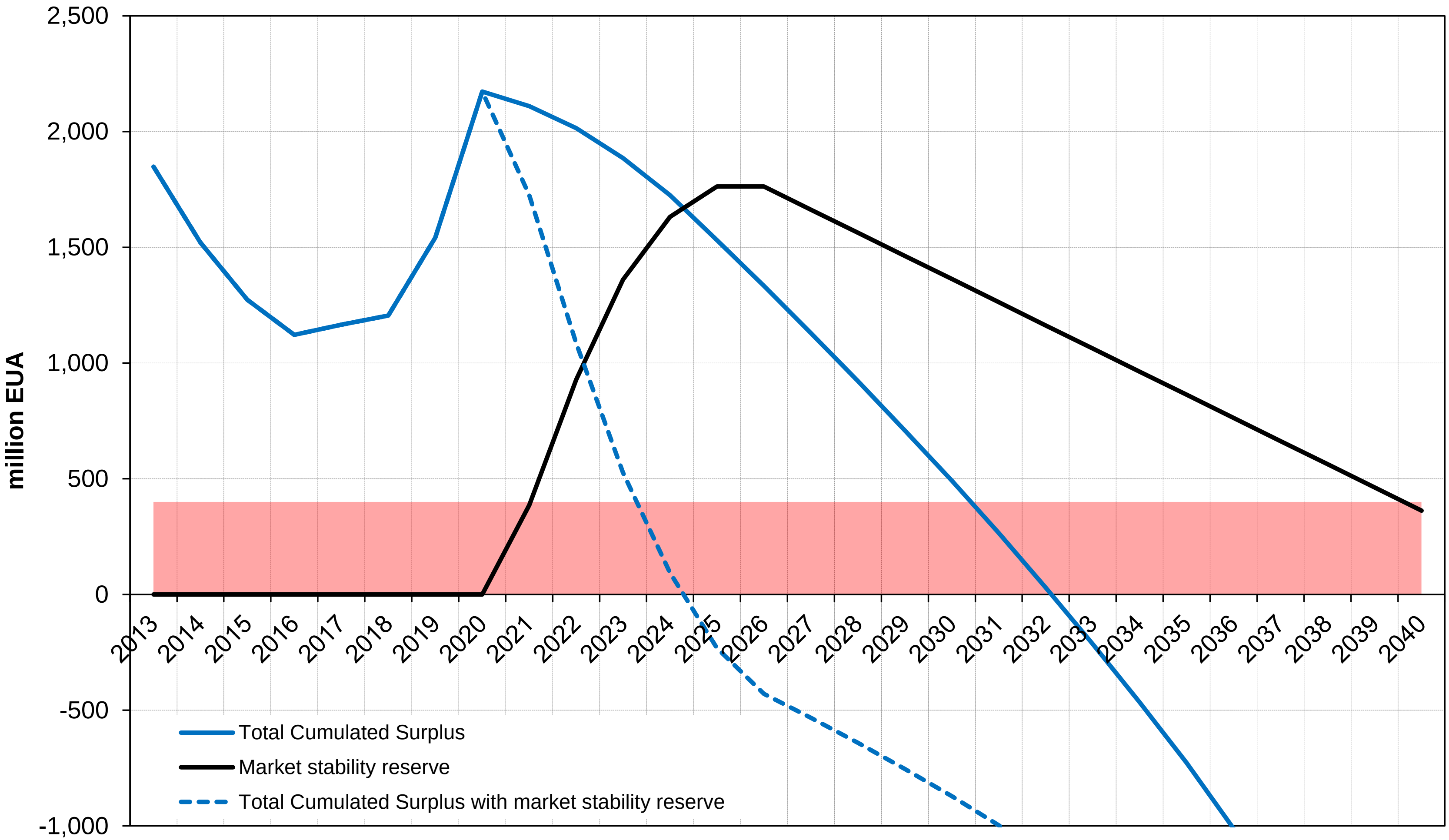

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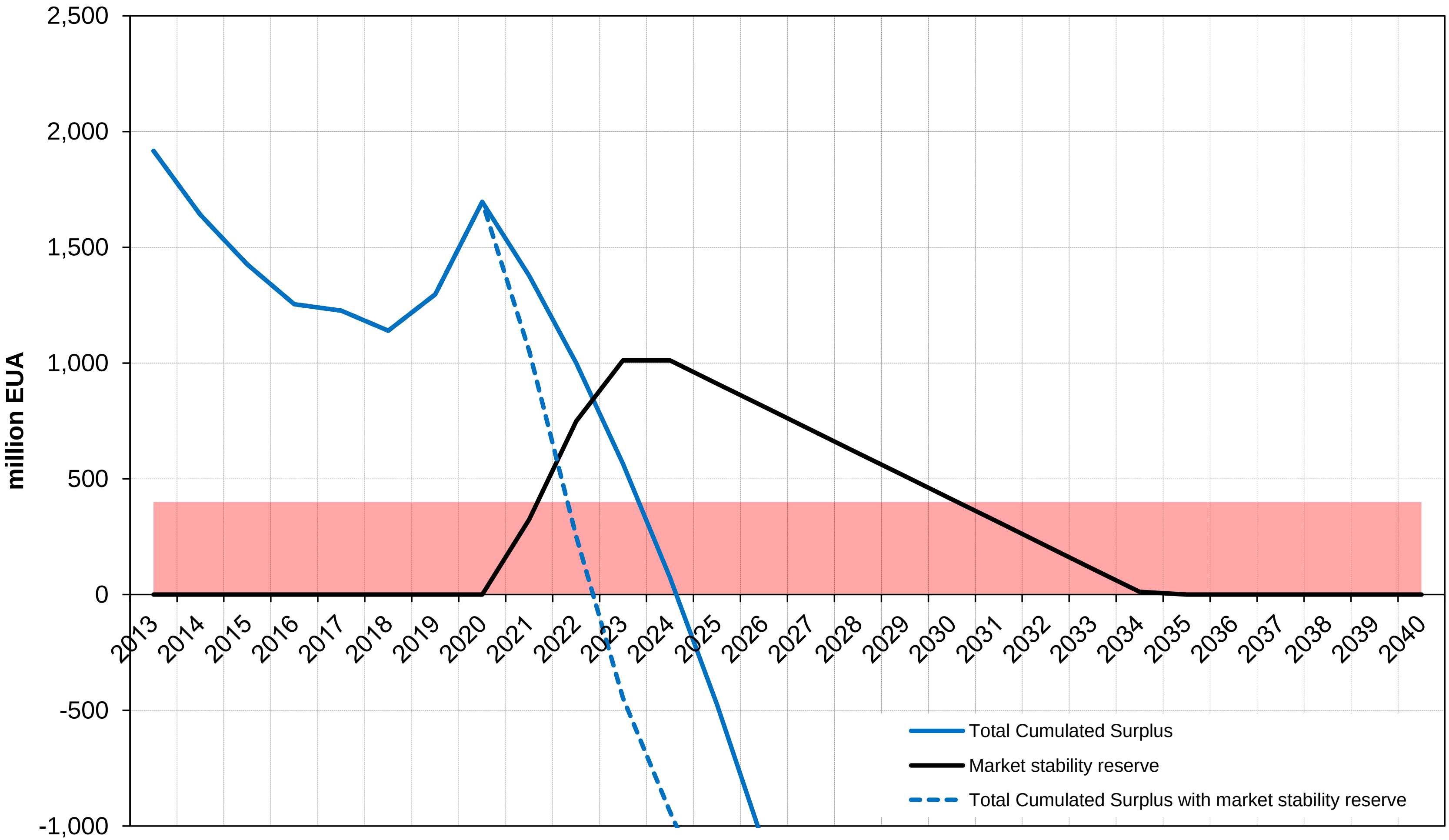

MSR from 2016 (0-400 mln EUA hedging corridor) LRF 2.2% (from 2021) & EC Reference baseline

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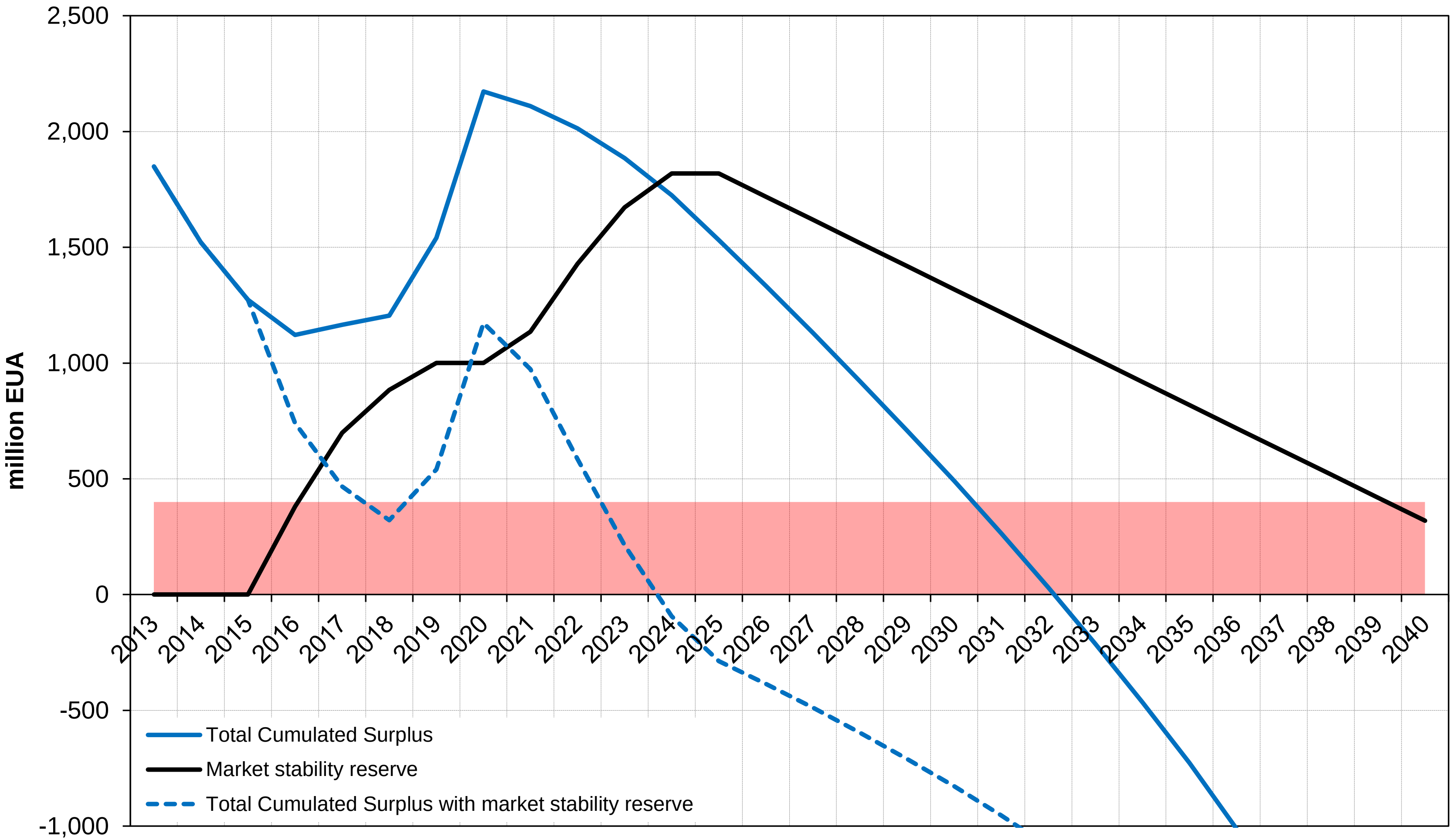
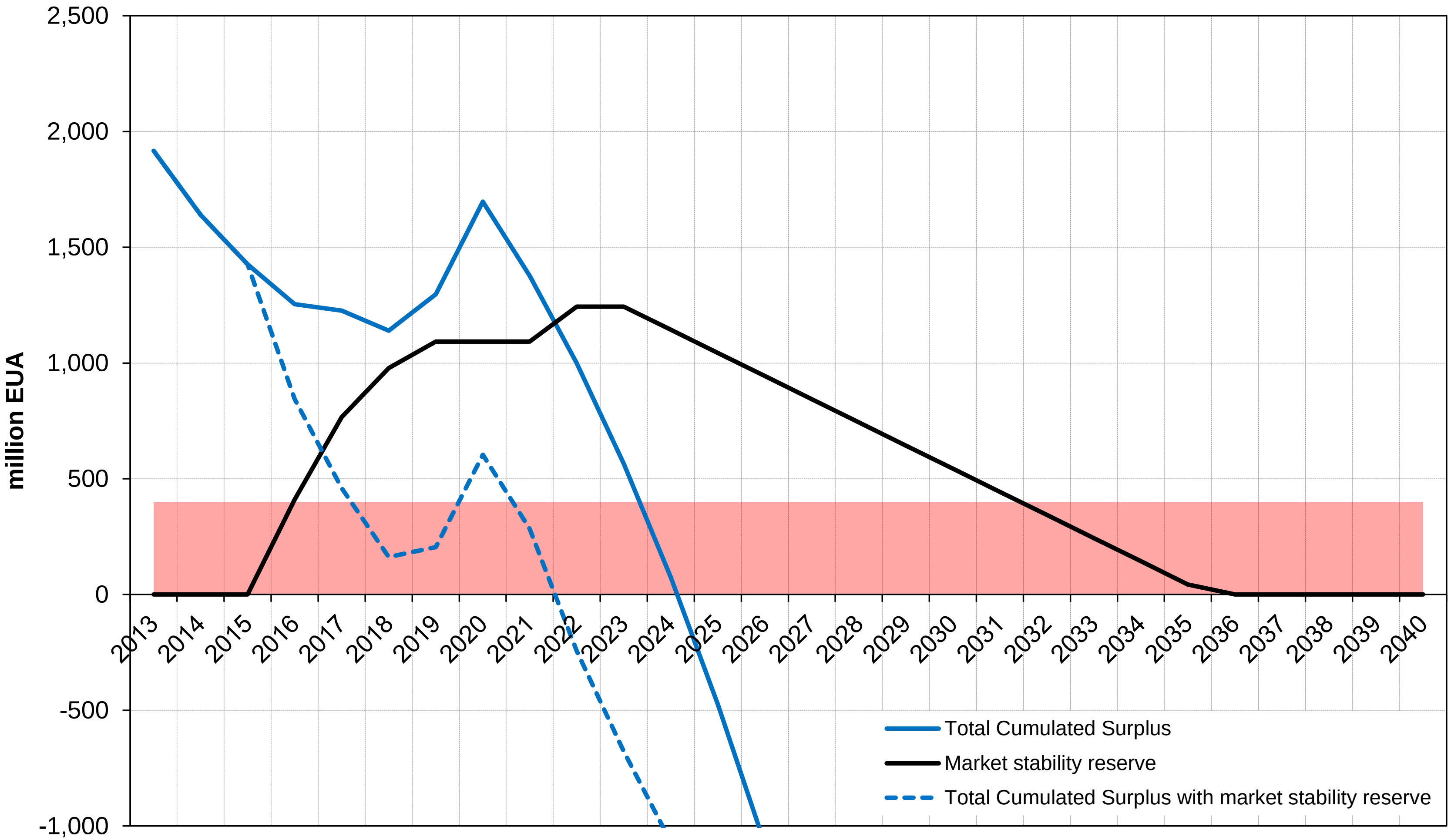


MSR from 2016 (0-400 mln EUA hedging corridor)
LRF 2.6% (from 2016) & Constant 2012 baseline



- **The adjustment of the LRF is a must (long-term perspective!)**
  - is an adjustment before 2021 a real option?
  - a more aggressive LRF than 2.2% is more consistent with the long-term targets
- **The MSR is an interesting concept (short- & medium-term perspective)**
  - as a hybrid between quantity and price triggered mechanism (reflecting macroeconomic and policy uncertainties)
  - its effects are strongly depending on the assumption of certain hedging strategies in the power market
  - the MSR itself contains a hedging mechanism (the price trigger)
  - given this safety valve, the underlying hedging corridor could be designed more dynamically and/or narrowed (over time?) or designed on the basis of MSR vintages (which will be retired after a certain time)
  - the MSR could start earlier
  - scarcity around 2020 will only be possible with a mix of adjustments
- **Retirement of surplus should still be reflected as an additional option**

Thank you very much

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