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Auctioning as an Allocation Method: Pros and Cons of Auctioning and Free Allocation

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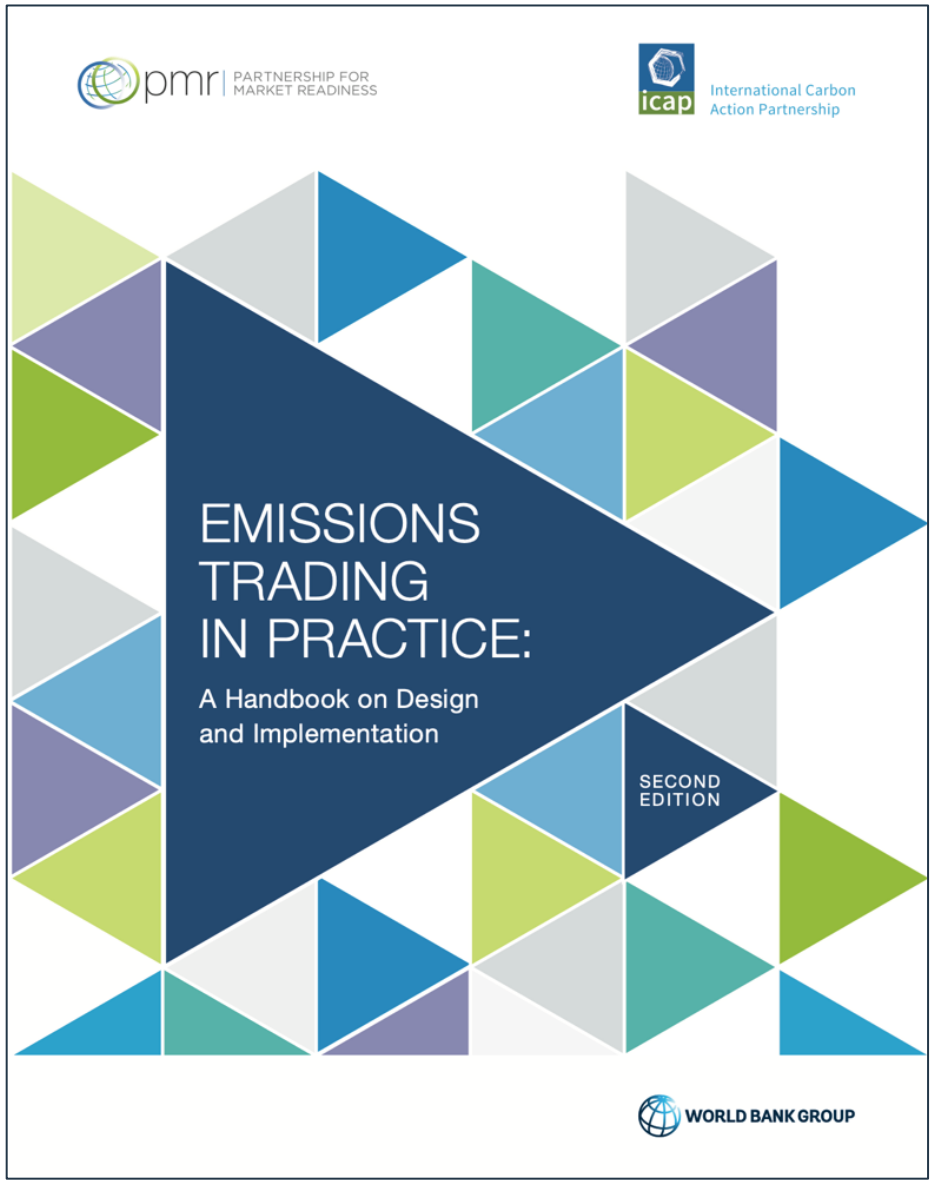
Background Reading

ICAP/PMR Handbook
Emissions Trading in Practice
2nd ed. (2021)

Chapter 5: “Distribute allowances” (pp. 97-122)

Available at:
https://icapcarbonaction.com/system/files/document/ets-handbook-2020_finalweb.pdf



Distributing Value under an Emissions Trading System

- By capping the number of allowances and creating scarcity, an ETS generates **economic value** that is expressed through the carbon price
- The carbon price flows through the economy, altering consumer prices and the value of assets, and resulting in relative **winners and losers**
- Allowances are therefore an asset that must be **allocated** in some way, determining how these costs and value are **distributed** across society
- The **distribution method** is key to how covered entities respond to the ETS and the carbon price it reveals, for instance through:
  - Decisions on **production** volumes
  - Location of new **investments**
  - Rate of carbon cost **pass-through**
- Certain distribution methods can also **distort** the carbon price signal and its abatement incentives

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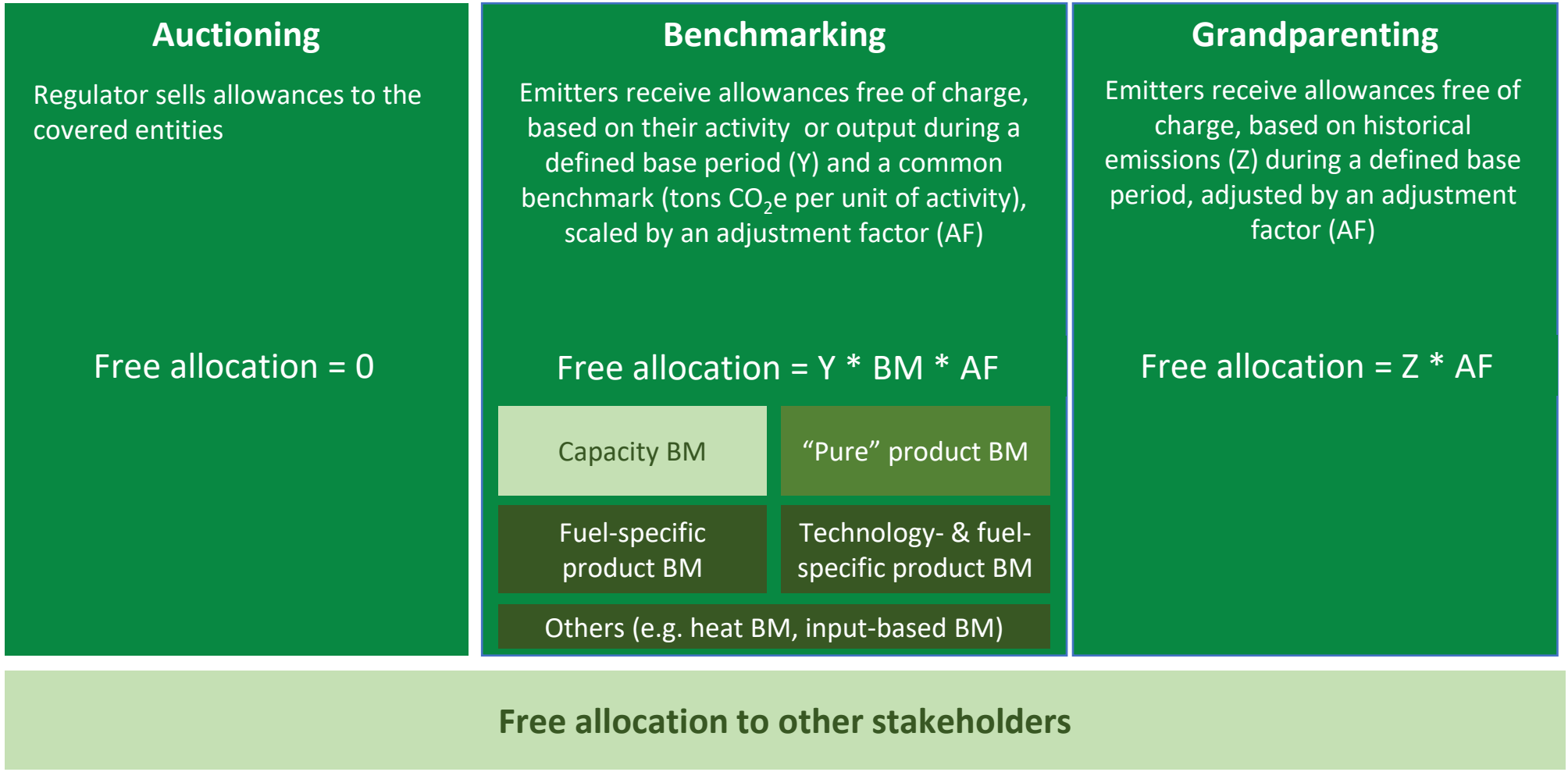
Main Allocation Methods in an Emissions Trading System



Allowance Distribution through Auctioning

- **Auctioning** involves the distribution of allowances through a competitive bidding process
- Many different **auction formats** are available, for instance:
  - **Single-round** vs. multiple-round
  - **Sealed bid** vs. open bid
  - **Uniform price** vs. pay-as-bid
- **Frequency** and **volume** of auctions can be chosen to generate steady price signal while avoiding disturbance of secondary market
- **Price** and **supply management mechanisms** can be implemented in the form of auction reserve (or floor) prices or market stability reserves
- Rules on **participation**, **transparency** and **oversight** are needed to monitor market and prevent misconduct (e.g. collusion)
- **Variants** exist, e.g. consignment auctions

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Benefits of Auctioning as a Distribution Method

- Improves **internalization** of a negative externality - and thus helps correct the main market failure - underlying climate change
- Likely to result in a higher rate of **carbon cost pass-through**, thus sending a
- Auction **revenue** can be used for various useful purposes:
  - Reducing distortionary taxes or lowering public debt
  - Supporting decarbonization through subsidies and incentives
  - Addressing distributional concerns and generating public support
- Reduces wasteful **rent-seeking** and lobbying for preferential treatment associated with the decision-making process on free allocation
- Promotes **price discovery** by bringing together large number of buyers and releasing significant quantities, identifying highest-value users
- Avoids **windfall profits** and directly rewards **early action**
- Can be **faster**, **simpler** and more **transparent** than free allocation (e.g. benchmarks, new entrants)

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Drawbacks of Auctioning as a Distribution Method

- Politically **less palatable** than free allocation methods, potentially undermining stakeholder support and social license of the ETS
- Higher **average carbon cost** and **pass-through rate** can result in loss of asset value ("stranded assets") and undesirable impacts on consumers
- Higher average carbon cost faced by energy-intensive and trade-exposed producers can impact **competitiveness** and result in **leakage**
  - Emissions leakage takes place through short- (production) or long-run (capital) channels
  - Decline in production can affect balance of trade and lead to structural change
- Upfront cost of auctioning **binds capital** that may then be unavailable for investments in emissions abatement
- Low **initial capacity** of covered entities to trade may constrain participation in auctioning and affect compliance

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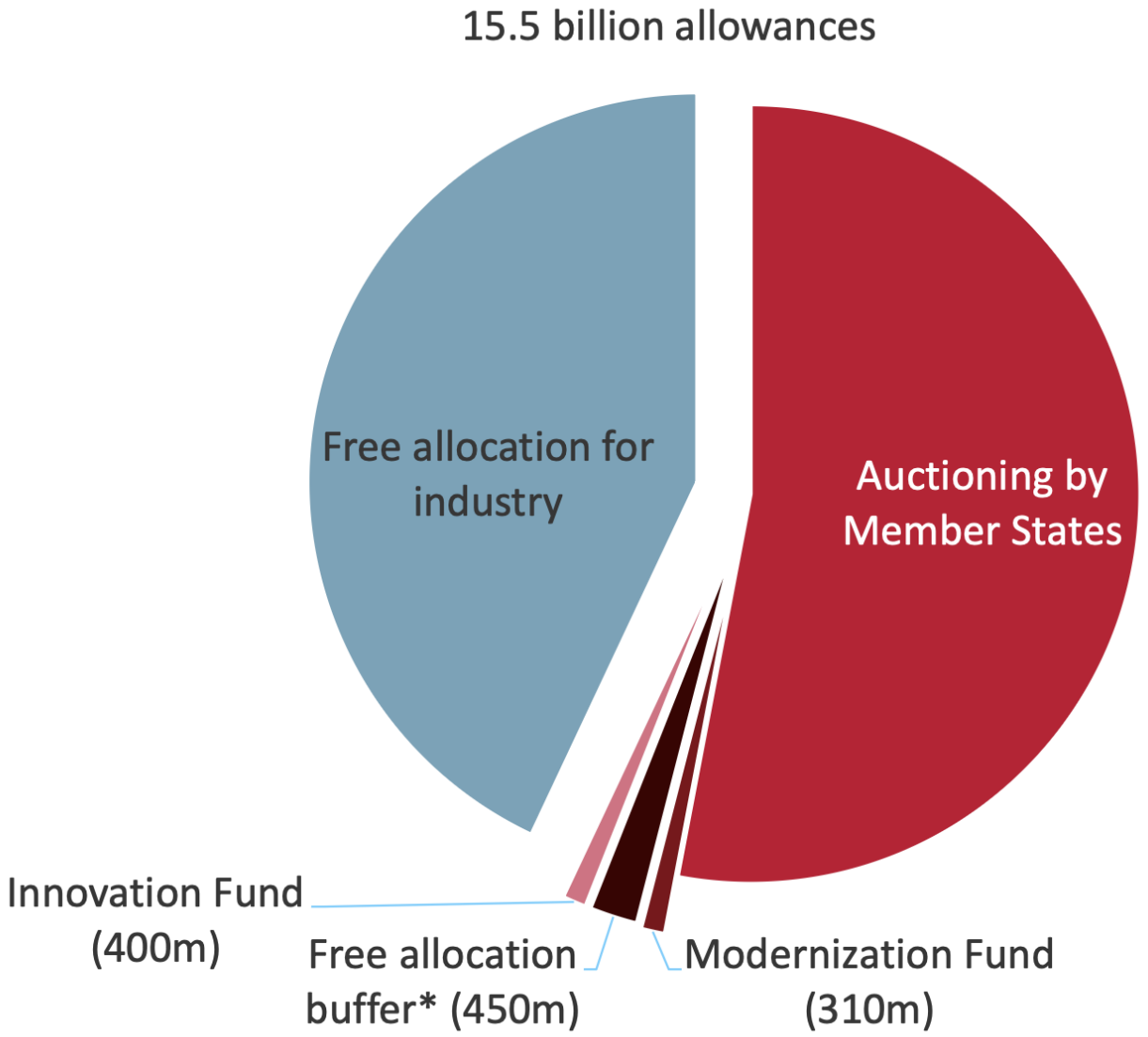
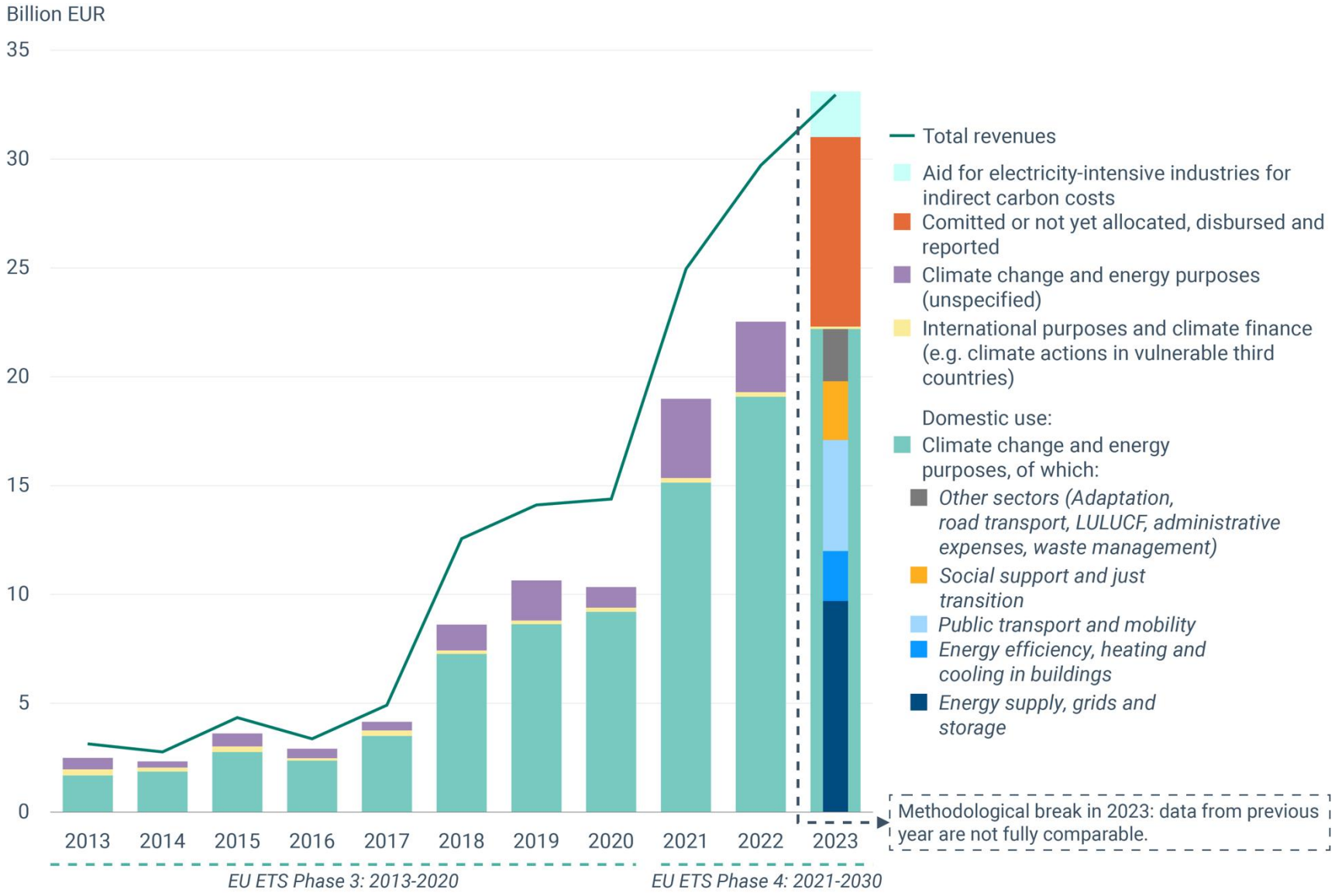
EU ETS: Allowance Distribution in Phase 4



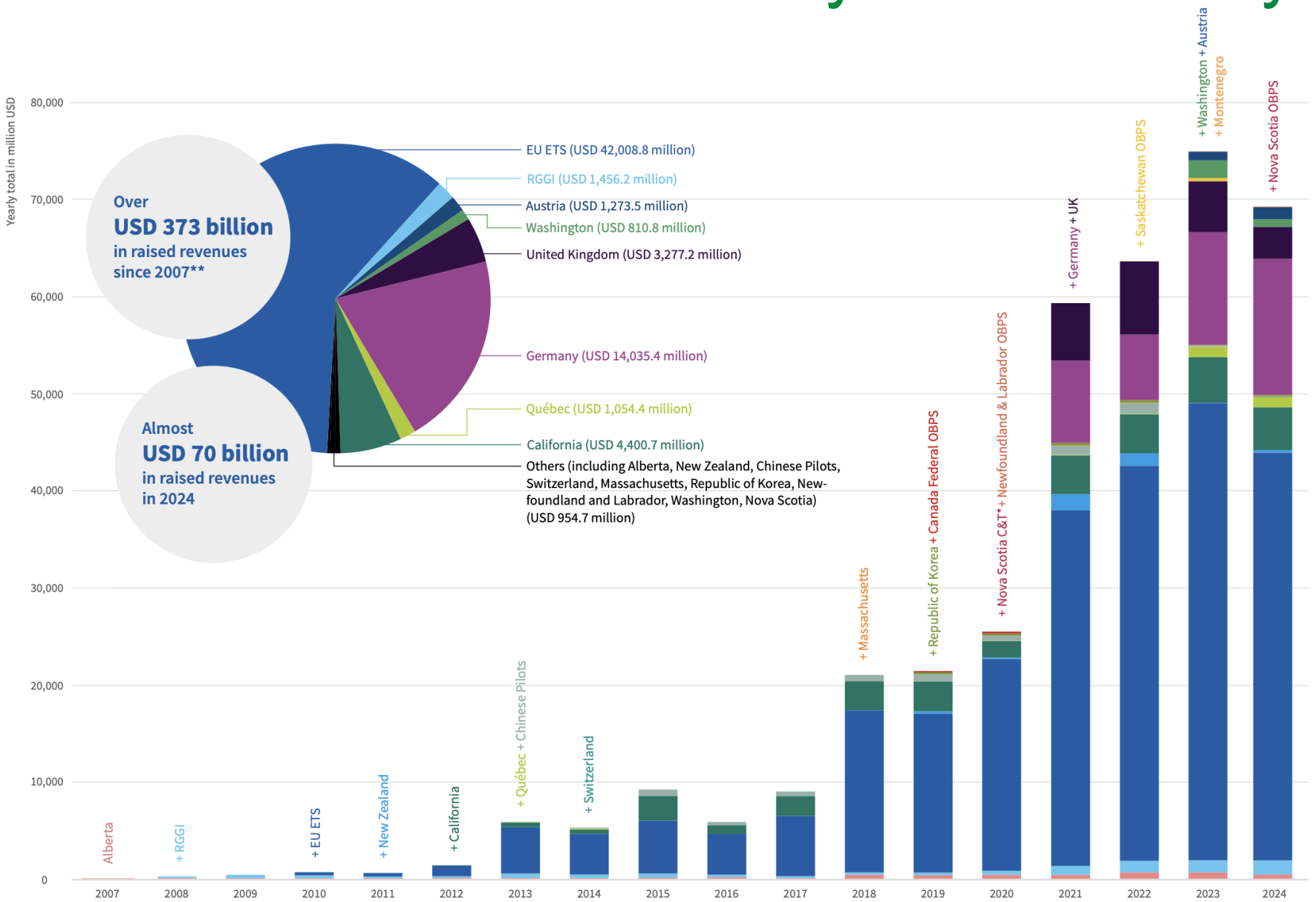
Source: EFET, 2022

EU ETS: Auctioning Revenue and Reported Usage

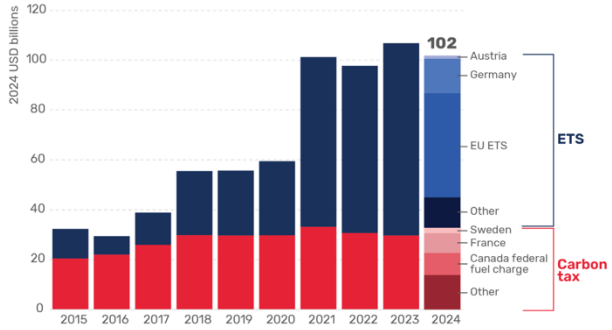


Source: EEA, 2024

Annual Revenue Raised by ETS Globally

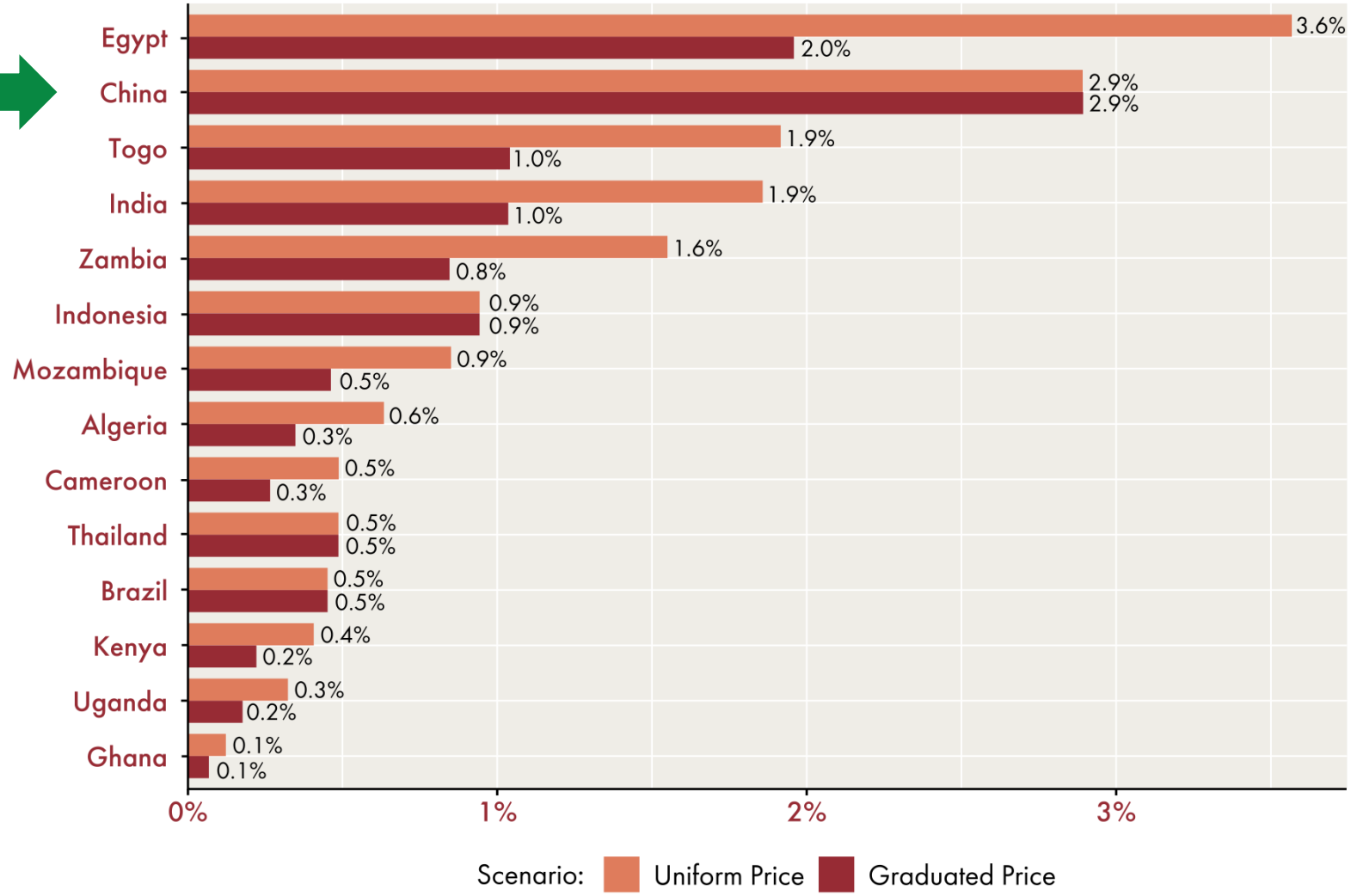


Source: [ICAP, 2025]



Source: [World Bank, 2025]

Revenue as a Share of General Government Revenue at $50/tCO2e on Selected Heavy Industry



Source: GCPP, 2025

Choosing the Right Allocation Method

- **Cost incidence:** who will eventually pay the carbon cost? Are firms able to pass on the carbon price? Is there a risk of creating windfall profits?
- **Competitiveness:** is the sector exposed to international competition? Is there a risk of carbon leakage, and will free allocation reduce this risk?
- **Compensation for stranded assets:** Does the carbon price devalue past investments? Should firms be compensated for this devaluation?
- **Securing political support:** Is free allocation a necessary concession to secure stakeholder acceptance and political buy-in?
- **Practical considerations:** *inter alia* data needs, administrative effort (for designing and applying the rules), risk of fraud or perverse incentives
- **Hybrid options:** targeted free allocation; dynamic transition

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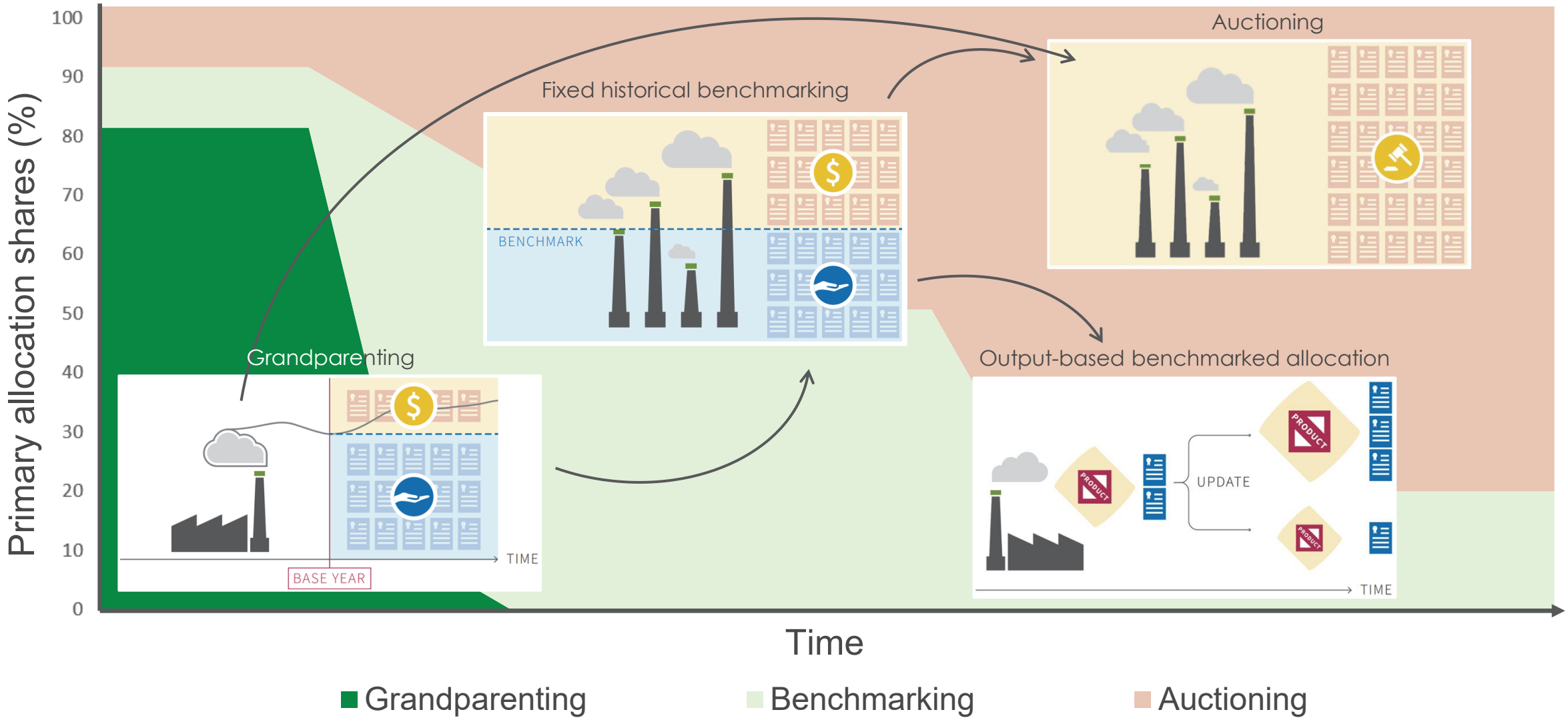
Possible Evolution of Primary Allocation Shares over Time



Source: [World Bank/ICAP, 2021]

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