GIZ – Carbon Pricing Training for Members of the Energy Community

Key elements in ETS design

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Outline

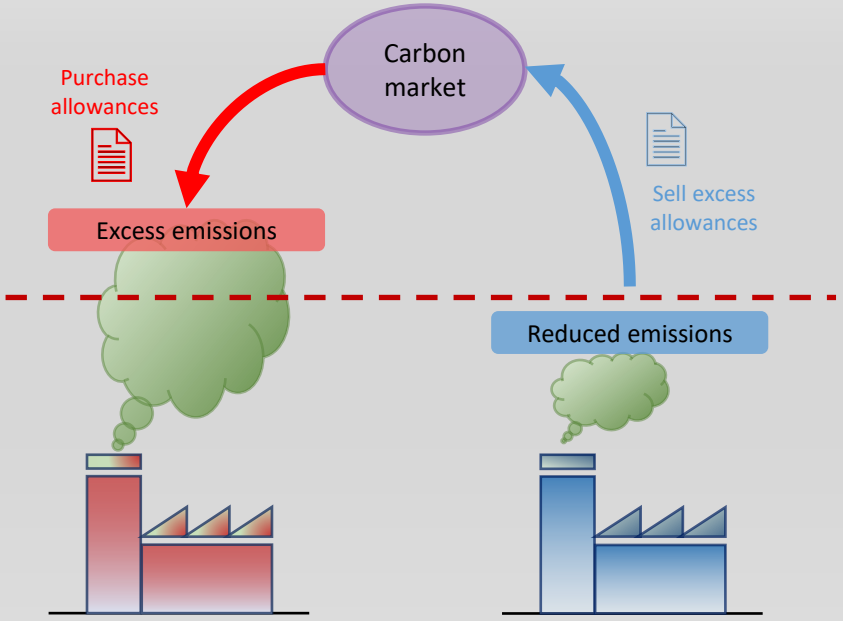
Principles of ETS

Key ETS design elements

Principles of ETS

Functioning of an emission trading system (ETS)

- Government imposes a limit on total emissions in one or more sectors
- Regulated companies need one allowance for every ton of emissions released
- Government allocates or auctions permits to companies
- Regulated companies can trade excess permits with one another



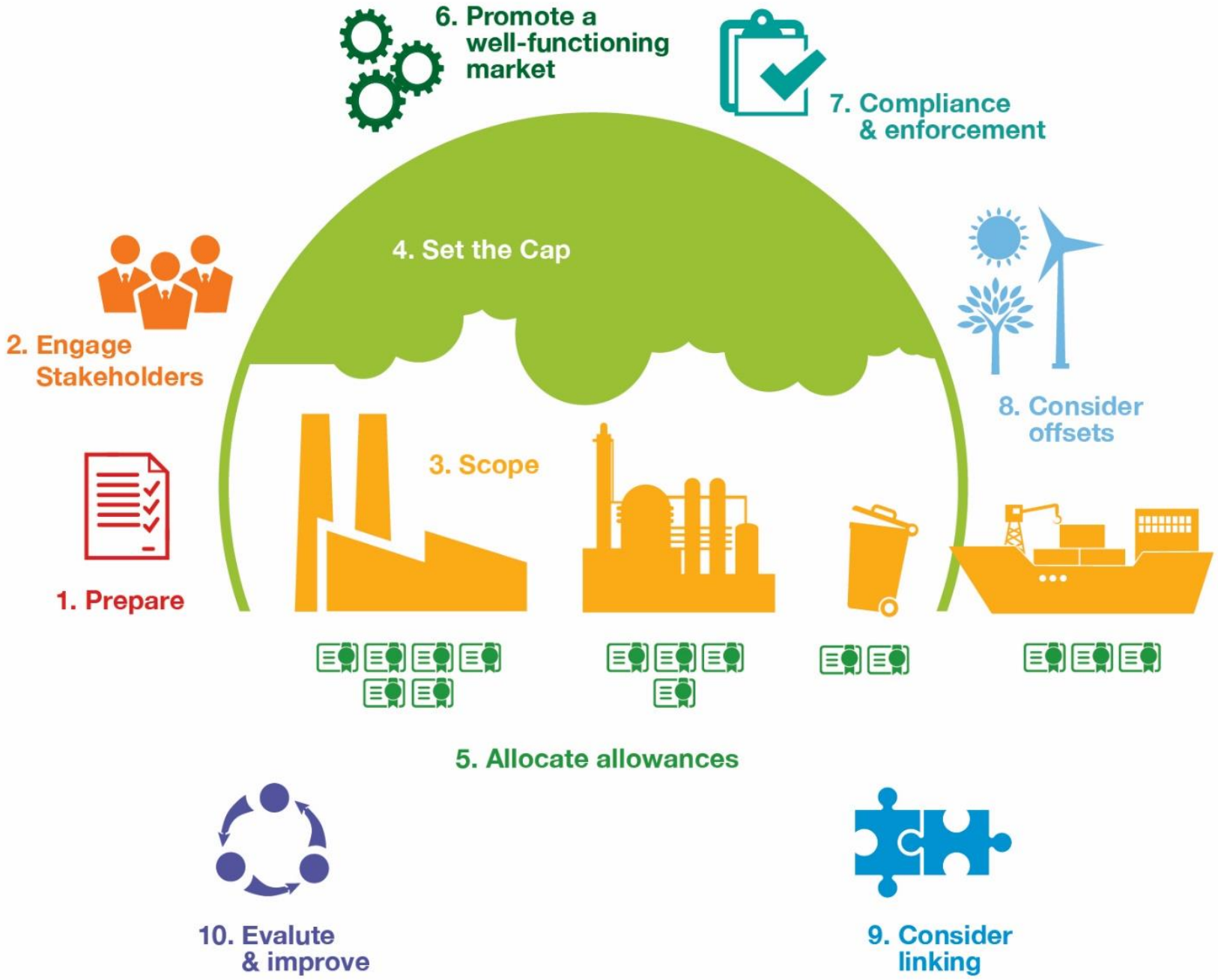
Source: Adapted from: Québec Ministry of Environment and Fight against Climate Change

Pre-conditions for ETS implementation

- Sufficient **number of entities** to enable functioning market
- Available **abatement potentials** in the targeted sectors
- Sufficient **capacity to monitor, report and verify** emissions of covered entities
- **Legal mandate** providing institutional authority over and enforcement of the ETS

Key ETS design elements

ETS design elements



ETS scope and coverage

SECTORS

Power generation, industry, transport, buildings, waste, forestry etc.

EU ETS: *Power stations; industry including oil refineries, coke ovens, and iron and steel plants, cement, glass, lime, bricks, ceramics, pulp, paper, and cardboard production; intra-EEA aviation.*

GASES

Coverage of gases varies among the different ETS in place, but all of them at least cover CO2.

EU ETS: *CO_2, N_2O; PFCs*

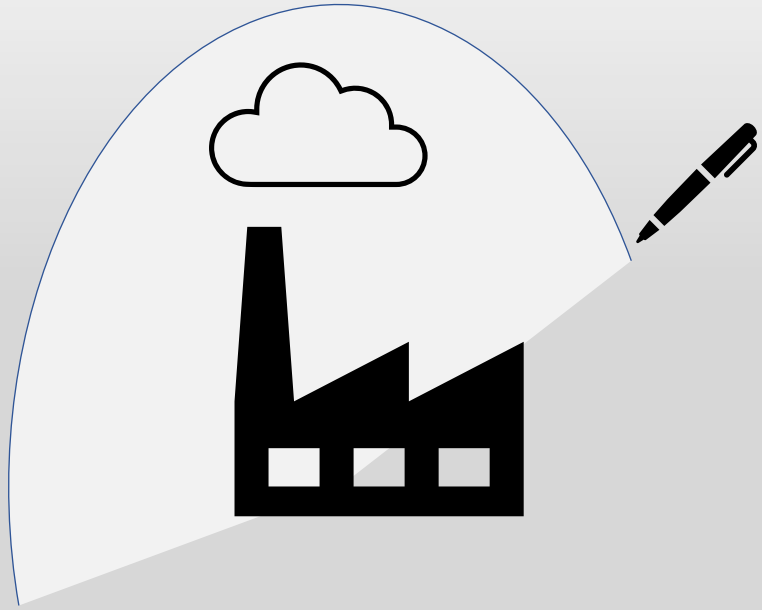
POINT OF REGULATION

Downstream or upstream

EU ETS: *downstream.*

Set the ETS cap (1)

The cap defines the **total amount of GHG emissions that can be emitted** by all sectors and entities under the ETS



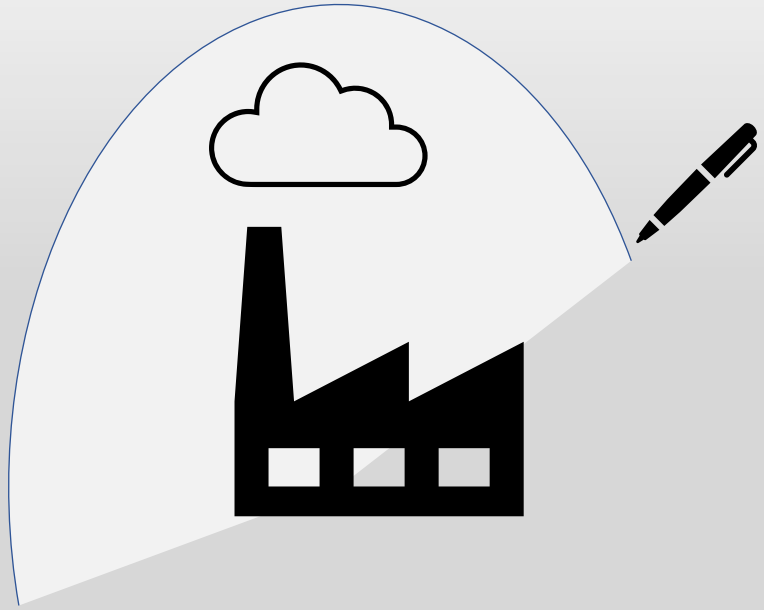
The tighter the cap is…

…the lower the number of available allowances …

…the higher their price…

…the stronger the incentive to reduce emissions.

Set the ETS cap (2)



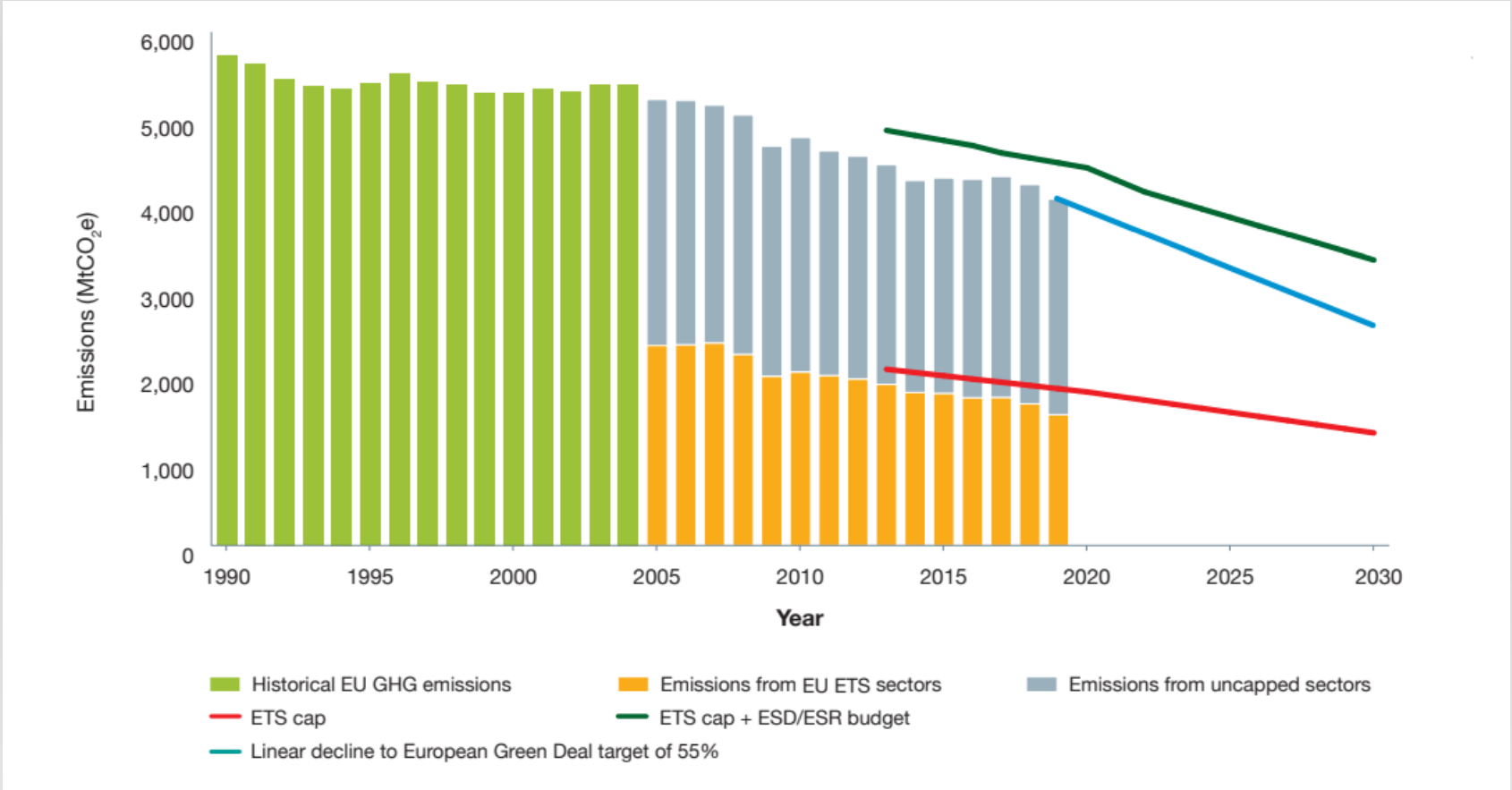
To set the cap, a jurisdiction must assess:

- Its historical emissions,
- its projected emissions,
- mitigation opportunities and costs of covered sectors.

Setting a robust cap:

- Depends on high-quality, reliable and consistent data,
- should reflect the national climate targets,
- needs to reflect complementary policies.

EU mitigation goals and the EU ETS cap



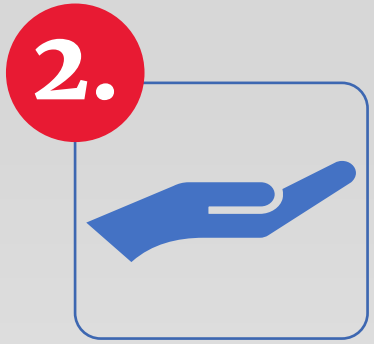
Source: PMR and ICAP Updated ETS Handbook, 2021

Allocation emissions allowances

- How allowances are allocated to covered entities in an ETS determines how the burden of meeting the target is shared across the economy.
- The government can distribute allowances through free allocation, auctioning, or a combination

Auctioning

- Efficient way to get allowances to those who value them most.



Free allocation

- Protects companies from loss of competitiveness.
- Entities still have incentive to invest in low-carbon technology.

Allowance allocation in the EU ETS

2005-2007	Mainly free allocation via grandparenting; established through member states
2008-2012	Similar to Phase 1 + some benchmark-based free allocation + auctioning in eight member states, 3% of allocation
2013-2020	57% of allowances auctioned over entire trading period; remaining allowances allocated through benchmark-based free allocation. Nearly 100% auctioning for electricity sector.
2021-2030	Similar to Phase 3, with share of auctioning slowly increasing and updated sector benchmarks for free allocation

EU ETS has gradually moved from grandparenting to auctioning and benchmarking.

Monitoring, reporting, verification (MRV) of emissions

MONITORING

- Ensuring that one tonne of CO_2 emissions emitted is one tonne of CO_2 emissions reported

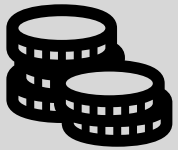
REPORTING

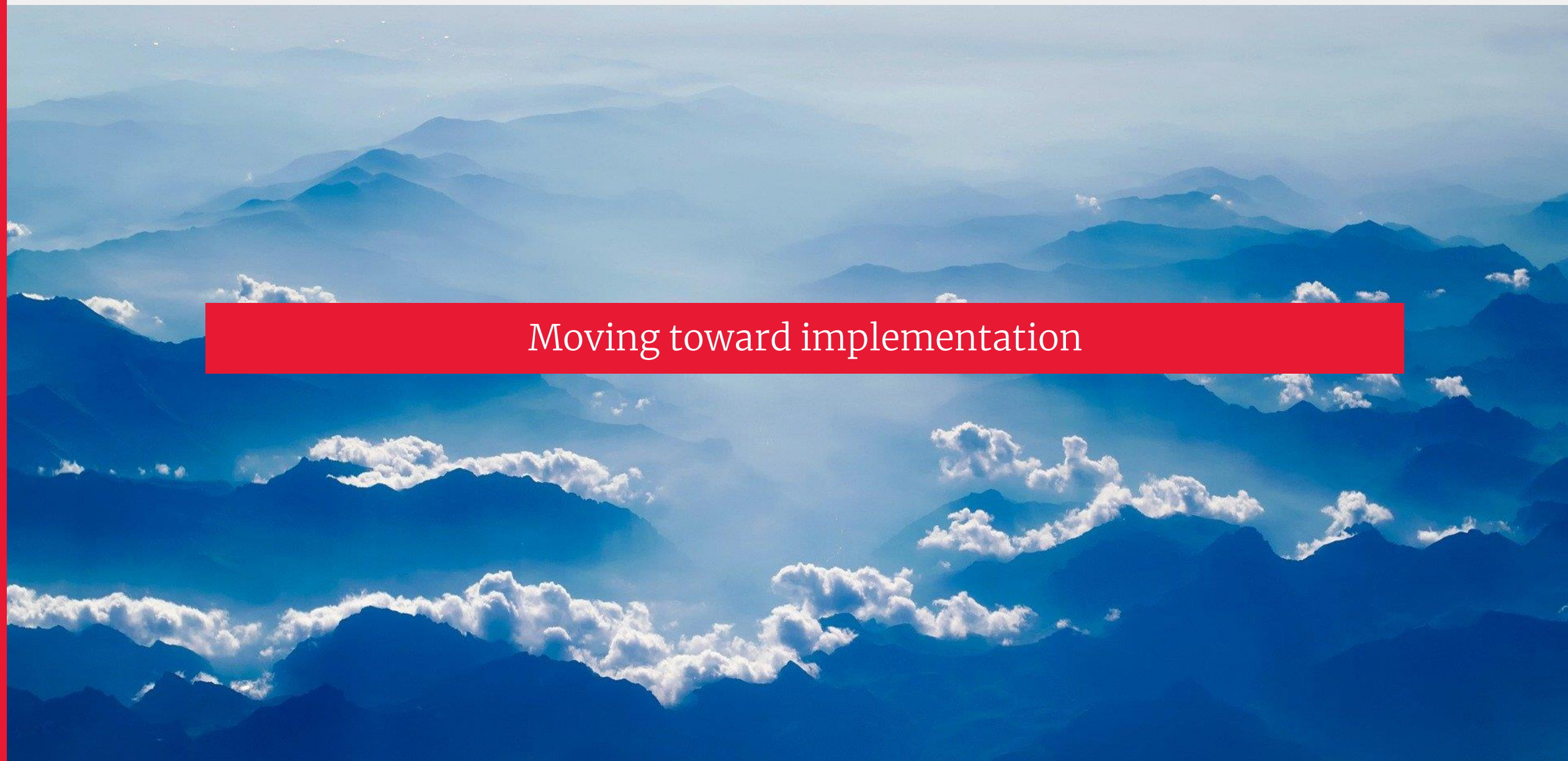
- Entities need to report their emissions data to the regulator in a standardized and transparent form.

VERIFICATION

- Emissions reports must be verified since entities may have an incentive to underreport total emissions in order to pay less for compliance.
- Third-party verification standard practice for ETS.

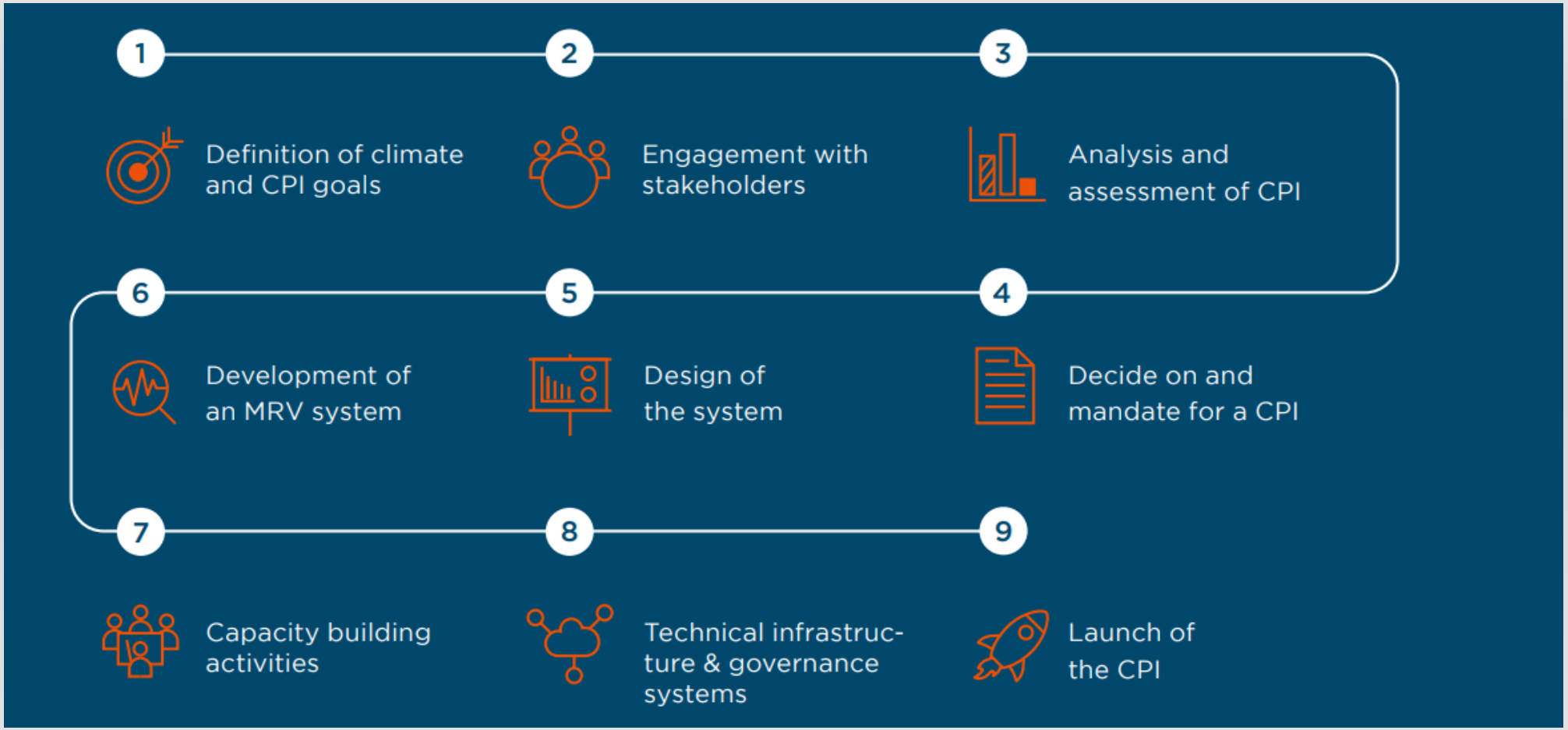
Enforcement

EU ETS Example		
	FINES	• Regulated entity must pay a penalty of EUR 100 for each tonne of CO2 emitted for which no allowance has been surrendered
	MAKE-GOOD REQUIREMENT	• Entity must buy and surrender the equivalent amount of allowances.
	NAMING AND SHAMING	• The name of the noncompliant operator is made public.



Moving toward implementation

Step-by-step towards ETS



ICAP, *Status and trends of compliance and voluntary carbon markets in Latin* America, 2021

Pilot ETS vs. Gradual implementation

	Advantages	Disadvantages
ETS Pilot	• Test ETS policy, methodologies, systems and institutions • Build capacity	• Unlikely to run long enough or be ambitious enough to trigger substantive mitigation • If pilot is viewed as unsuccessful, risk of damaging instrument‘s reputation and acceptance going forward
Gradual implementation	• Test systems & institutions • Early implementation of a carbon price • Reduce upfront costs of implementation • Enable time for adjustments in interlinked regulatory frameworks	• Smaller initial scope reduces ETS impact • Potential leakage risk between sectors

The EU regulatory framework

Fundamental legislation: EU ETS Directive

✓ sets the scope and main principles

Important (legislative) implementing measures: Commission Decisions and Regulations directly applicable to regulated entities

✓ Auctioning Regulation (2010/1031/EU), amended by Delegated Regulation 2019/1868
✓ Delegated Regulation on functioning of EU Registry (2019/1122)
✓ Implementing Regulation on Monitoring and Reporting ('MRR') (2018/2066) and on Accreditation and Verification ('AVR') (2018/2067)
✓ and many more

Specific national rules

Guidance documents

Non-binding documents to help authorities and entities comply with the rules

Croatia´s journey into the EU ETS

- 2005: EU ETS enters into operation.
- 2005-2011: Membership negotiations between EU and Croatia.
- January 2013: **Croatia joins the EU ETS** through a bilateral linking agreement.
- July 2013: **Croatia formally accedes to the EU** as its 28th Member
- January 2014: **Aviation** in Croatia is included in the ETS scope
- April 2014: Croatian companies covered by the EU ETS are required to surrender allowances in line with their 2013 emissions

Key take-aways

- Domestic ETSs can deliver **certainty on emissions outcomes** at least cost, offer **implementation flexibility**, can raise government revenue and provide co-benefits.
- ETS are generally considered a **'high governance' instrument**. First experiences being gained in emerging economy contexts.
- Key design elements of an environmentally and economically efficient ETS comprise
  - a **broad scope** and coverage,
  - a robust and ambitious **cap**,
  - **robust MRV**,
  - and adequate mechanisms for **allocating allowances** and **market stability.**

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Mentimeter

Go to "menti.com" and enter the following code: 4264 7134

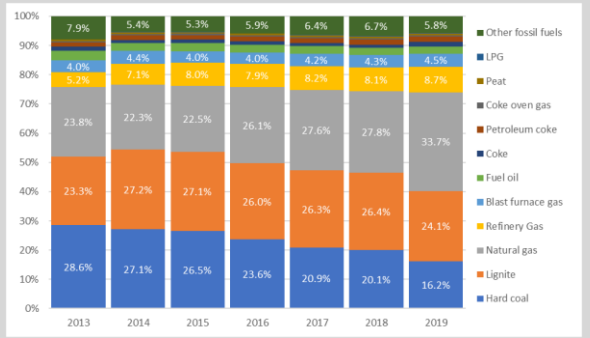
1) What was the most important take-away for you from the first two sessions of this series?

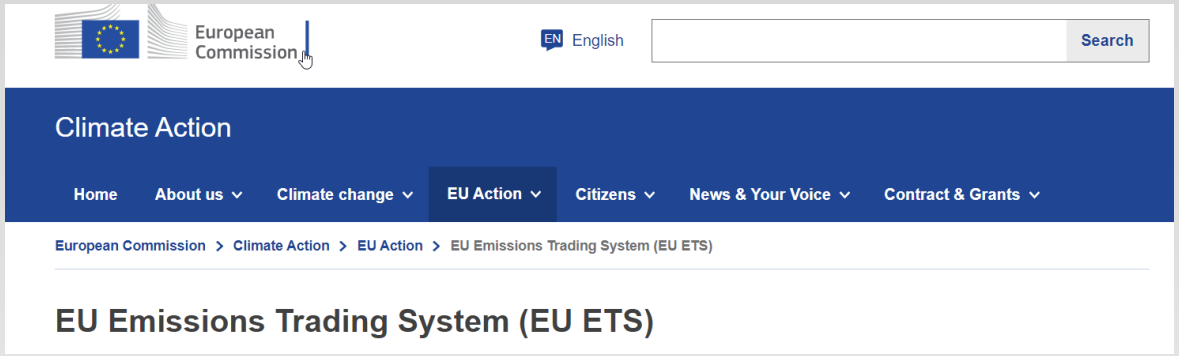
2) What key questions on ETS and carbon tax are still open for you?

Please type your answers into Mentimeter.

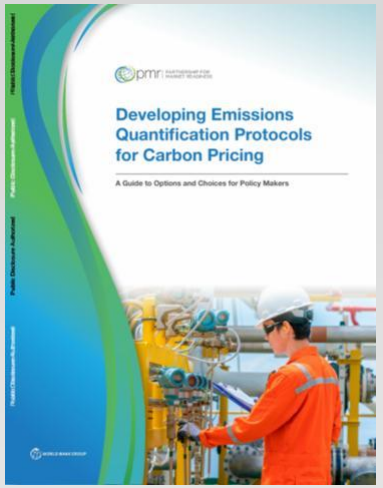
More information on EU ETS

- **The EU ETS explained** (3-minute video) https://bit.ly/3ATB4Bt
- **DG CLIMA EU ETS website** https://bit.ly/3rqwI1D
- **Carbon market progress reports** https://bit.ly/3gobpHD and ttps://bit.ly/347jZIo
- **Quick MRV guide** for operators/CAs: https://bit.ly/3unS8Ow and https://bit.ly/3L6VD1V





More general CPI MRV guide: https://bit.ly/3GquS55



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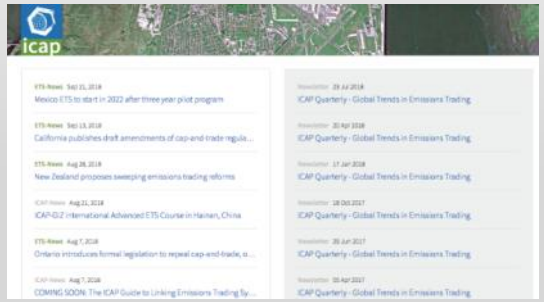
ICAP Interactive Map

ETS state of play worldwide (3-monthly updates)

News

Objective coverage on all regulatory ETS developments as they occur

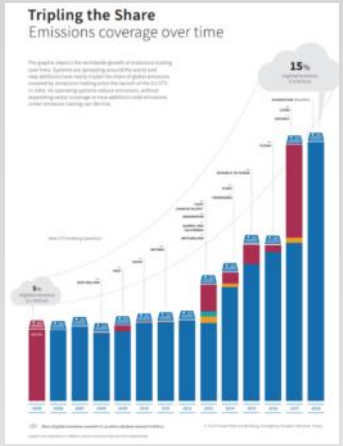


ETS briefs

Introduction of the basics of cap-and-trade

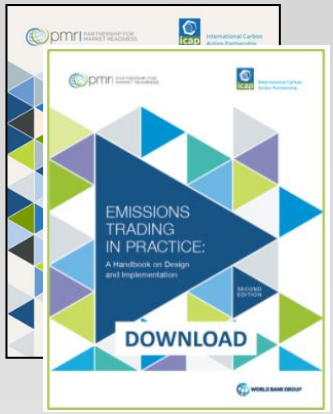
Infographics

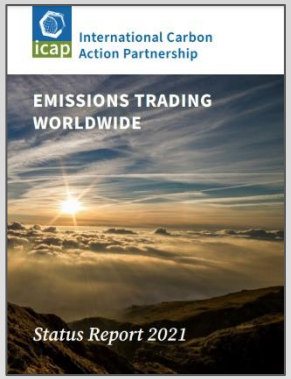
Visualization of key ETS trends



Publications

Key reference material on ETS





Allowance Price Explorer

Historical and current carbon prices worldwide

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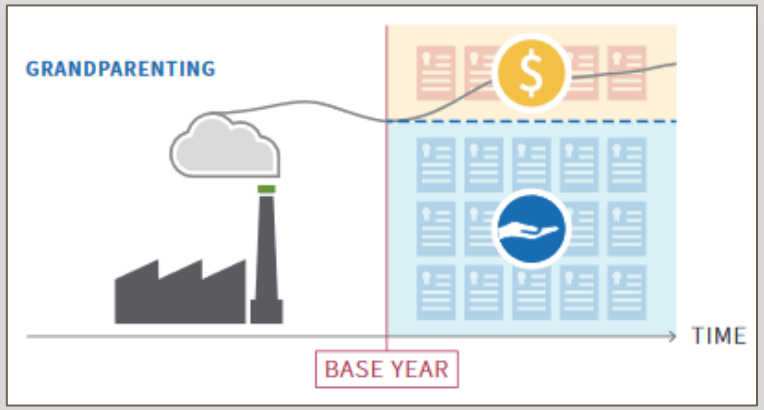
Thank you for your attention!

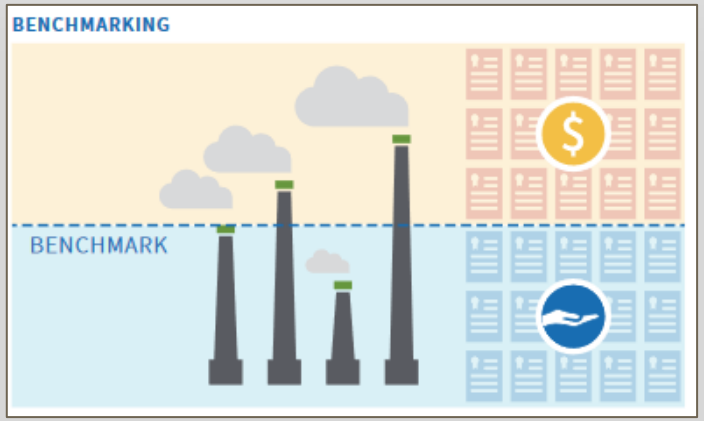
This project is part of the International Climate Initiative (IKI). The Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) supports this initiative on the basis of a decision adopted by the German Bundestag.

Back-up slides

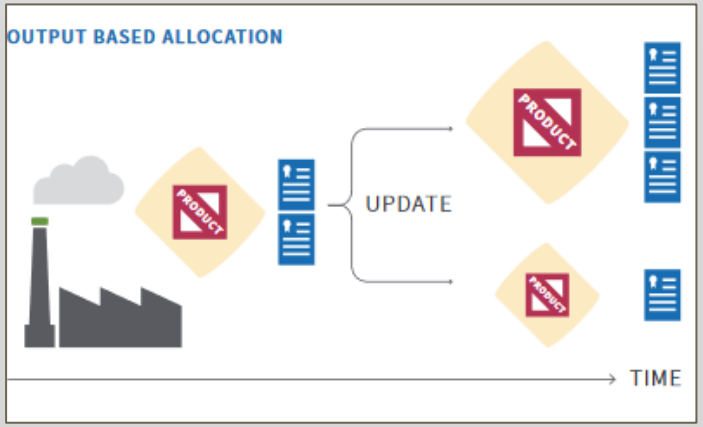
Methods of free allocation



Based on entities' historical emissions



Based on a standard level of emissions per unit of input/output / industry-specific benchmark



Update allocation according to the actual output of the company or installation

Market stability

- Allowance prices in an ETS are determined by the **balance of allowance supply and demand**.
- Market stability mechanisms provide a **safety net in case of unforeseen major developments** impacting the carbon price
- Mechanism are designed to **respond to either low or high allowance prices** by adjusting the number of allowances available in a market either triggered

  based on price (e.g. **minimum prices or price ceilings**), or

  based on quantities (e.g. **market stability or emissions containment reserves**).

Actors involved in ETS implementation

Legislator / regulator (legislative chamber)	• Designs the system, creates ETS legislation, issues decrees/ implements regulations, establishes a competent authority
Competent authority (ministry or agency)	• Implements ETS rules, e.g. regarding allowance allocation, monitoring, reporting, verification and enforcement (MRVE)
Covered entities (companies)	• Receive or buy and trade allowances, monitor and report emissions, surrender allowances
Verifiers	• Verify the accuracy of reported emissions
Accreditation body	• Ensures the quality of verifiers by means of a verifier accreditation process
Trading and auction platform	• Manages government auctions and trading between covered entities
Other market participants (financial institutions)	• Financial players (e.g. banks, brokers) can act as alternative trading partners and help regulated entities manage risk and increase liquidity

Linking ETS

- One benefit of ETSs is that systems can be linked, and allowances in one system be used in another for compliance