

# HOW TO ESTABLISH AN EFFECTIVE ETS

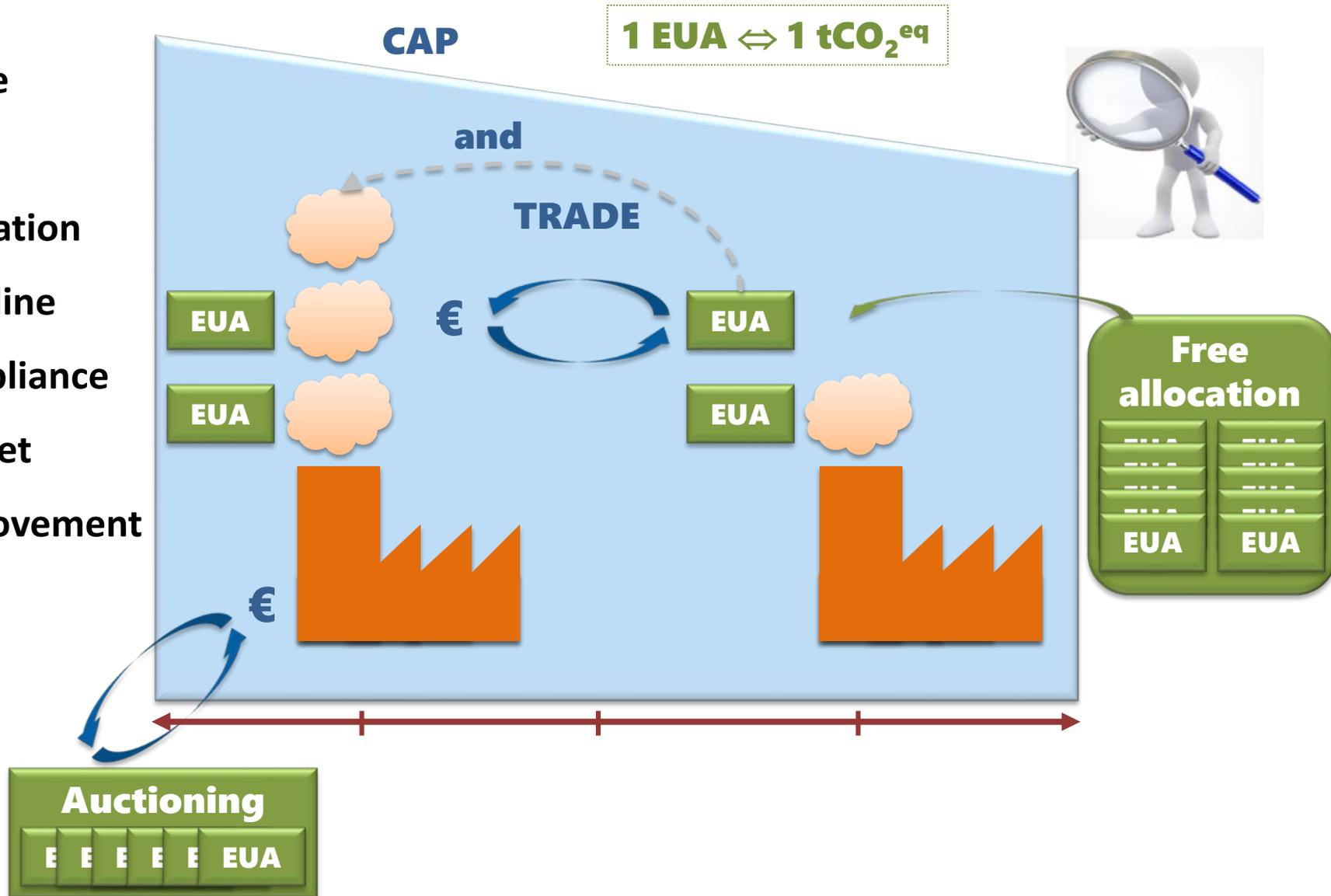
*Design elements and implications*

*TAIEX RIPAP Technical Workshop on  
the EU Emission Trading Scheme*

*Ankara – 6 November 2018*

# MAIN STEPS IN DESIGNING AN ETS

- Scope
- Cap
- Allocation
- Timeline
- Compliance
- Market
- Improvement



# KEY CHALLENGES FOR AN EFFECTIVE ETS

- Environmental impact and integrity
- Fairness and trust
- Protecting industry competitiveness
- Market integrity
- Market liquidity
- Price stability
- Acceptance

Many of these challenges are interrelated

# ESTABLISHING AN EFFECTIVE ETS

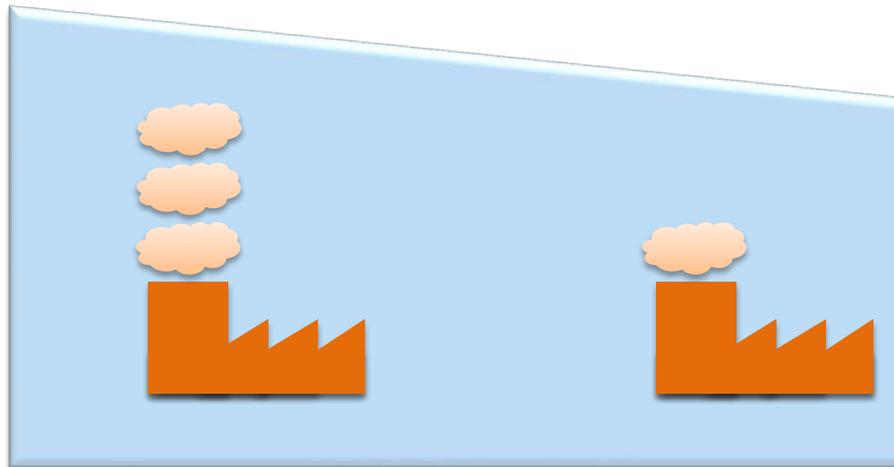
- I. Cap
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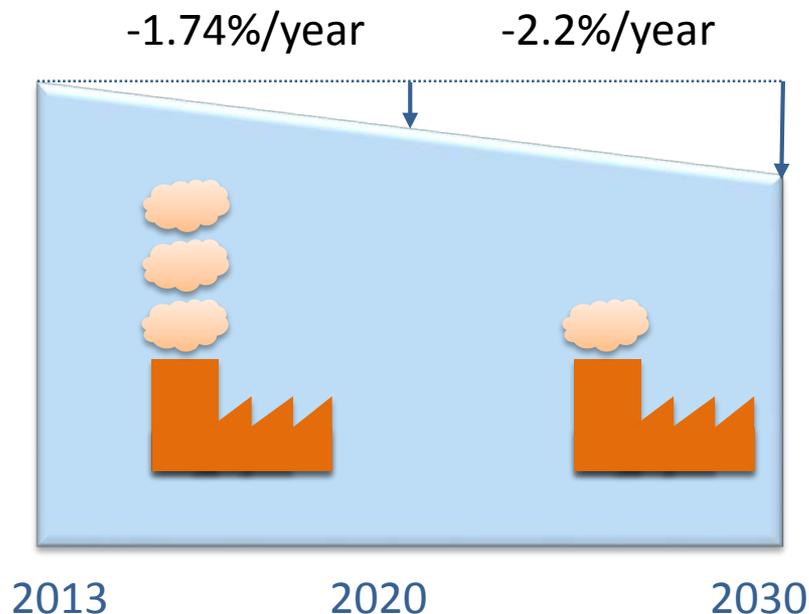
# CAP

- Aim: set a limit on the number of allowances issued
- Contributes to environmental impact
  - A lower cap will lead to a higher carbon price and stronger incentive to reduce emissions
  - Banking provisions can increase the cap, thereby increasing supply and reducing price (and increasing unpredictability)



# EU ETS CAP

- In phase 3 (2013-2020), an EU-wide cap is set by Directive 2003/87/EC (the EU ETS Directive)



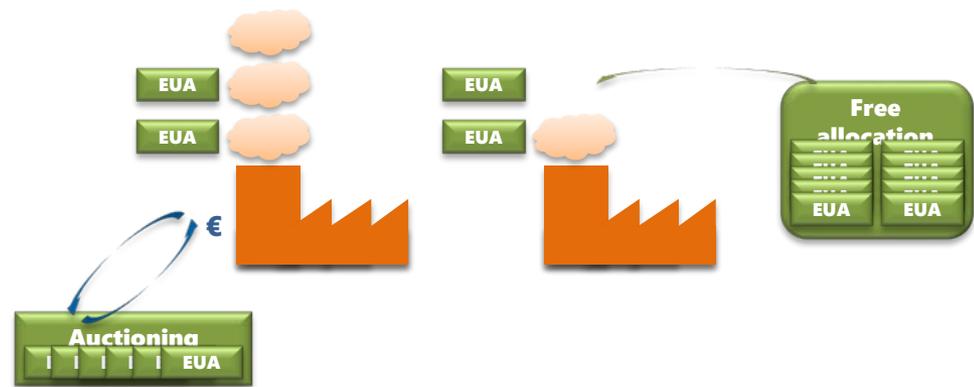
- The cap is reduced annually by a linear reduction factor of 1.74% for the duration of the current trading period
- In phase 4 (2021-2030), the pace of emission reductions will increase: the linear reduction factor will reduce the cap by 2.2% annually

Environmental impact

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# ALLOCATION



- Match allocation methods to policy objectives, in a transparent way Fairness and trust
- Define eligibility and method for free allocation and balance with auctions over time
- Define treatment of entrants, closures, and removals
- Contributes to price stability, environmental impact, fairness and trust, protecting competitiveness of industry and acceptance

# EU ETS AND FREE ALLOCATION

- Among key changes from Phase 2 to Phase 3
  - Move from grandfathering to benchmarks
    - Awards early action
    - Prevents perverse incentives
  - No more free allocation for electricity production
    - Avoids windfall profits
    - Incentivises emission reductions
- For Phase 4
  - Benchmarks will be updated twice
  - Allocation changes will be based on production and no longer on capacity

Fairness and trust

Environmental impact

# CARBON LEAKAGE IN EU ETS

Protecting  
competitiveness

Acceptance

- “Carbon Leakage” is the risk to see GHG industrial emissions rise outside EU-ETS, in countries where industry has less carbon constraints
- For Phase 3, a list of products ‘deemed to be exposed to a significant risk of CL’ was defined, for which free allocation is higher
- For non-CL sectors, free allocation is reduced based on a CL factor:
  - In Phase 3, the CL factor reduces from 80% in 2013 to 30% in 2020
  - In Phase 4, the CL factor is expected to decrease from 30% to 0 in 2030
- The Carbon Leakage List was regularly revised during Phase 3. A new version is currently being finalized, applicable for Phase 4.

CL: Carbon Leakage

GHG: greenhouse gas

Non-CL sectors: sectors not deemed to be exposed to a significant risk of CL

# AUCTIONING IN EU ETS

- In Phase 3, auctioning has replaced free allocation as the main method for allocating allowances to all EU ETS sectors except aviation: all allowances not allocated free of charge must be auctioned, which **incentivises emission reductions**
- The auction share is 57% of allowances
- **Frequent auctioning** (*several times a week*)
- **Revenue recycling** (*see other presentation*)

Environmental impact

Price stability

Acceptance

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# COMPLIANCE

- Aim: ensure environmental integrity , maintain fairness and trust and contribute to acceptance
- Ensure a robust infrastructure
  - Identify and manage regulated entities
  - Manage emission reporting
  - Design and implement penalty and enforcement approach
- Compliance is based on 'MRVA'
  - Monitoring: knowing how many tonnes are emitted
  - Reporting: informing the responsible authorities
  - Verification: controlling to safeguard confidence
  - Accreditation: ensuring quality of verification



# COMPLIANCE IN EU ETS

- No or insufficient surrendering of allowances should entail high penalties (*in the EU ETS, the fine is EUR 100 €/t<sub>CO2e</sub> not covered by surrendered allowances + 'make good' provision*)
- The EU ETS has a very high compliance rate: each year around 99% of the emissions are covered by the required number of allowances on time.
- **Solid MRV system with 3<sup>rd</sup> party verification**, strengthened over time:
  - 2007 MRG
  - 2012 MRR and AVR
  - On-going review for Phase 4

Environmental integrity

Fairness and trust

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# MARKET

## ■ Market design

Market liquidity

- Ensure sufficient market size (*geographical scope, linking*) and stability, avoid over-supply
- Contributes to market liquidity, environmental integrity, price stability

## ■ Market oversight

- Define auctioning rules and platforms
- Establish and oversee ETS registry
- Regulate and oversee the market for ETS emissions units (*VAT/tax rules, prevent fraud, define mechanisms to show prices and market volume*)
- Contributes to price stability, market integrity

# MEASURES TO REDUCE ALLOWANCE SURPLUS IN EU ETS

- 2008 economic crisis and banking resulted in substantial over-allocation (*almost 2 billion allowances*)
- Backloading (*temporary measure*)
  - EUAs reduced on a one-off basis
  - 900 million EUAs intended for auktioning were postponed from 2014-2016 to 2019-2020
- Market Stability Reserve (MSR)
  - Structural measure
  - Aim is to neutralise negative impacts of existing EUA surplus, and improve system's resilience to future shocks
  - In 2019: the 900 million back-loaded EUAs will be transferred to reserve rather than auctioned
  - In Phase 4, « automatic » adjustment of auction volumes:
    - If surplus > 833 million EUAs: 12% of surplus will be withheld from auctions
    - If surplus < 400 million EUAs, up to 100 million EUAs returned to auctions

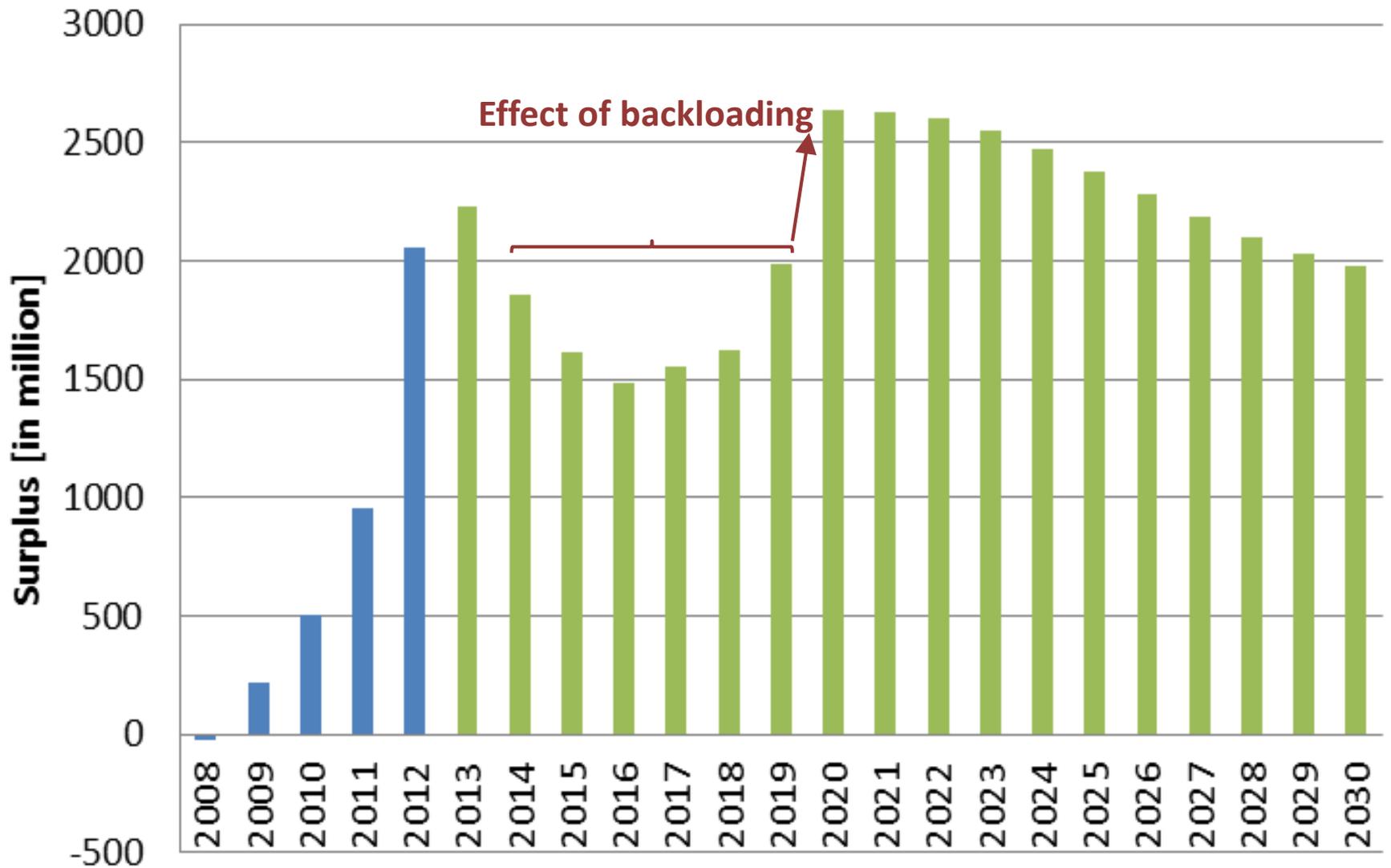
Price stability?

Environmental impact?

Price stability

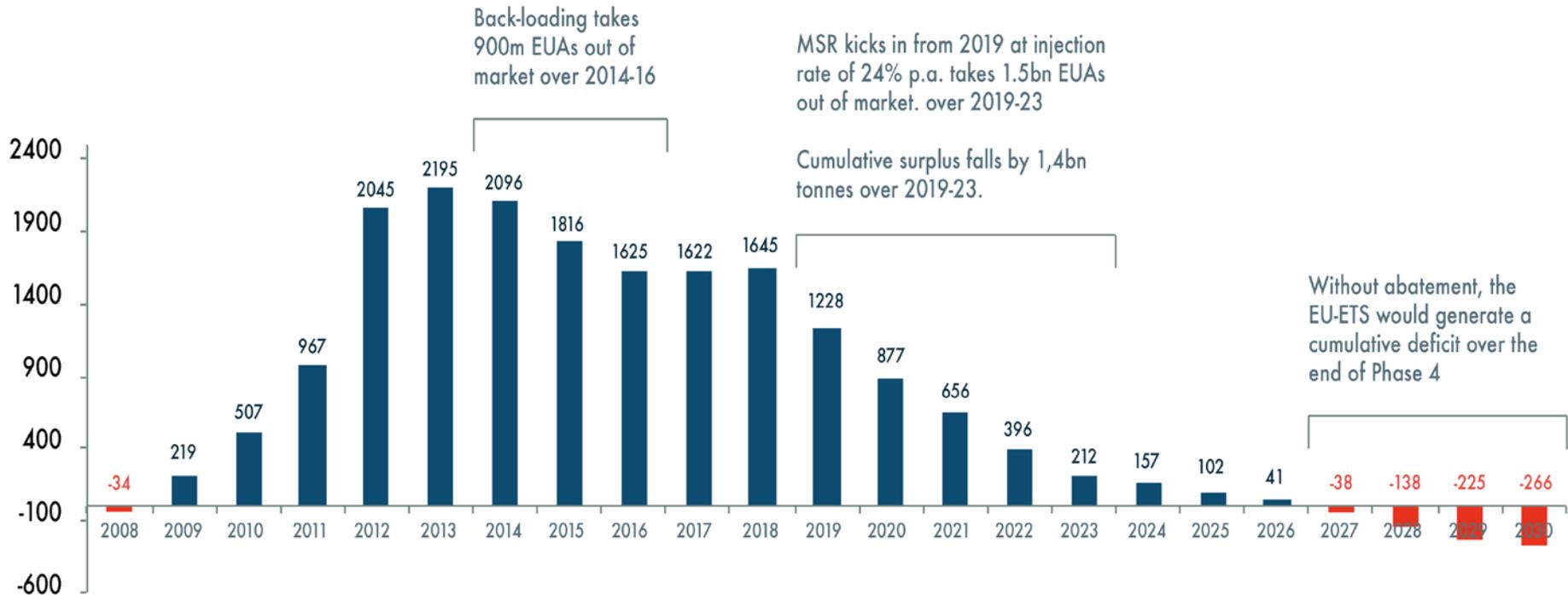
Environmental impact

# IMPACT OF ECONOMIC CRISIS AND BANKING ON ALLOWANCE SUPPLY



# EFFECT OF MSR ON MARKET SURPLUS

CTI base-case EU-ETS total system cumulative deficit/surplus, 2008-30, EUAs/EUAs (m)



Source: European Commission, EU Council, CTI research estimates

# RECENT CARBON PRICES

## European carbon credits price

Euros per tonne



Source: Thomson Reuters

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# EU ETS REGISTRY SYSTEM

- 2012: national registries merged into EUTL
- The registry is a **centralized database** keeping track of the ownership of allowances in the same way as a banking system keeps track of the ownership of money
- The EUTL automatically **checks**, **records**, and **authorises** all transactions that take place.
- This verification will ensure that any transfer of allowances from one account to another is consistent with the EU ETS rules.

Market integrity

# EUTL – EUROPEAN UNION TRANSACTION LOG

CLIMATE ACTION  
European Union Transaction Log

EUROPA > European Commission > Environment > Climate Change > European Union Transaction Log

Welcome

ETS  
ESD  
Fees

Operator Holding Account - Search Criteria

National Administrator: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia

Main Activity Type: All, None

Compliance Status: A, B

Account Holder Name:   
Installation/Aircraft ID:   
Installation Name/Aircraft Operator Code\*:   
Permit/Plan ID:

Search Export

Operator Holding Account - Search Result

National Administrator	Account Type	Account Holder Name	Installation/Aircraft ID	Installation Name/Aircraft Operator Code*	Company Registration No.	Permit/Plan ID	Permit/Plan Date	Main Activity Type	Latest Compliance Code	Options
Austria	Aircraft Operator Account	Jettalliance Flugbetriebs GmbH	200103	27702	FN 203001g	BMLFUW-UW.1.3.2/0304-V/4/2009	2010-01-01	Aircraft operator activities	C	<a href="#">Details - Current Phase</a> <a href="#">Details - All Phases</a> <a href="#">Details - Select Phases</a>
Austria	Aircraft Operator Account	Glock GmbH	200108	194	FN64142b	BMLFUW-UW.1.3.2/0084-V/4/2010	2010-01-01	Aircraft operator activities	A	<a href="#">Details - Current Phase</a> <a href="#">Details - All Phases</a> <a href="#">Details - Select Phases</a>

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A participant in the EU ETS must open an account in the Union Registry.

CLIMATE ACTION  
European Union Transaction Log

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Operator Holding Account Information

General Information

National Administrator	Account Type	Account Holder Name	Installation ID	Company Registration No.	Account Status
Austria	100-Holding Account	AGRANA Starke GmbH	47	FN 252477 s	open

Details on Contact Information

Type	Name	Main Address Line	Secondary Address Line	Postal Code	City	Country
Account holder	AGRANA Starke GmbH	Friedrich-Wilhelm-Rastfelsen-Platz 1		1020	Wien	Austria

Installation Information

General Information

Installation ID	Installation Name	Permit ID	Permit Entry Date	Permit Expiry/Revocation Date	Subsidiary Company	Parent Company	E-PRTR Identification
47	AGRANA Gmnd	ILE106	2005-01-26				

Address Information

Main Address Line	Secondary Address Line	Postal Code	City	Country	Latitude	Longitude	Main Activity
Conradstrasse 7		3903	Gmund	AT			20.Construction of tasks

Contact Information

Name	Main Address Line	Secondary Address Line	Postal Code	City	Country

Compliance Information

EU ETS Phase	Year	Allowances in Allocation	Verified Emissions	Units Surrendered	Cumulative Surrendered Units**	Cumulative Verified Emissions***	Compliance Code	Options
2013-2020	2013	26705	34883	34883	34883	34883	A	<a href="#">History</a>
2013-2020	2014	27505	34693	34693	69576	69576	A	<a href="#">History</a>
2013-2020	2015	27245	35812	35812	105388	105388	A	<a href="#">History</a>
2013-2020	2016	26779	37500	37500	142888	142888	A	<a href="#">History</a>
2013-2020	2017	25526	39282	39282	181970	181970	A	<a href="#">History</a> <a href="#">Details on Surrendered Units</a>
2013-2020	2018	24384						<a href="#">History</a>
2013-2020	2019	23455						<a href="#">History</a>
2013-2020	2020	22541						<a href="#">History</a>

\* Verified Emissions entered/updated after deadline of EU ETS Phase Year  
\*\* Total allowances, ERUs and CERs surrendered in current EU ETS Phase before 30 April of Phase Year  
\*\*\* In current EU ETS Phase before 30 April of Phase Year  
\*\*\*\* Allowances for Operators under Article 10c of ETS Directive  
\*\*\*\*\* Allowances for Operators from New Entrant Reserve (NER)  
Verified Emissions for 2013 of aircraft operators are not taken into account while calculating the Compliance Status for 2013 on 1st of May 2014

Compliance Code Explanation

Compliance Code	Compliance Code Explanation
A	The number of allowances and ERUs/CERs surrendered by 30 April is greater than or equal to verified emissions
B	The number of allowances and ERUs/CERs surrendered by 30 April is lower than verified emissions
C	Verified emissions were not entered until 30 April
D	Verified emissions were corrected by competent authority after 30 April of year X. The competent authority of the Member State decided that the installation is not in compliance for year X-1
E	Verified emissions were corrected by competent authority after 30 April of year X. The competent authority of the Member State decided that the installation is in compliance for year X-1
X	Entering verified emissions and/or surrendering was impossible until 30 April due to the allowance surrender process and/or verified emissions update process being suspended for the Member State's registry

**Verified emissions are published** in April each year

Price stability

Fairness and trust

Acceptance



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# EVALUATE AND IMPROVE OVER TIME

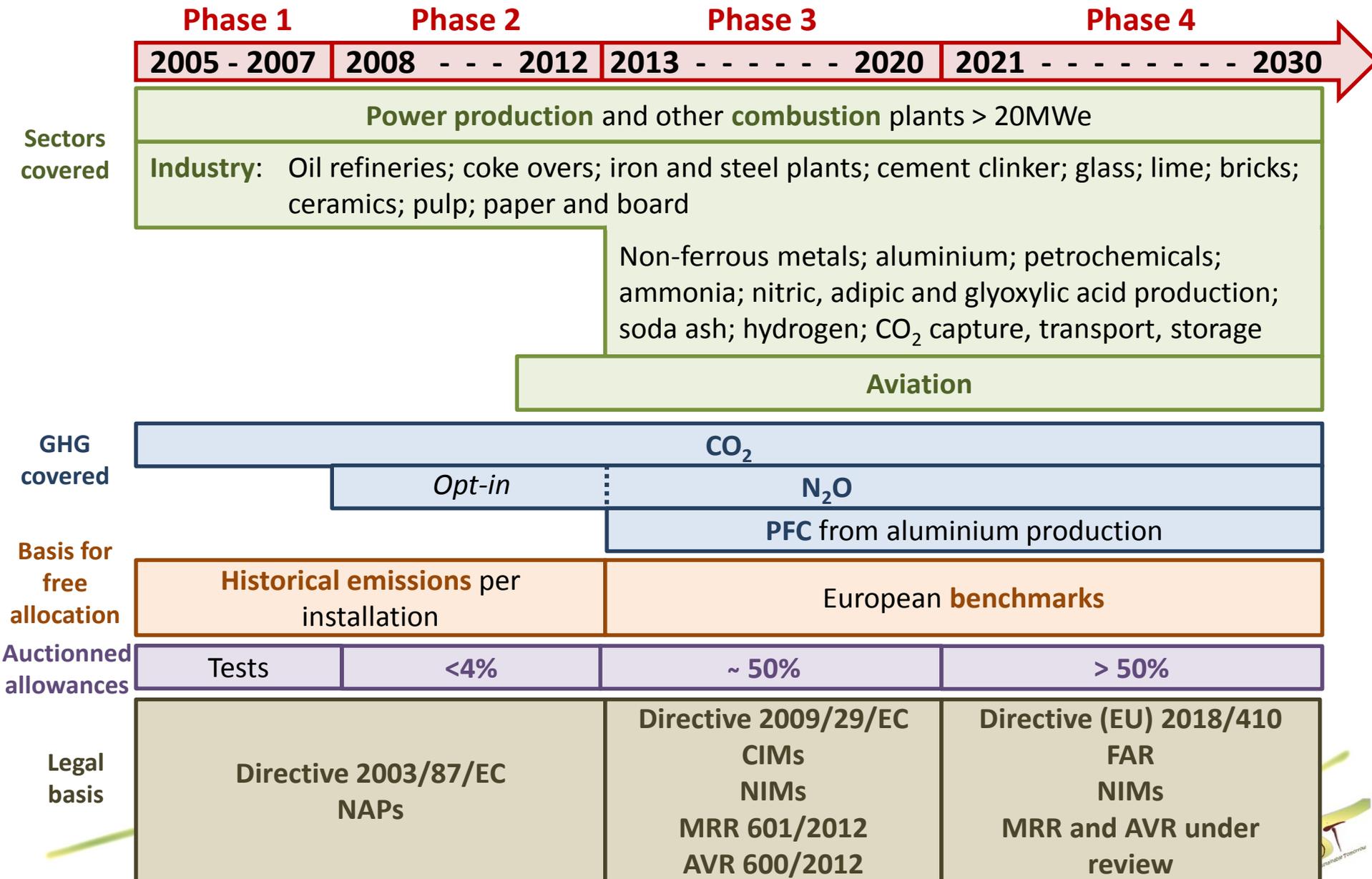
- Decide on the process and scope of reviews
- Evaluate the ETS to support review
- Phasing may ease burden on institutions and sectors
- Providing a predictable review process and schedule can reduce policy uncertainty
- Good governance and stakeholder engagement processes are key to successful implementation

Fairness and trust

Environmental impact

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# EVOLUTION OF THE EU-ETS OVER TIME



# KEY LESSONS LEARNED ABOUT (IN)EFFECTIVE DESIGN IN EU ETS

- The **environmental impact** of the ETS is **influenced by many design choices**: definition of the cap (*reduction over time*), strictness in free allocation (*benchmarks, no allocation to electricity*), amount of auctioning, market tools to limit risks of over-supply (*MSR*),...
- **Transparency** on defined rules and on results (*emissions, exchanged volumes*), **fairness and acceptance** are essential to ensure long-term predictability and contribute to market stability
- Acceptance challenge may lead to less ‘effective’ choices (*reduced constraints with CL, free allocation*), but **acceptance is crucial** for the system to be politically decided and implemented
- **Phasing may help** to progressively move towards more effective measures

# THANK YOU FOR YOUR ATTENTION



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