

# Emissions trading in the EU

Emissions trading (EU ETS) is a market instrument applied by the EU in an effort to reduce the emission of greenhouse gases and achieve its climate objective.

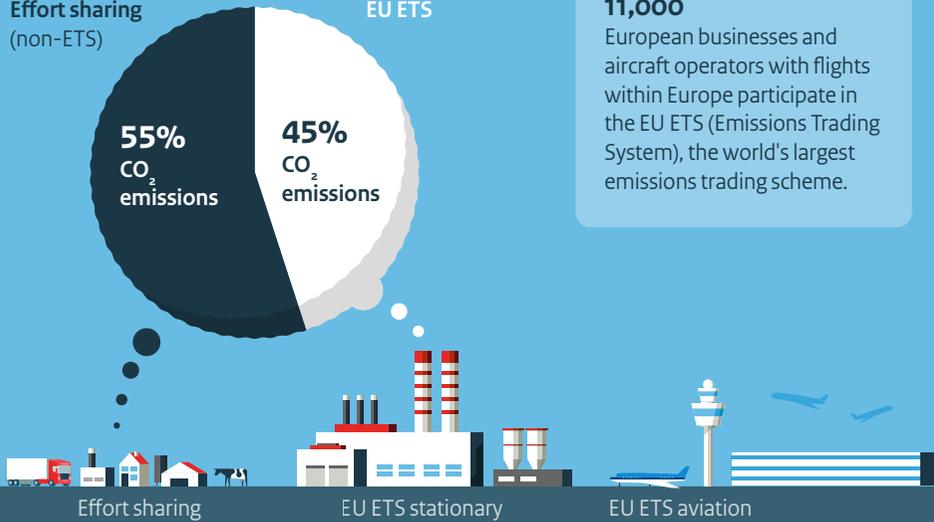
There are two emissions trading schemes:

Effort sharing  
(non-ETS)

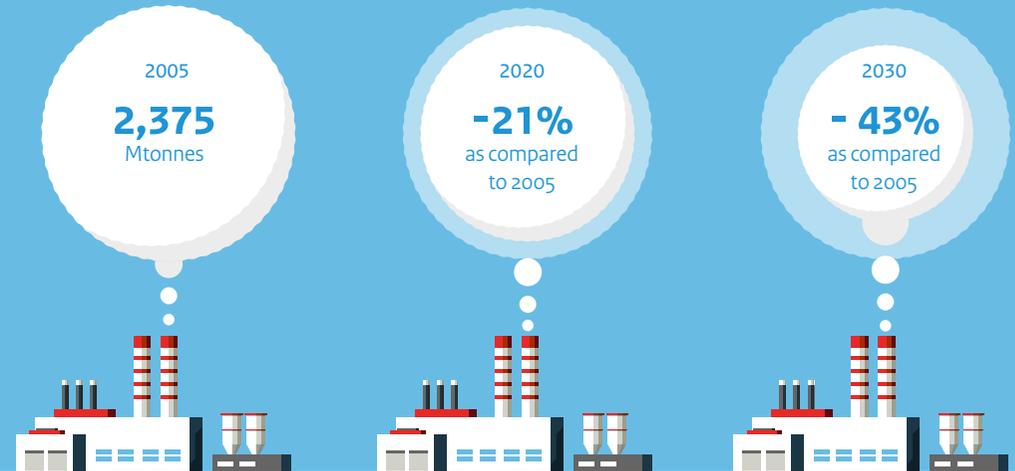
EU ETS

**11,000**

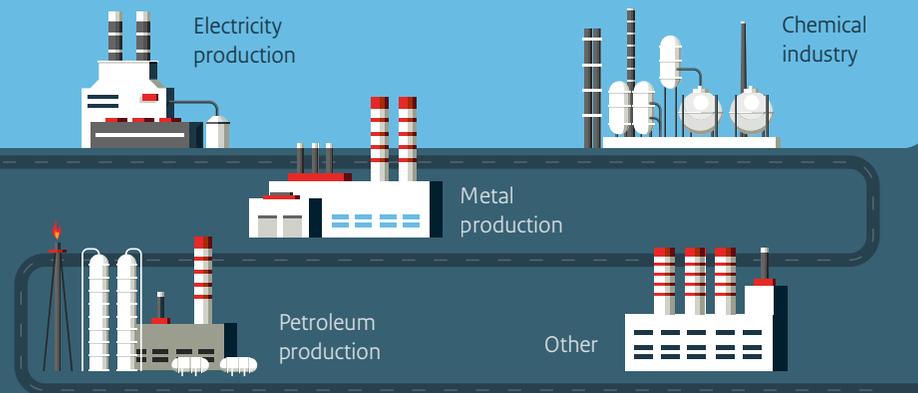
European businesses and aircraft operators with flights within Europe participate in the EU ETS (Emissions Trading System), the world's largest emissions trading scheme.



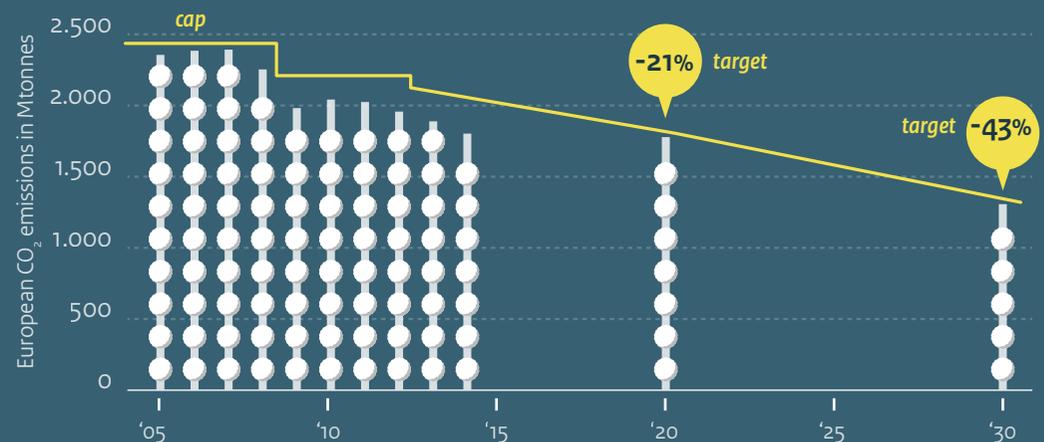
EU ETS stationary was implemented in an effort to reduce CO<sub>2</sub> emissions



Industry sectors participating in EU ETS stationary



An annually diminishing threshold for CO<sub>2</sub> emissions (cap) has been set on the basis of the reduction targets



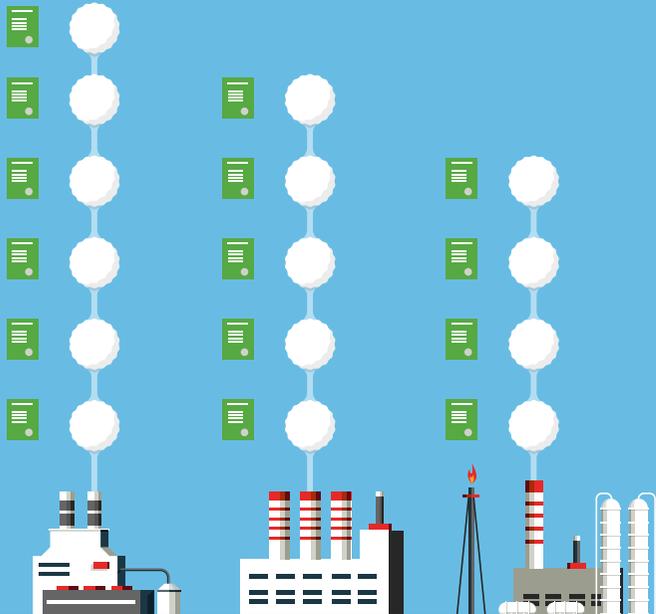
# How does the EU ETS work?

Emissions trading is the trade in emission allowances, which grant the right to emit a specific quantity of CO<sub>2</sub>. The EU ETS operates on the 'cap and trade' principle.

## Emission allowance

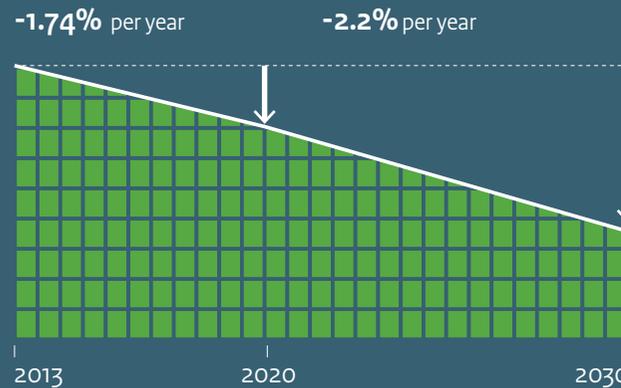
An emission allowance offers the right to emit 1 tonne of CO<sub>2</sub>. All EU ETS companies must surrender one emission allowance for each tonne of CO<sub>2</sub> they have emitted over the course of the year.

emission allowance  1 tonne CO<sub>2</sub>

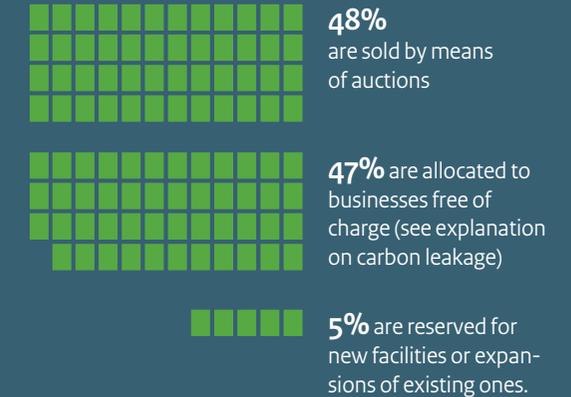


Within the EU ETS, a maximum number of emission allowances is available; this amount equals the total allowable volume of CO<sub>2</sub> emissions, or cap.

CO<sub>2</sub> emissions are reduced by lowering the cap.



Allowances below the cap for the period 2013-2020 can be broken down as follows:

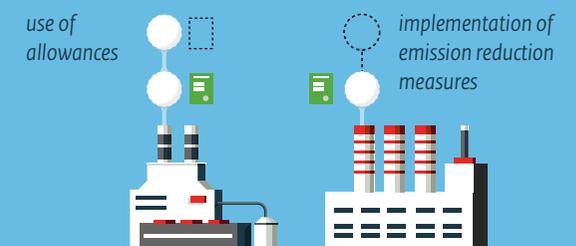
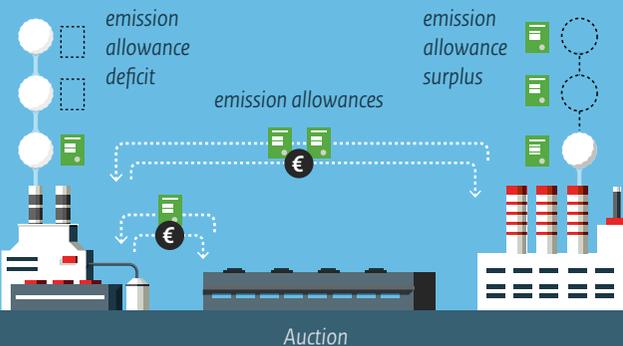


## Trading consists of emission allowance transactions

Companies with insufficient allowances must purchase allowances to cover their deficit.

Companies with lower CO<sub>2</sub> emissions may sell their surplus allowances.

The emission allowances market operates on a supply and demand basis, effectively attaching a price tag to all CO<sub>2</sub> emissions. Businesses try to choose the most cost-effective option:



This system, whereby each company weighs the relevant pros and cons, ensures that the cheapest CO<sub>2</sub> reduction measures are taken first.

# EU ETS in the Netherlands

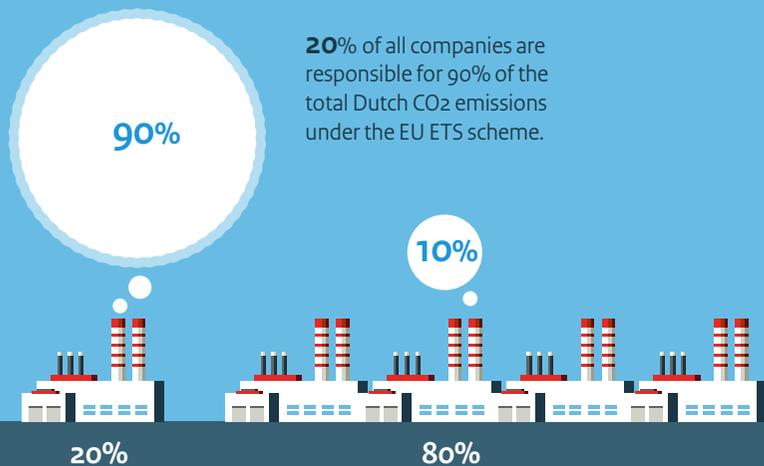
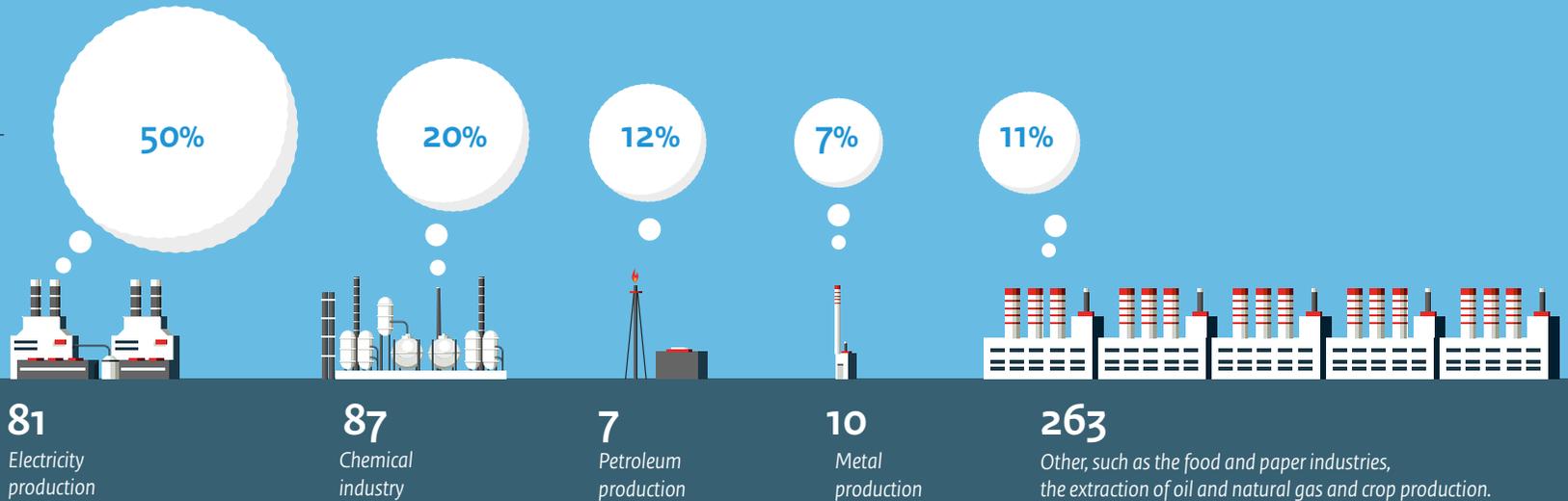
The Ministry of Infrastructure and the Environment is responsible for implementing EU ETS regulations in the Netherlands. The Dutch Emissions Authority is responsible for policy implementation.

Total CO<sub>2</sub> emissions in the Netherlands under the EU ETS scheme (reference year: 2014)

**89 Mtonnes CO<sub>2</sub>**

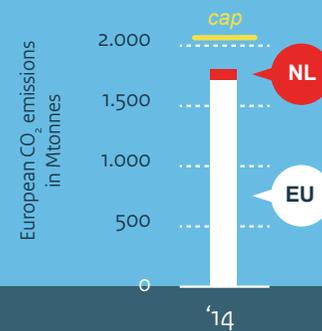
Total number of EU ETS participants in the Netherlands:

**448 Businesses**



## CO<sub>2</sub> emissions by Dutch companies

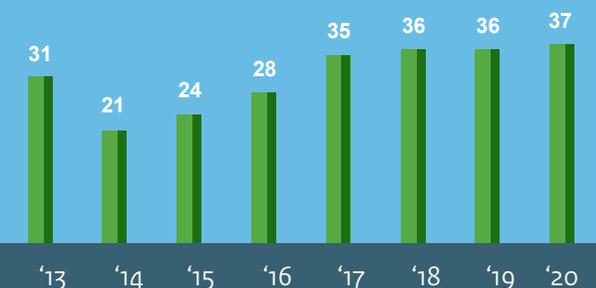
In 2014, Dutch companies were responsible for 5% of the total CO<sub>2</sub> emissions under the EU ETS scheme.



## Auction of emission allowances

The government oversees the auction of emission allowances. The resulting revenues go towards the state budget.

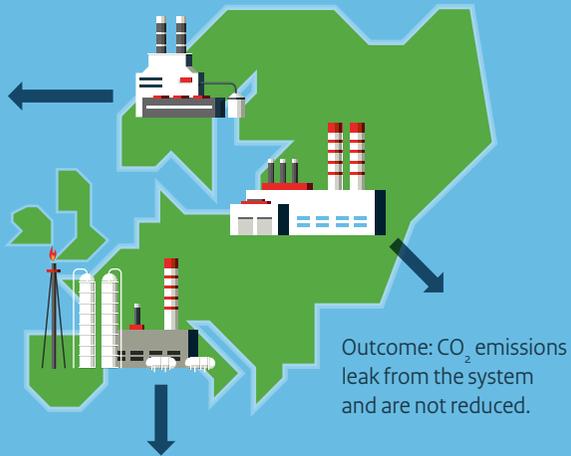
Number of Dutch emission allowances (EUA) designated for auction by the European Commission in millions



# Carbon leakage

## What is carbon leakage?

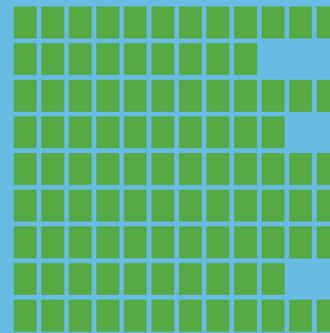
Companies that are incapable of passing on the additional CO<sub>2</sub> costs to their customers relocate their activities and investments to non-EU countries due to their competitive disadvantage to companies outside the EU.



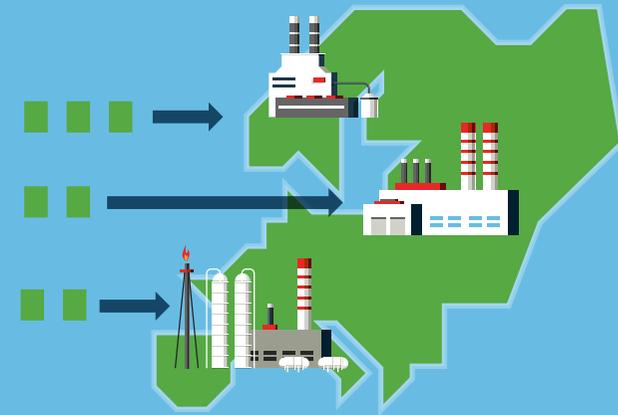
## Preventing carbon leakage

Companies that are susceptible to carbon leakage are allocated more free emission allowances than those that are less vulnerable. This mechanism helps reduce the portion of EU ETS participation costs that cannot be passed on and eliminates the incentive to relocate to countries that are not taking part in the EU ETS scheme.

Free emission allowances



The European Commission compiles the list of sectors facing a significant risk of carbon leakage once every five years, and may supplement this list annually.



## Allocation of free emission allowances

Activities deemed prone to carbon leakage by the European Commission are allocated free emission allowances on the basis of the following formula:



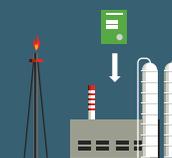
Historical production, heat and fuel data.

Standard reflecting CO<sub>2</sub> emissions of the 10% most energy-efficient companies in Europe.

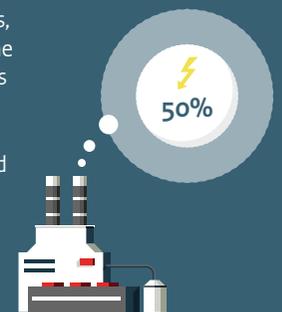
Ensures that the total number of allocations does not exceed the total number of free emission allowances.



Changes within companies may result in a rise or decline in the allocation of free allowances.



Electricity producers, responsible for some 50% of all emissions under EU ETS stationary, can pass on the CO<sub>2</sub> costs and are not allocated free emission allowances.



# Strengthening EU ETS

As a result of the current surplus of emission allowances, the price of CO<sub>2</sub> emissions is still not high enough to stimulate companies to take reduction measures within the desired time frame.

In addition to fast-tracking the lowering of the cap, the European Commission is also taking other additional measures to reduce the allowance surplus.

## One-off: Backloading

Emission allowances are reduced on a one-off basis by including a portion of the emission allowances to be auctioned in the MSR.



900 million emission allowances, intended for auctioning, to be set apart.

## Structural: Market stability reserve (MSR)

The MSR is designed to help buffer major fluctuations in the price of emission allowances.



1 As from 2019 the supply of allowances will be reduced annually if the surplus is too large (833 million allowances and more).

This involves setting apart emission allowances that would have been auctioned.

2 In the event of a surplus smaller than 400 million emission allowances, MSR allowances will be returned to the auctions.

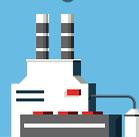
cap

Supply of allowances

2013

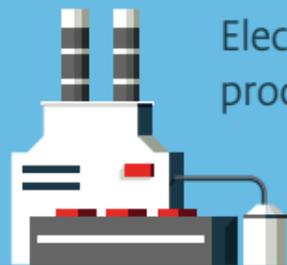
2020

2030

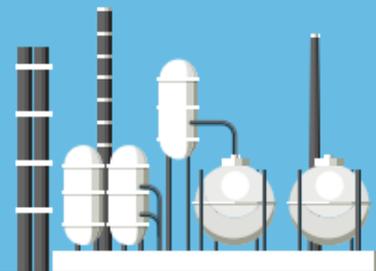


In July 2015, the European Commission issued proposals for further strengthening the EU ETS after 2020.

# Industry sectors participating in EU ETS stationary



Electricity  
production



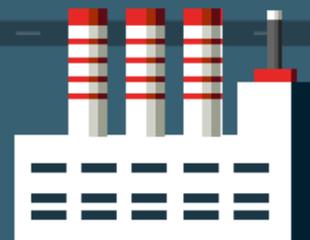
Chemical  
industry



Metal  
production



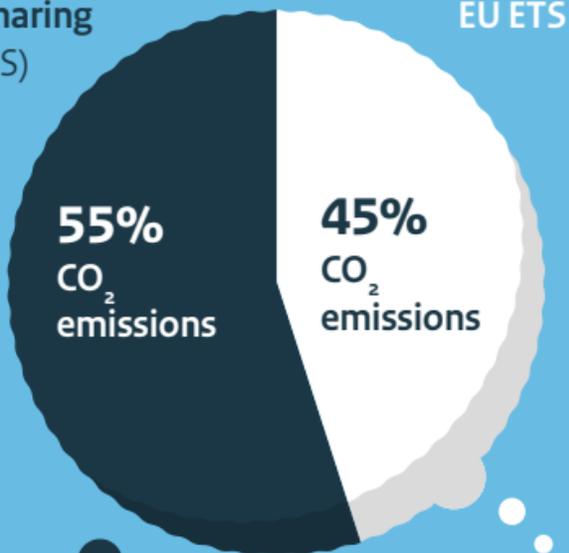
Petroleum  
production



Other

# There are two emissions trading schemes:

Effort sharing  
(non-ETS)



**11,000**

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Effort sharing



EU ETS stationary



EU ETS aviation

# EU ETS stationary was implemented in an effort to reduce CO<sub>2</sub> emissions

2005

**2,375**

Mtonnes

2020

**-21%**

as compared  
to 2005

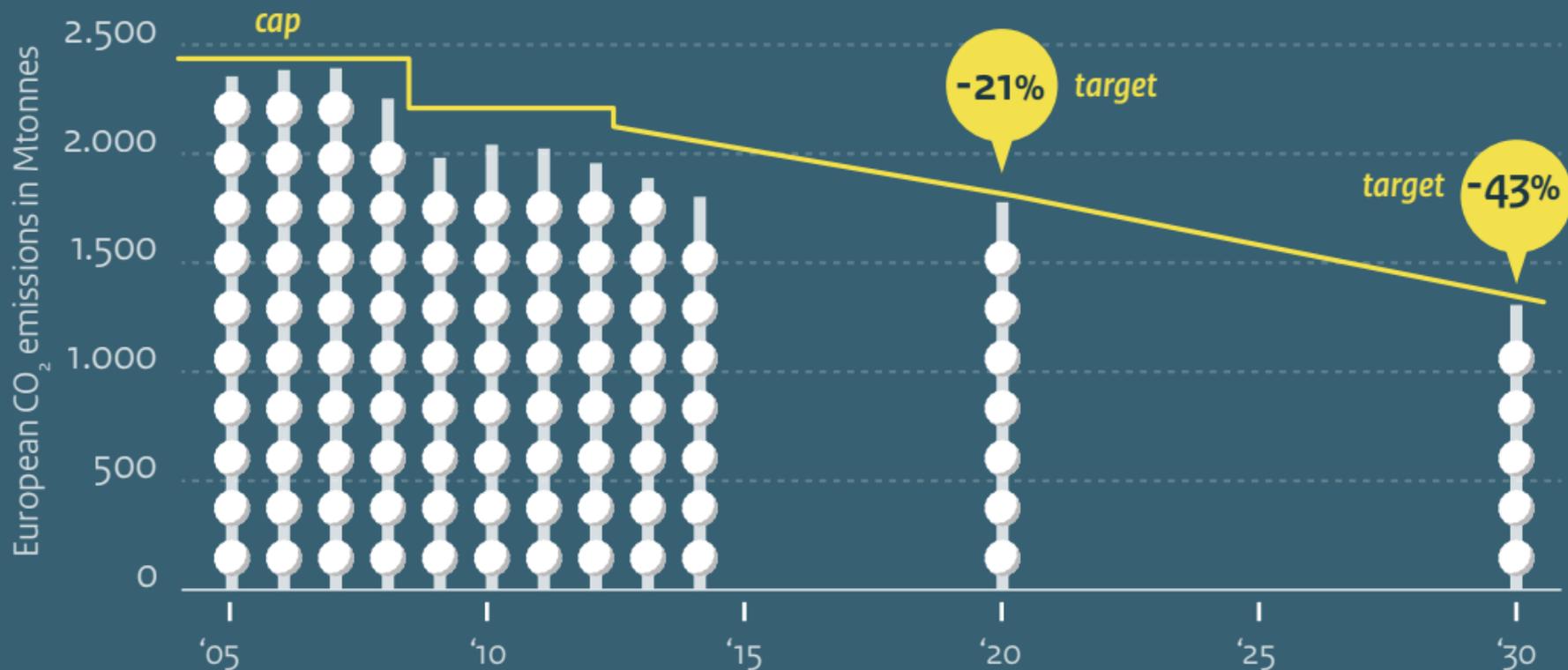
2030

**-43%**

as compared  
to 2005



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# Emission allowance

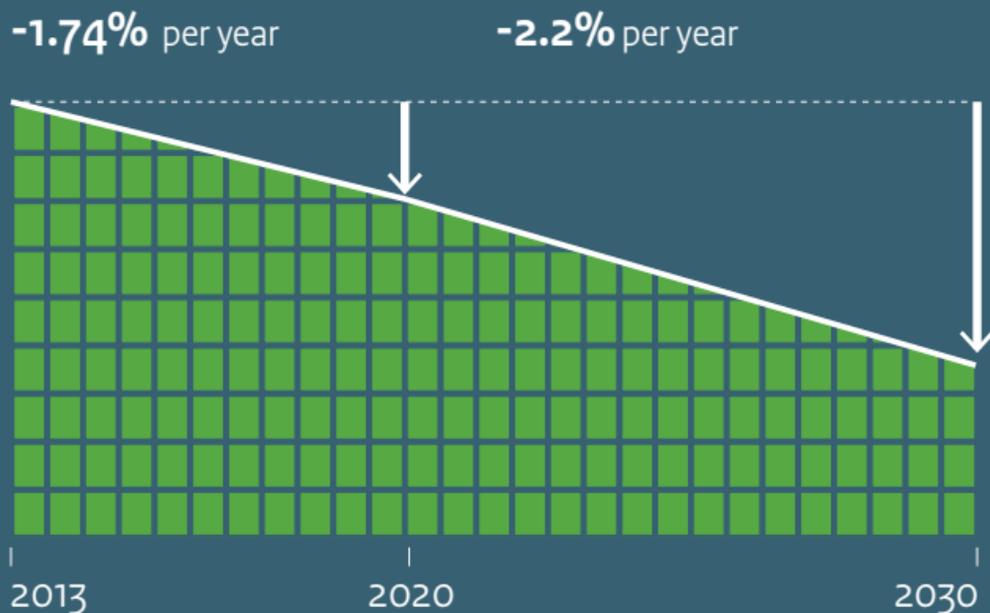
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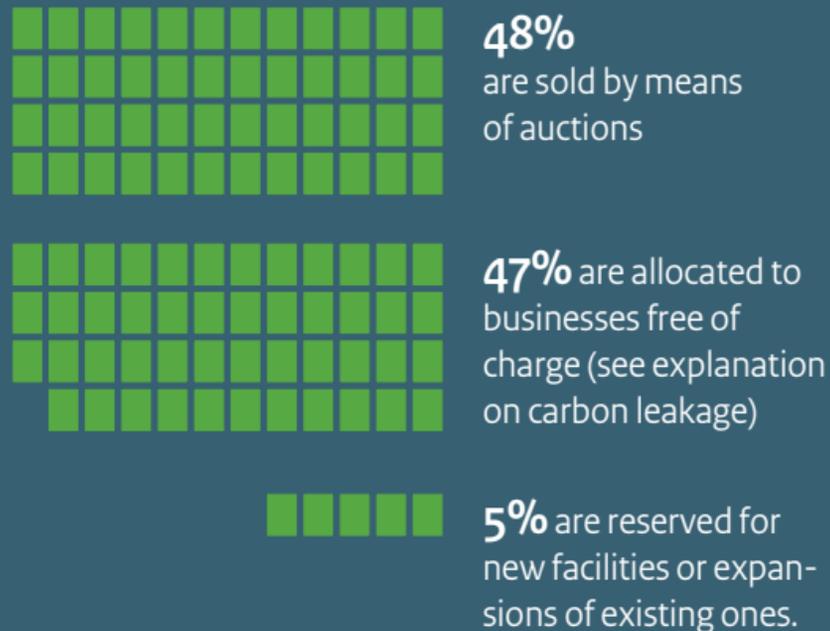


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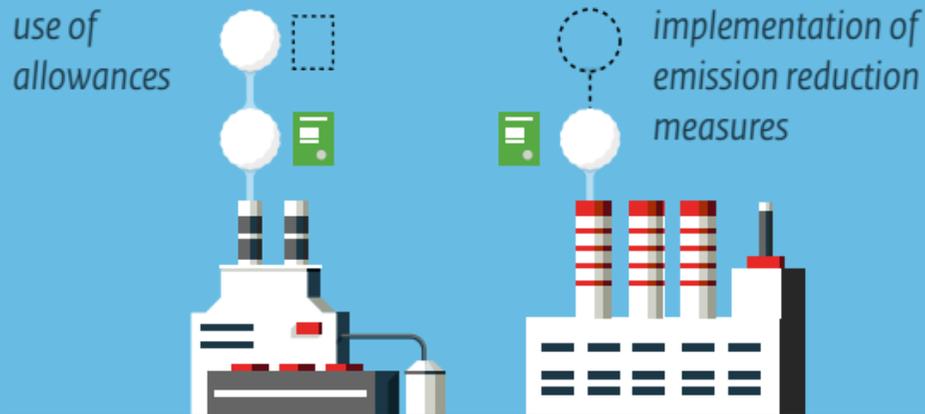
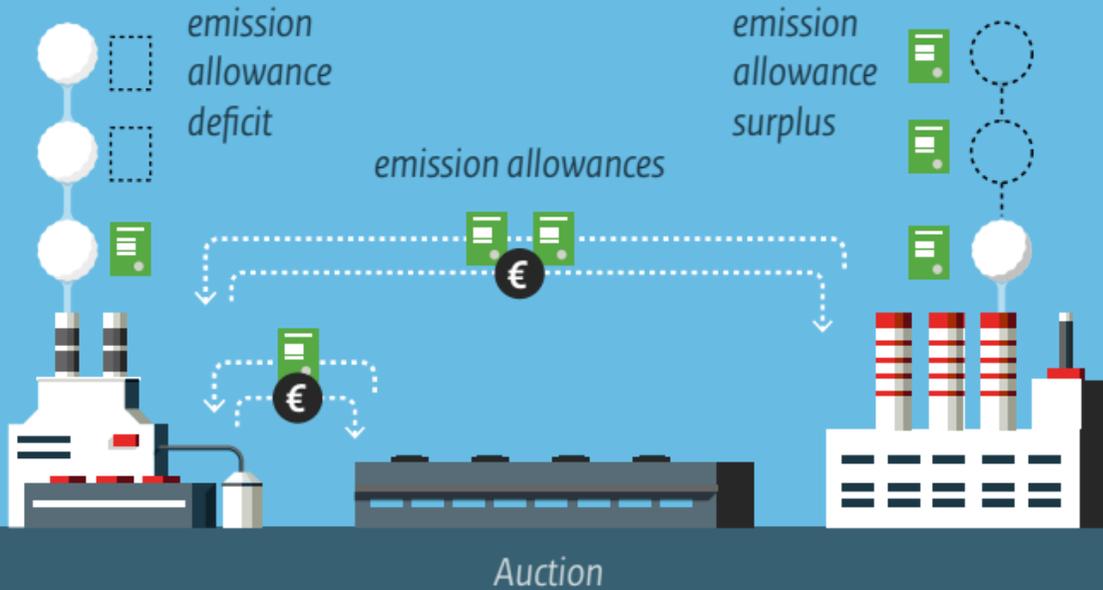


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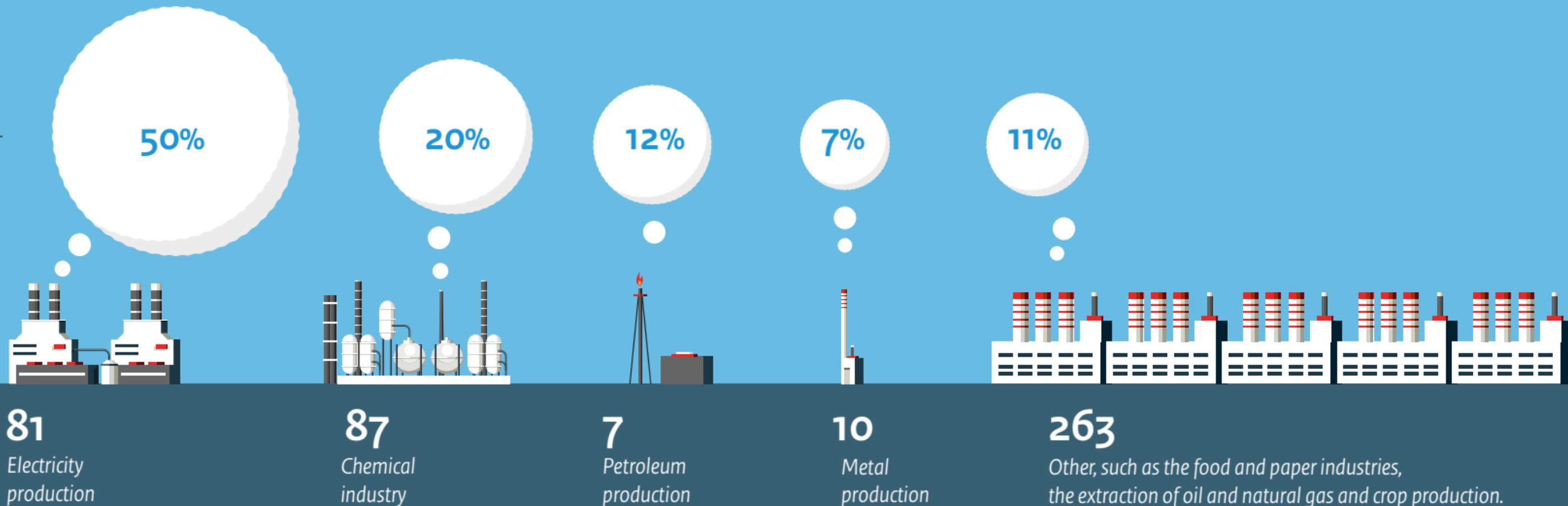
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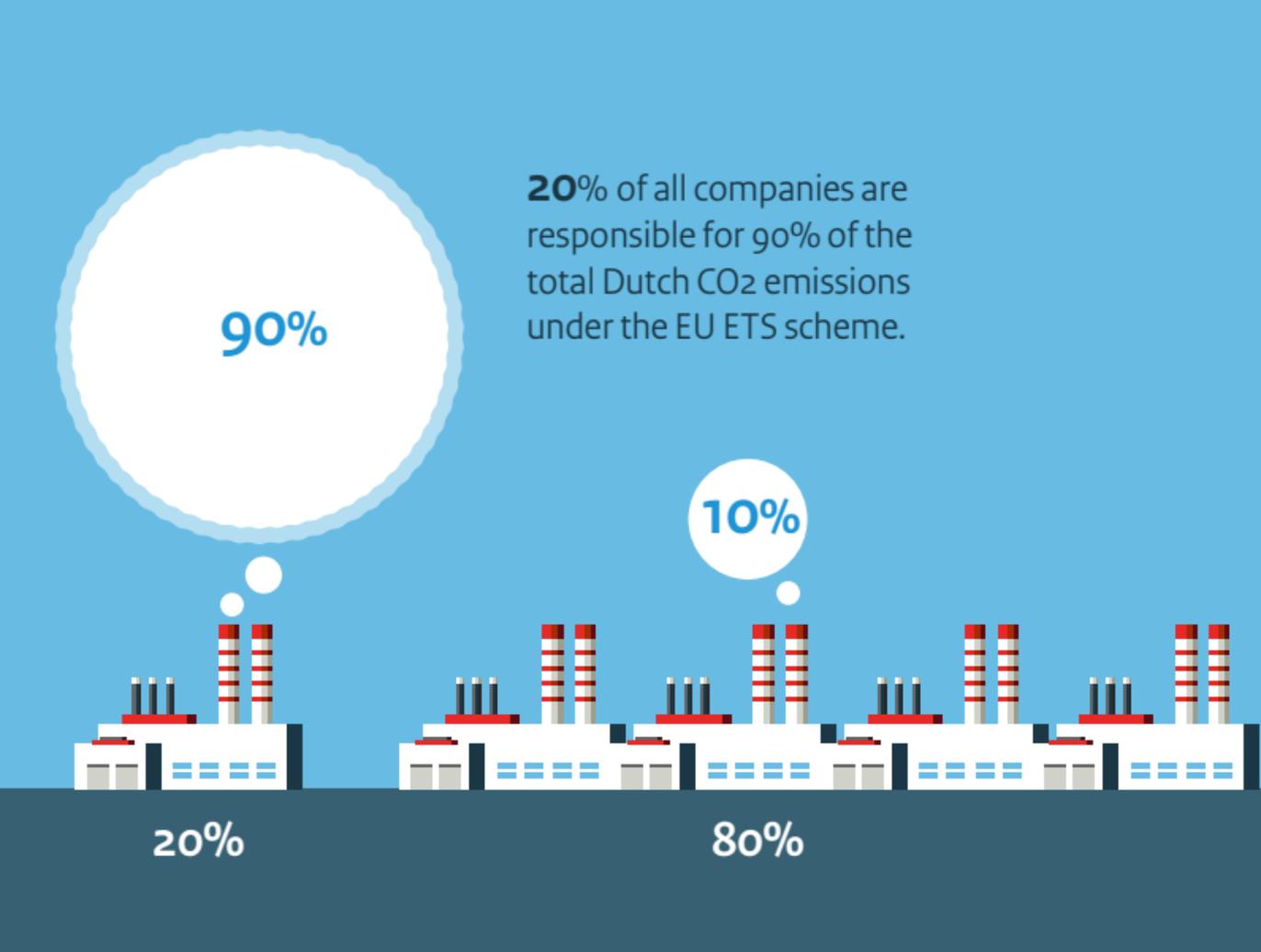
**81**  
Electricity  
production

**87**  
Chemical  
industry

**7**  
Petroleum  
production

**10**  
Metal  
production

**263**  
Other, such as the food and paper industries,  
the extraction of oil and natural gas and crop production.

An infographic on a blue background showing a row of stylized industrial buildings with smokestacks. The buildings are arranged in two groups. The first group on the left is labeled '20%' and has a large white thought bubble above it containing '90%'. The second group on the right is labeled '80%' and has a smaller white thought bubble above it containing '10%'.

90%

**20%** of all companies are responsible for 90% of the total Dutch CO<sub>2</sub> emissions under the EU ETS scheme.

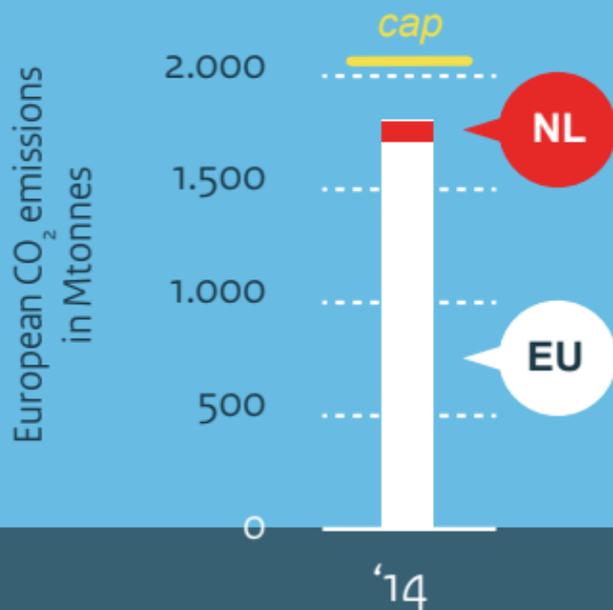
10%

20%

80%

# CO<sub>2</sub> emissions by Dutch companies

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*Number of Dutch emission allowances (EUA) designated for auction by the European Commission in millions*

