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EU ETS that enables necessary industry transformation

WORKING PARTY CLIMATE AND EFFICIENCY

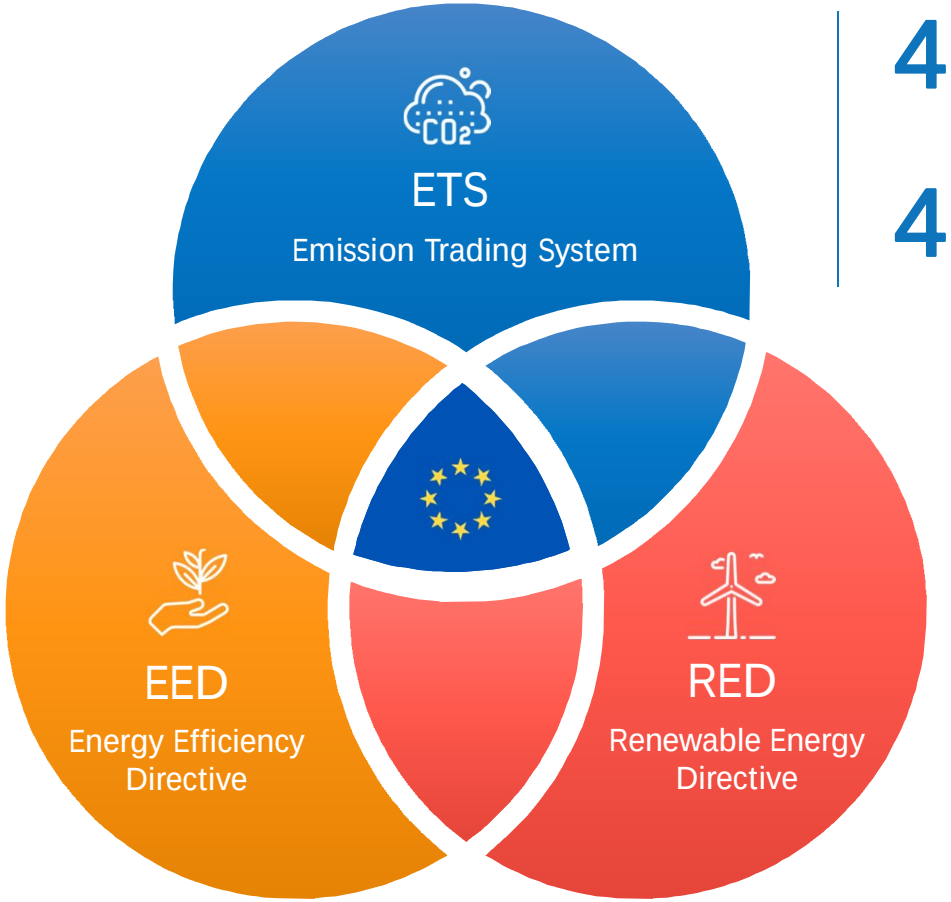
Energy Forum, 31 May 2017

EU climate ambitions level is high

EU CLIMATE AMBITION 2030

40% Greenhouse gasses reduction (compared to 1990)

43% ETS target and 30% non-ETS target (compared to 2005)



Energy Efficiency improvement * (EU – binding) **30%**

27% Renewables by 2030 * (EU – binding; 27% might become 30%)

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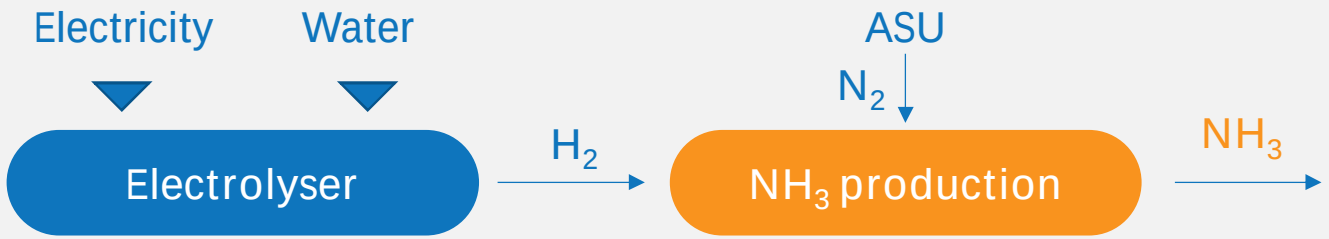
EU climate ambitions level is high, but potentially achievable

These decarbonisation targets are highly ambitious, especially since they are only valid for EU, not for outside EU.

The decarbonisation of European industry is potentially achievable; but how would this decarbonisation of EU industry work?

What if we would electrify industry?

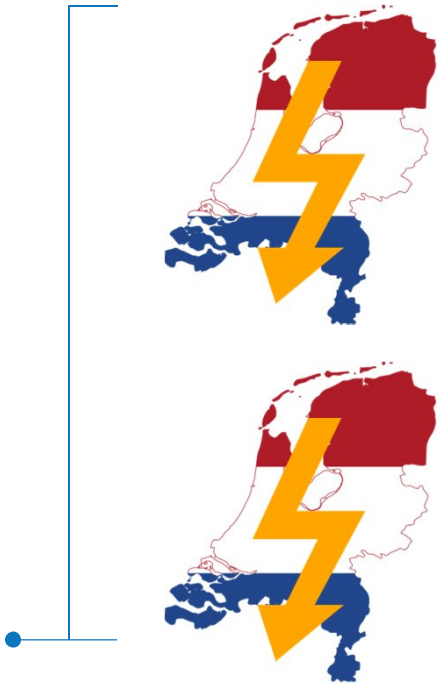
Electrification of EU Ammonia production



EU average 500kta Ammonia plant	Classical gas-based ammonia	Electrified ammonia	Total EU - Electrified ammonia (16.7 Mta)
Energy usage	35 GJ/tNH3	40 GJ/tNH3	
Investment in electrolysers	-	525 M€	17 B€
Additional electricity	-	750 MW	25050 MW (220TWh*) (5010* wind turbines 5 MW)

Source: OCI Nitrogen, March 2017

**at 100% availability*



COMPETITIVENESS CHALLENGES

Natural gas based NH_3 is cheaper

Large additional investment required

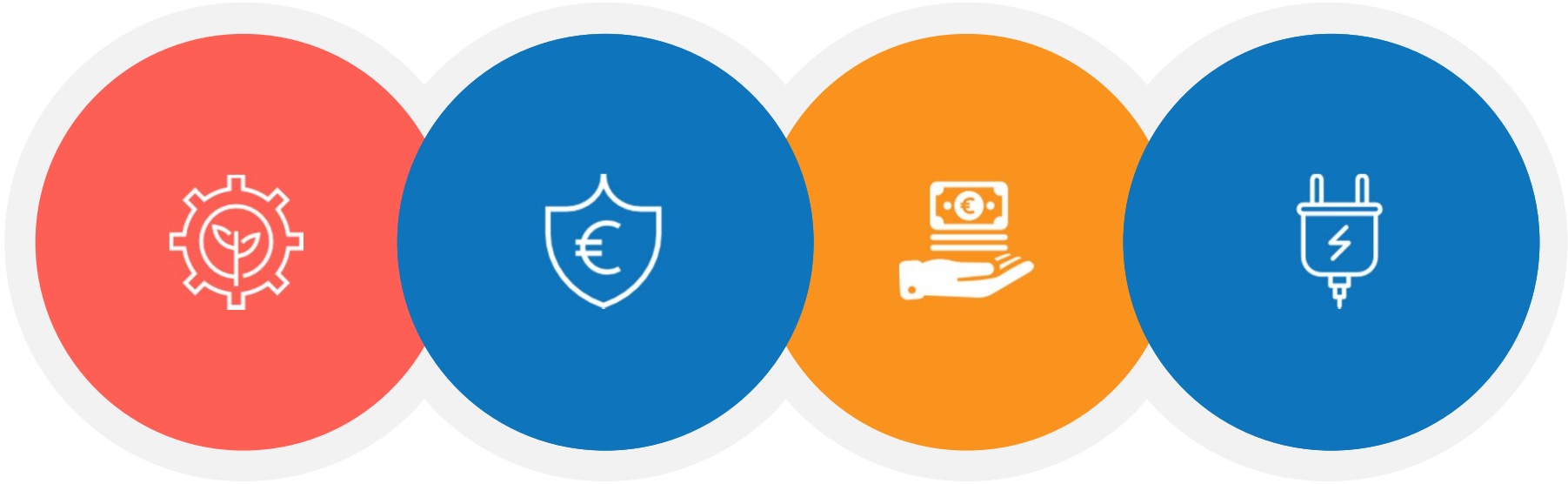
Large amount of electricity required

Transformation needs healthy EU industry to innovate and produce

In current transition phase, EU is faced with this enormous transformation challenge. A.o. following is needed:

High level of innovation in EU industry

Large investments in new production processes



Reliable/ predictable/ rewarding investment climate

High electricity volume (non-intermitted)

Transformation needs healthy EU industry to innovate and produce

EU industry is not only requested to innovate and invest, but should also be/stay the provider of products / solutions that are used down the value chain for climate solutions.

Therefore there needs to be a EU legislative framework that:

01. Helps materializing ambitions by innovation, but also

02. Keeps EU industry competitive with producing products/solutions

EU industrial competitiveness needs a sound EU ETS

One of the main elements to ensure a healthy and competitive EU industry is the sound EU ETS reform.

To mention some of the possible threats on competitiveness of current ETS proposals…

Source: FutureCamp VIK study, April 2017, “Plant-related carbon costs in phase IV of the EU Emissions Trading System”

01 High additional cost due to unrealistic update of the benchmarks

02 Aluminium production plant can face more than 25 M€/y additional cost due to CO2 costs in electricity

03 Heat production costs in Chemicals could increase 11x in 2030 compared to 2015

04 If a sector like Sinter would not be CL exposed, steel production costs would rise with 43%

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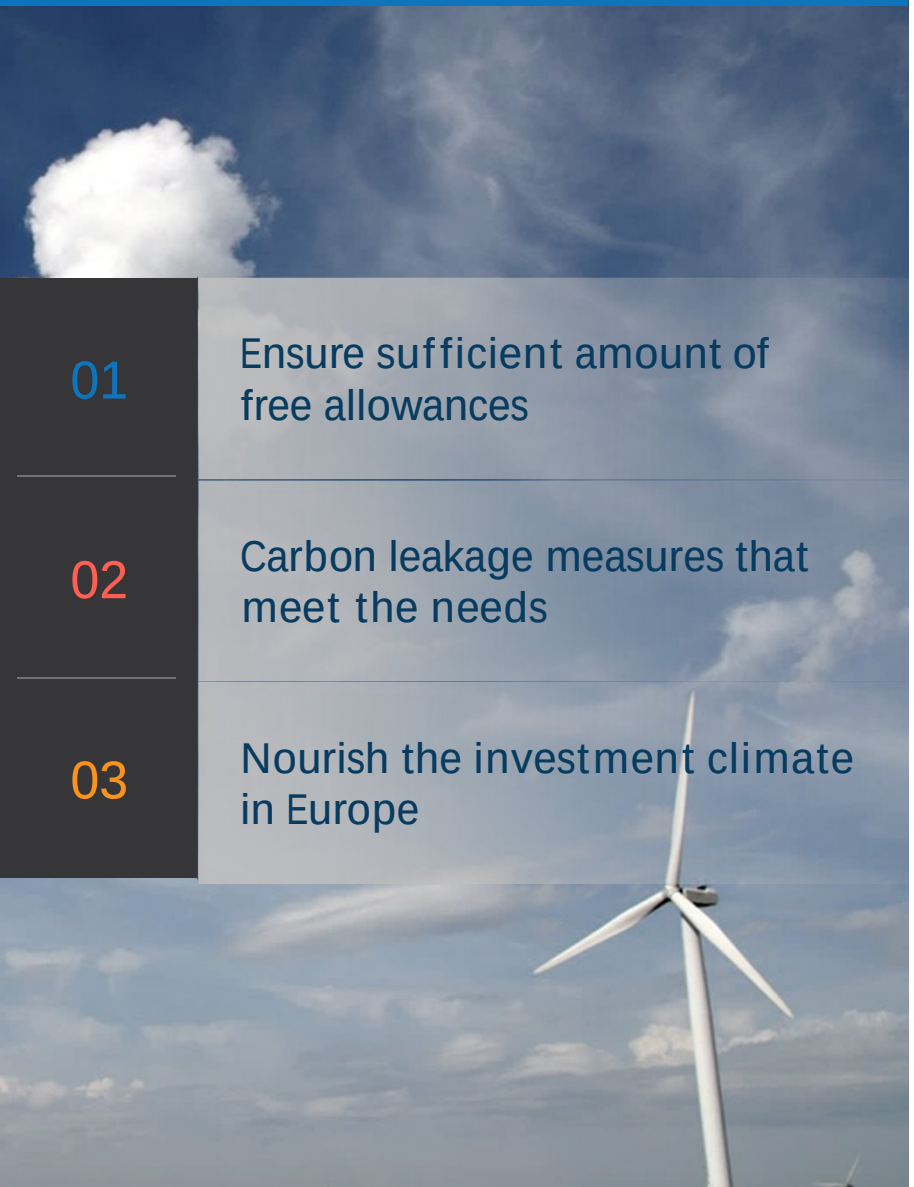
Main elements that need to be reflected in ETS reform



01 Ensure sufficient amount of free allowances

02 Carbon leakage measures that meet the needs

03 Nourish the investment climate in Europe

Enough free allowances need to be made available to avoid undue carbon costs for exposed EU industrial manufacturers. It is essential to compensate for the discrepancy between the costs for EU and non-EU industrial manufacturers.

(allowances share, NER from ph 3)

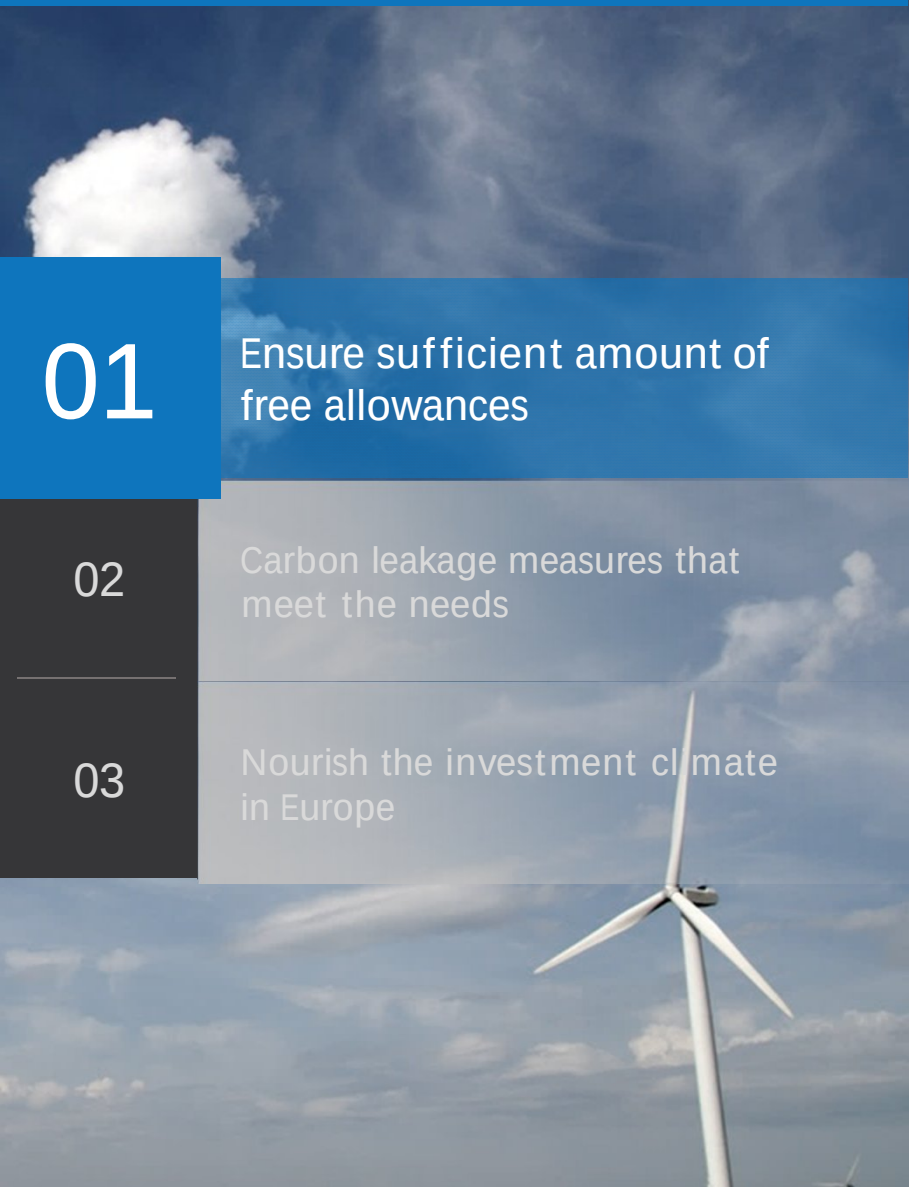
EU industrial competitiveness can only be maintained when undue costs are controlled

(real BM, qualitative ass., indirect comp)

New installations, investments and efficient growth in EU should not face undue carbon costs

(No LRF for new entrants, dyn all, MSR)

Main elements that need to be reflected in ETS reform



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FREE ALLOWANCES SHARE TO 48%

The share of free allowances needs to be increased by 5 percent point, to prevent triggering the CSCF;

NER FROM PHASE 3 SURPLUSES

The NER (New Entrant Reserve) should be established using surpluses of phase 3 rather than curbing the available amount for phase 4;

INNOVATION FUND FROM AUCTIONING SHARE

The innovation fund should be fully financed from the auctioning share.

Main elements that need to be reflected in ETS reform

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REAL BENCHMARKS

(without flat rate or haircut beyond realistic performance level) based on actual EU industry performance to avoid undue costs for best EU manufacturers;

CORRECT CARBON LEAKAGE LIST

- Lowest thresholds for qualitative assessment option
- Appropriate level of data disaggregation (NACE or PRODCOM).

INDIRECT COMPENSATION

- Ensure a legislative basis for member states that allows proper level of compensation for indirect carbon costs.
- No cap on compensation related to the auctioning revenues

Main elements that need to be reflected in ETS reform

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NO LRF FOR NEW ENTRANTS

Applying the linear reduction factor (LRF) for new entrants must be removed, at least the definition of new entrants should be updated to limit the negative impact;

SENSITIVE DYNAMIC ALLOCATION

Lowest production threshold for more dynamic allocation is preferred since this brings a closer reflection of real output fluctuation and thus avoiding over and under allocation;

MSR

- Excessive cancellations or invalidation of allowances need to be avoided
- Absorbing and releasing allowances with high enough rate

Retain and attract sustainable industrial production in Europe

Innovation that is needed for the transformation happens where there is a

HEALTHY GROWTH AND INVESTMENT CLIMATE

Only in such conditions, European industry can deliver solutions that are needed to reach the climate targets and to combat global warming.