Hydro

Analyst information session

Regulatory framework

Investor Relations

November 16 2020

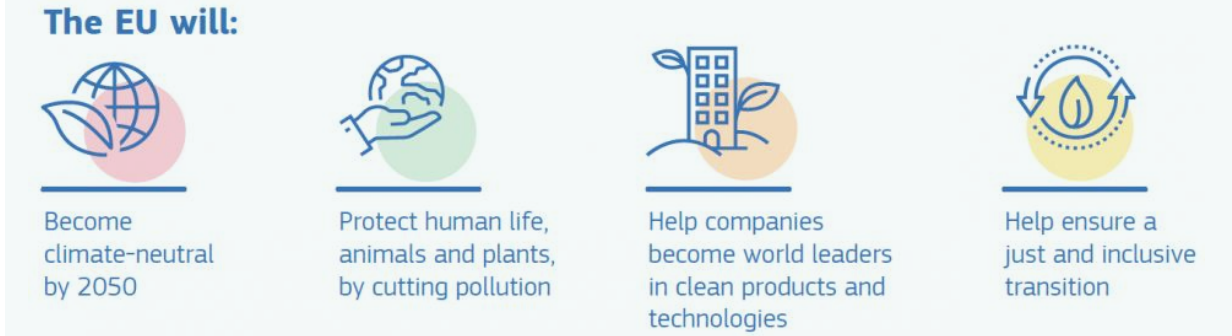
Objective of session to
(1) present latest internal update on key regulatory frameworks (30 mins)
(2) answer any questions on the topics (Q&A at end) (30 mins)

European Green Deal:
Positioning low carbon solutions, protecting competitiveness

Climate neutral by 2050
- Current proposal: from 40% to 50-55% GHG emissions reductions in 2030

Key elements for Hydro
- Energy transition
- Sustainable mobility
- Green buildings
- Circular Economy
- Sustainable Finance

Increased industry focus
- Aluminium defined as critical raw material for Europe
- Circular economy and demand for sustainable product
- Enhanced industry competitiveness in EU



Regulatory frameworks supporting green transition

1 EU's Emissions Trading System quotas

- EU main climate policy to reduce emissions – capping emissions
- Free allocation given to protect against carbon leakage. As highly carbon leakage exposed, Hydro receives free allocation
- Hydro purchases additional allowances to cover remaining shortage

2 Indirect Co2 compensation

- Indirect carbon costs passed through to European aluminium companies in their power bills by price setting mechanisms in the power market
- Scheme permits member states to partially compensate industries for indirect carbon costs mitigating carbon leakage and preserving industry

3 EU Taxonomy

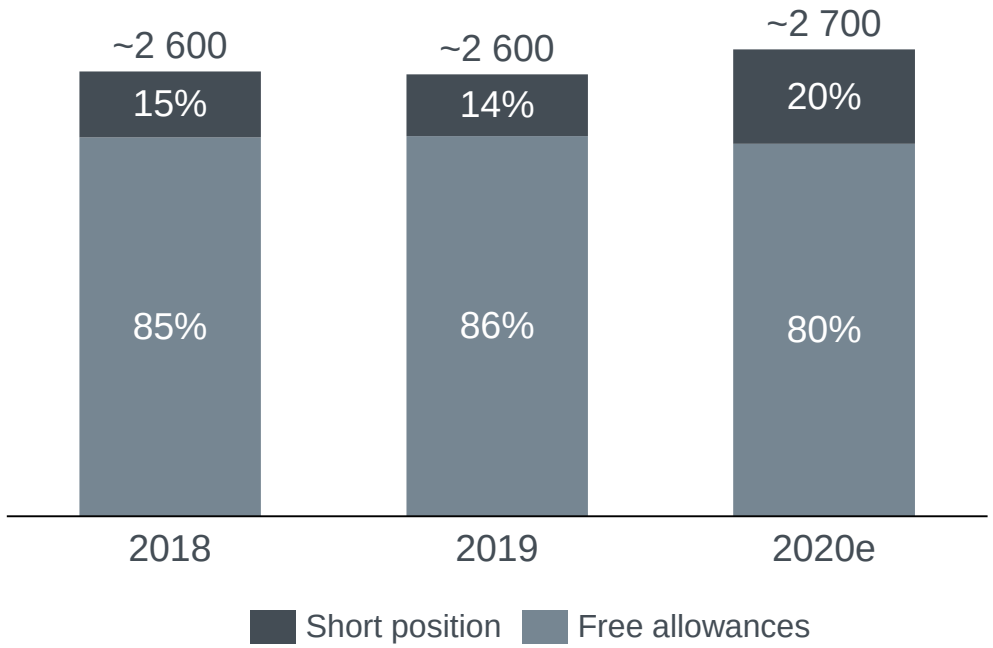
- Classification of activities regarding its contribution to mitigating climate change:
  - Have greenhouse emissions that correspond with best performance in industry
  - Does not hamper development of low carbon alternatives
  - Does not lead to a lock-in of carbon intensive assets over their viable lifetime

4 Carbon Border Adjustment Mechanism (CBAM)

- New carbon leakage charge imposed on imported products
- Selected sectors affected yet to be defined
- Under consideration for introduction with process to run in 2021

Hydro historically running a short position on EU ETS allowances for direct emissions

CO2 emissions (tonnes 000s)



- Fewer free allowances allocated in 2020 due to a factor reducing the free allocation linearly throughout phase 3 of the EU ETS (2013-2020)
- Annual position of free and purchased allowances disclosed in Hydro's annual reporting to the CDP[1)]
- Free allowances allocated according to EU-set benchmark, reduced by annual factor, and based on historical production level
- Hydro's production increasing each year, resulting in larger short position and additional purchases
- Allowances purchased in BA Energy and sold back-to-back to BA Primary Metal at no margin

Outlook moving forward

- Green deal influencing EU ETS phase 4 from 2021-2030 likely resulting in:
  - Need for higher emissions cuts in ETS sectors
  - Higher allowance prices, increasing risk exposure
- In 2030 – limited EU ETS quotas available, need for link to other systems

1) CDP is a not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts

CO2 compensation currently received for some of smelter portfolio in EU, each country treats accounting differently

Hydro

In 2020, three plants receiving compensation for indirect CO2 costs

Currently receiving

- ✓Husnes
- ✓Slovalco
- ✓Neuss

Not receiving in 2020

- × Karmøy
- × Årdal
- × Sunndal
- × Høyanger

Each of the three countries with different accounting policy for compensation received

Husnes (Norway)

- Monthly accrual for production year (1/12 of est. compensation)
- Payment received following year, reversal of accrual

Slovalco (Slovakia)

- Received each year in Q4 to cover entire previous year

Neuss (Germany)

- Monthly accrual for production year
- Compensation received 1H of following year

Changes from 2021 could mean additional Norwegian smelters eligible for indirect CO2 compensation

Main policy changes from 2021

- EU published member state guidelines for 2021-2030 enabling member states to continue scheme for indirect Co2 compensation
- Changes within the actual calculation for compensation:
  - Aid intensity set for 75% for entire period
  - Annual production levels evaluated annually
- Co2 price based on annual forward price per year
- Some uncertainties remain
  - Benchmark for electricity consumption
  - Emissions factors for countries/regions
  - National guidelines ratified to confirm continued compensation
  - Timing for payments

Hydro and CO2-compensation

- More of Hydro's Norwegian aluminium production will likely be eligible for compensation from 2021, as a contract from before 2005 expires in 2020, and thus more of our power consumption is now exposed to indirect CO2-costs in power prices
- Current Norwegian regime does not compensate for self-owned power production
  - Hydro has 9-10 TWh annual power production
- Neuss and Slovalco continuation dependent on national frameworks established in Germany and Slovakia
  - Some uncertainty around Slovakia from 2021

Calculation includes multiple factors – many of which change year over year and are not yet determined

$$E(Aid) = CO_2(F) * Elec(F) * Elsys(Pro) * EU(Allow) * Aid(F) * (1 - Curt(F))$$

E(aid) is expected aid received for indirect Co2 compensation in a given year

Established factors

- **CO2 emission factor – $CO_2(F)$**: emission factor set by EU. Currently (2020) 0.67 Norway, 0.76 Germany, 1.06 Slovakia. Tonnes of Co2 per MwH (marginal power market effect) Factors will be updated for the period 2021-2030
- **Aid Intensity – Aid(F):** EU sets factor of aid intensity for given year. 75% established for entire period 2021-2030.

Factors requiring estimation

- **Electrolysis Production – Elsys(Pro):** Annual electrolysis production of eligible Hydro smelters (000 tonnes)
- **Electricity Consumption Efficiency Benchmark – Elec(F):** average electricity consumption at our consolidated smelters per kilo of primary aluminium produced. 14.2 Mwh per tonnes of aluminium in 2019 and to be determined for 2021 and beyond
- **Co2 European Emission Allowances – EU(Allow)**: Traded commodity price for forward year. Apprx. 25.15 EUR in 2019 but changing year over year.
- **Curtailment Factor - Curt(F):** Current regime - proportion of energy that is sourced by PPAs from before 2005 or electricity that is self-generated.

Sustainable Finance supporting EU Green Deal

EU Taxonomy initiaitve included as part of sustainable finance workstream

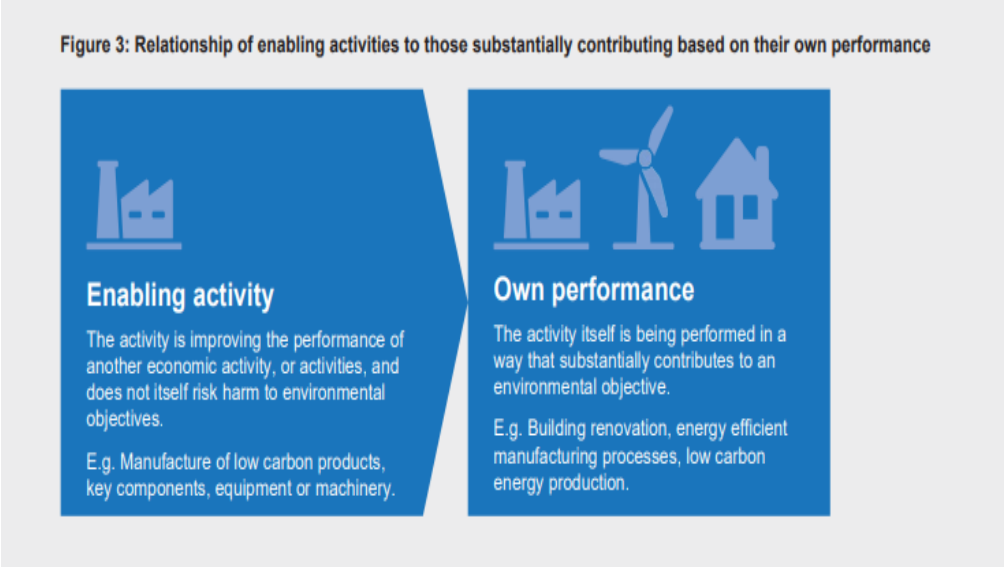
- EU initiative to mobilize investments in sustainable businesses
- A classification (taxonomy) to define economic activities which are sustainable to invest in is being developed.
- Only primary aluminium production is considered, not the entire value chain

Timeline

- Q4 2020: Taxonomy rules and new Sustainable Finance Strategy

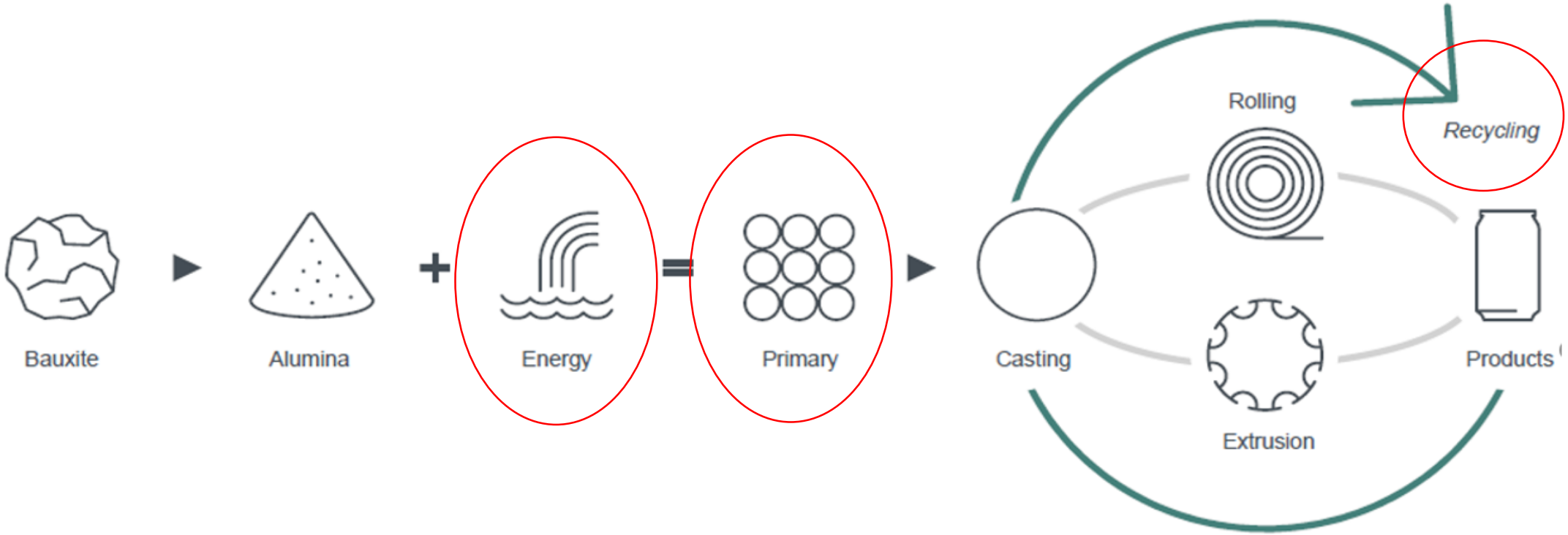
Taxonomy regulation: an activity is substantially contributing to climate change mitigation if it

- Has greenhouse gas emission levels that correspond to the best performance in the sector or industry
- Does not hamper the development and deployment of low-carbon alternatives; and
- Does not lead to a lock-in in carbon-intensive assets considering the economic lifetime of those assets



EU Taxonomy covers only part of Hydro's activities

Sectoral scope as from the TEG-report



EU Taxonomy's aluminium criteria still under determination

Carbon Border Adjustment Mechanism (CBAM) another measure currently under consideration

As currently stands, CBAM not most effective carbon leakage measure

CBAM ambition[1)]

- To put a price on carbon content of imports thereby providing carbon leakage protection
- To replace current carbon leakage measures (free allowances and CO2-compensation)

Current view on CBAM[1)]

- Current carbon leakage measures creating level playing field in terms of CO2-costs for European and foreign producers → removal increasing costs for European industry
- For CBAM to replace current instruments without creating more carbon leakage, increased import prices resulting from the CBAM need to be equal to the increased production costs European industry will face when current carbon leakage measures removed
  - Several factors indicate this will not be the case: possibilities for resource shuffling, importers not passing full Co2 cost into product prices, differences between indirect emissions and indirect costs in Europe
- For CBAM to be effective (if it is introduced), it should also:
  - Be applied to both upstream and downstream production – an upstream only focus would lead to higher costs for European downstream producers, incentivizing relocation of production out of Europe
  - Develop a methodology and administration to assess carbon content of products from primary metal to end product

1) Based on current information and understanding of CBAM

We are aluminium