

ALUMINIUM SECTOR GREENHOUSE GAS PATHWAYS TO 2050



PARAMETERS

2018

IAI baseline

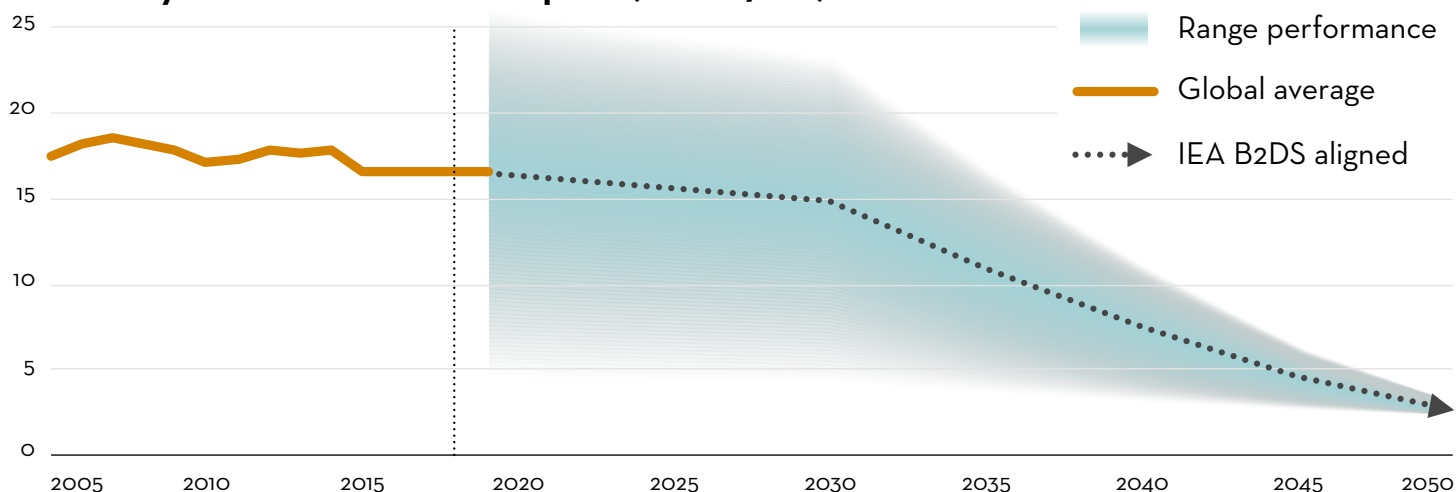
BAU

IAI 2050 **Business**
As Usual scenario

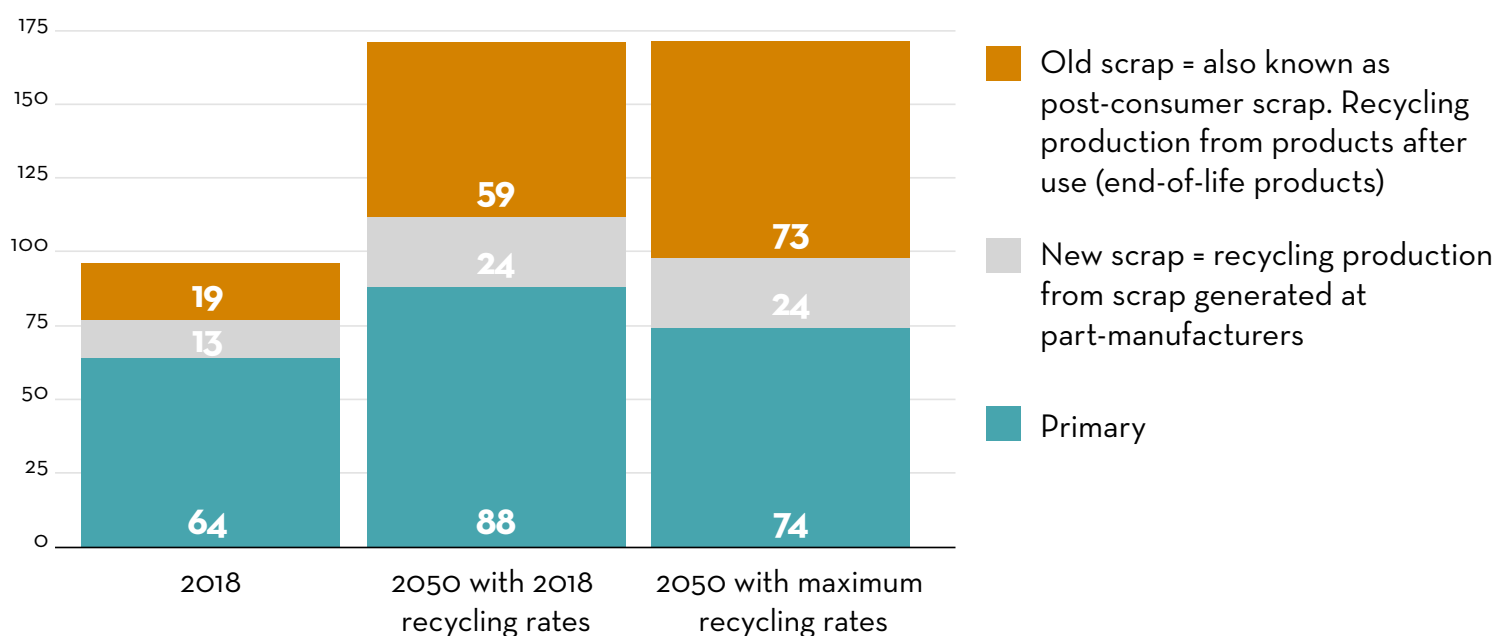
B2DS

2050 carbon budget aligned with International Energy Agency
Beyond 2 Degrees Scenario

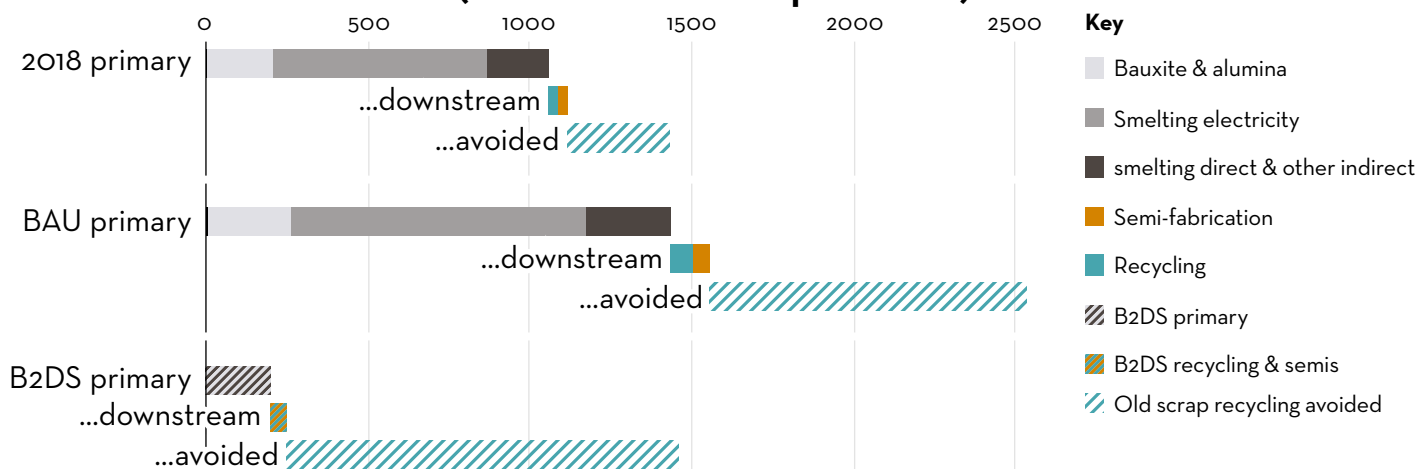
Primary aluminium carbon footprint (t CO₂e/t Al)



Aluminium semis supply (million tonnes per annum)



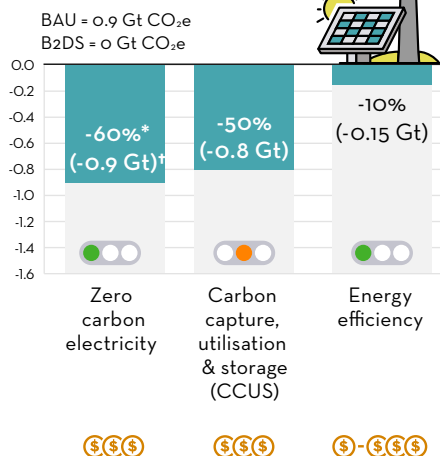
GHG emissions (million tonnes CO₂e per annum)



GREENHOUSE GAS EMISSIONS REDUCTION PATHWAYS

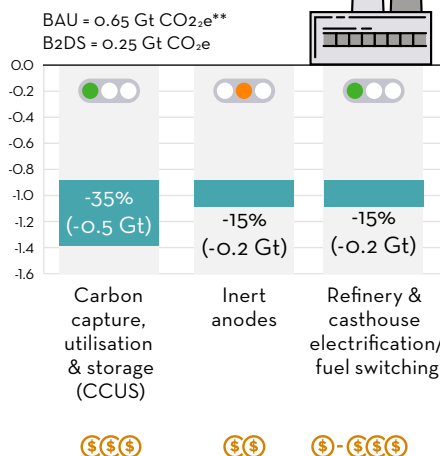
Pathway 1

Electricity decarbonisation potential



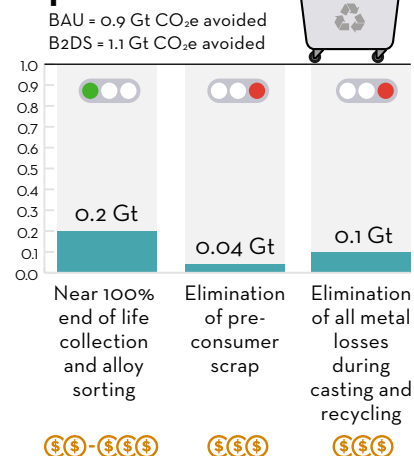
Pathway 2

Direct emissions potential



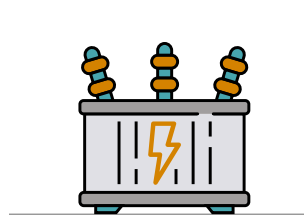
Pathway 3

Recycling & resource efficiency potential



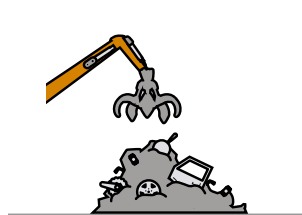
2050 demand

Total sector emissions need to be reduced by 80%, while demand for aluminium products grows by over 70%



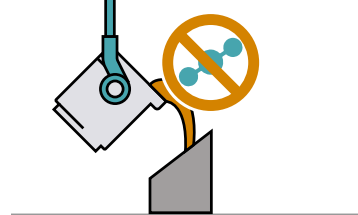
Electricity

Decarbonisation of electricity offers the largest potential for aluminium sector GHG emissions reduction



Recycling

Improving post-consumer scrap recycling requires action from players all along the aluminium value chain



Process emissions

Novel technologies for heat and steam, and zero carbon smelting are required

* Potential reduction on BAU (1.6 Gt CO₂e) emissions † Absolute CO

** Includes 0.15 Gt CO₂e from indirect emission sources (predominantly input materials & transport)