Datum: 2025-11-20 **Författare:** Mari Kadowaki

ProfilGruppen pathway for reduction of greenhouse gas emissions

Scope 3 dominates greenhouse gas emissions

For our carbon dioxide and greenhouse gas emissions, the upstream-related Scope 3 is by far the most dominant. With an annual delivery of approximately 34,000 tons of aluminum products, Scope 3 amounts to around 258,000 tons of CO_2 emissions per year (based on the baseline year 2020).

Approximately 40 per cent of these greenhouse gas emissions would be eliminated if all our customers purchased primary aluminum produced using fossil-free electricity (i.e., about 4.0 kg CO_2 per kg of produced aluminum). There is unused capacity among these suppliers, but several customers and many consumers opt for cheaper alternatives instead.

Our suppliers are also working on developing “non-carbon-based electrodes” for the electrolysis process. This has been ongoing for many years and has worked in smaller volumes. We are closely monitoring this, and once it becomes industrialized, we will be able to offer our customers the opportunity to virtually eliminate the remaining 140,000 tons of CO_2 emissions. However, this will initially likely come at a higher price, and the decisive factor will be the end customers’ willingness to pay.

Europe will introduce a special tax on aluminum products with high underlying CO_2 emissions. If this tool proves effective, it could significantly reduce such imports and correspondingly increase domestic European production.

Using recycled material instead of primary aluminum means that reported emissions according to standard Scope 3 reporting drop to about 0.3 ton per ton of aluminum, compared to the current best level of around 4 tons per ton for primary aluminum. However, this type of “CO_2 saving” in our reporting will instead increase someone else’s reported emissions. This is because there is no unused amount of aluminum scrap - one party’s increase becomes another’s decrease. Depending on where this occurs in the world, it currently results in between 4 and 24 tons of CO_2 per ton of aluminum.

While the world’s aluminum stockpile is still growing (and all aluminum scrap is being remelted), our main contribution to reducing greenhouse gas emissions is to convince our customers to choose primary aluminum produced by plants with good access to fossil-free electricity.

ProfilGruppen has also chosen to offer aluminum with recycled content, both from market-available sources and from ingot blends ordered by us. But as mentioned, this only has the global effect of likely increasing emissions elsewhere. Such products are often marketed as more sustainable, but globally speaking, they are not—only locally.

Small impact in Scope 1 and 2

In addition, we have about 2,300 tons/year of CO_2 equivalents (2024, market-based) for Scope 1 (2,180) and Scope 2 (120). We can already offer our customers the option to purchase products manufactured in propane-free production flows and to purchase green propane with certificates. Our goal is for all customers to choose this - then our Scope 1 would drop to zero.

At our own facility, reductions in district heating usage and efficiency improvements will contribute to an emissions reduction of 22.5 tons/year through 2030 if no further actions are taken. However, we are working to increase the utilization of our waste heat.

Our total emissions, that we and our customers can not influence, amount to only about 400 tons of CO_2 per year, which is about 0.013 tons per ton or approximately 0.20 tons of CO_2 per MSEK of our revenue. It is already possible to achieve this level today.

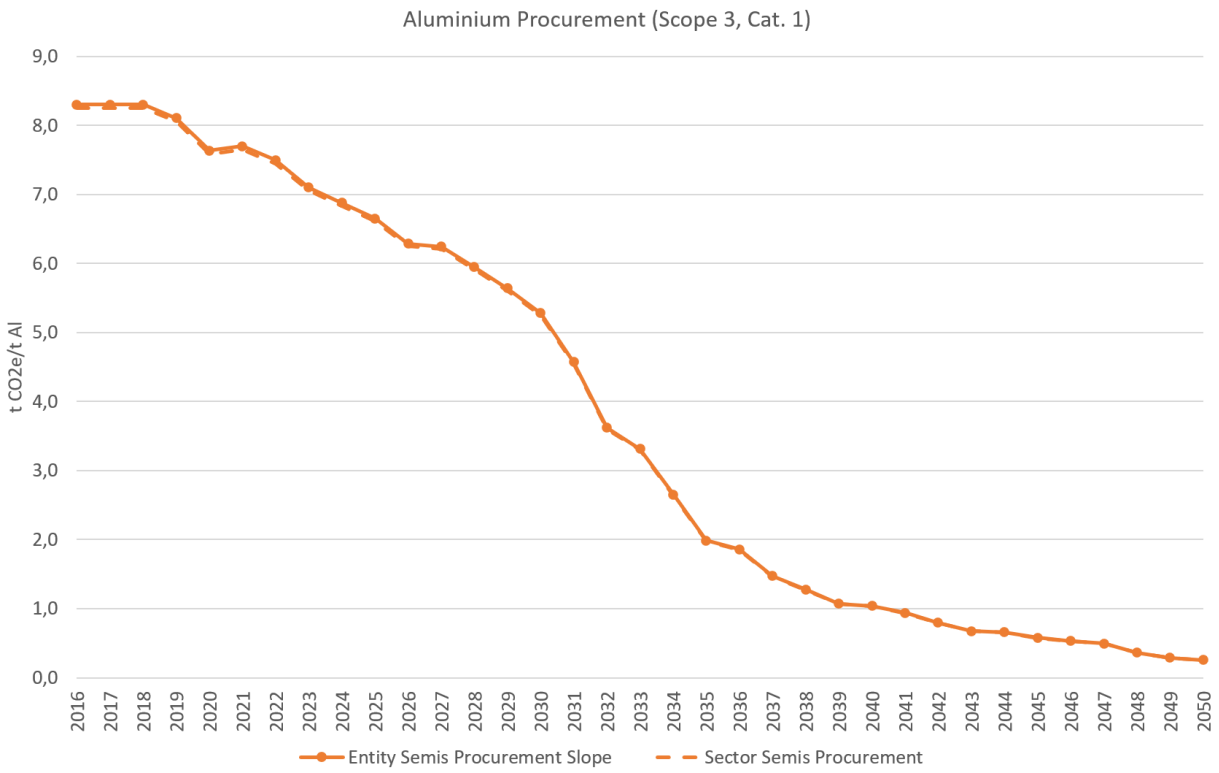
Positive impact downstream

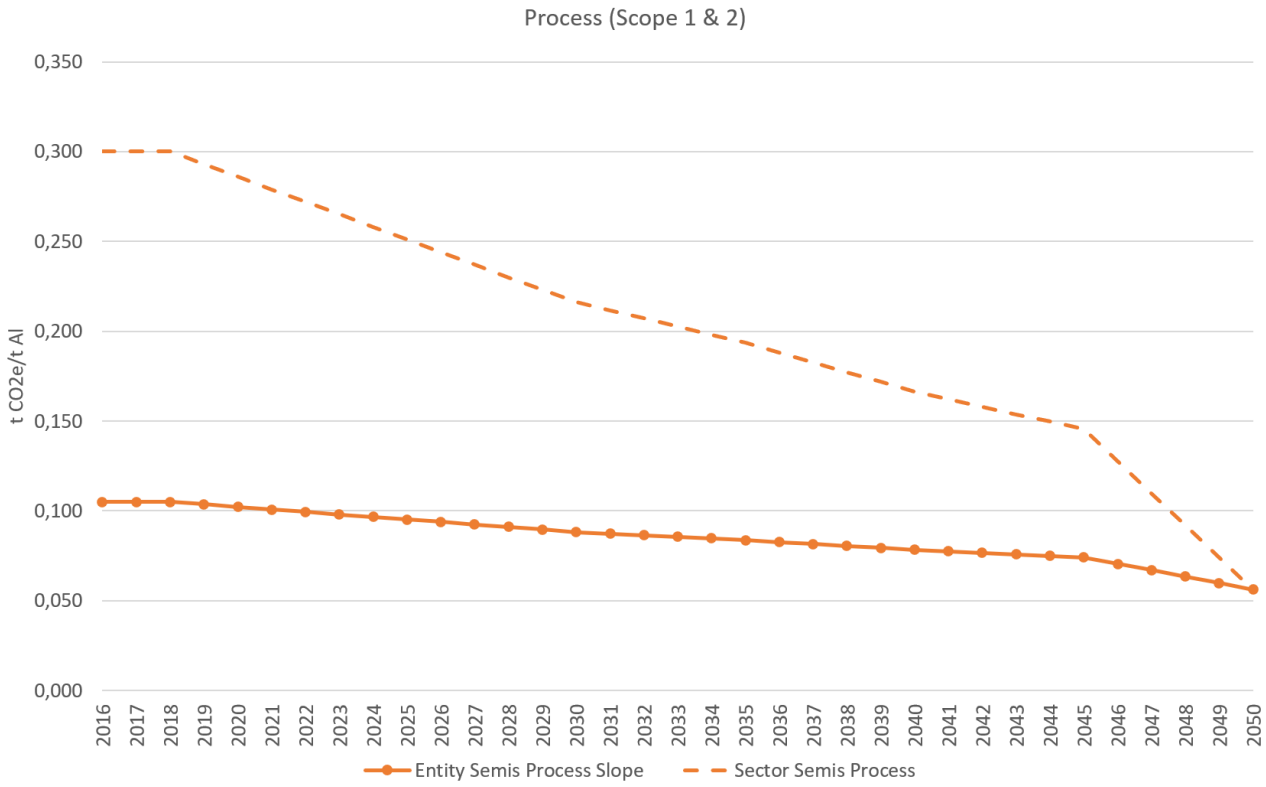
Finally, the downstream impact of our production is significant compared to manufacturing our components in other materials. Vehicles and devices that need to be moved and handled physically become much lighter, thus requiring less energy. For the electric vehicle industry, the transition to aluminum has been and continues to be a prerequisite for achieving its transformation. When properly managed, aluminum products have significantly longer lifespans, lower maintenance costs, and reduced environmental impact. If we were to include these effects, our operations would represent a significant carbon sink. However, it is not feasible to calculate this effectively, as the variations and uses are highly diverse.

Our contribution to the global reduction of greenhouse gas emissions is primarily to spread knowledge about upstream and downstream Scope 3.

Aluminium procurement and process according to the ASI GHG-pathway calculation tool

ProfilGruppen baseline year is 2020. We are following the anticipated pathway.





Action plan from 2025 to 2050

Action:	How:	When:
Encouraging use of primary aluminium with low CO2-emissions	Educating customers regarding the effects of choosing primary aluminium produced with fossil-free electricity.	Now
Reduce the use of propane	Offer customers alternatives to propane use, such as biogas, natural gas, hydrogen.	By 2026
Offering recycled aluminium products	ProfilGruppen offers aluminum with recycled content, both from market sources and custom ingot blends.	By 2027
Scope 1 and 2 emissions reduction	Reductions in district heating usage and efficiency improvements in our factory's.	By 2030
Reduce the use of propane	Replace propane powered machines with other alternatives. Or stop using these machines.	By 2035
Offering primary aluminium products with lower emissions	Emissions from primary aluminium billets cut by ~70%, supported by technology deployment and policy incentives.	By 2040
Offering primary aluminium products with zero emissions	Our suppliers will provide ProfilGruppen billets produced with zero emissions, using the latest available technology.	By 2050

This document is reviewed annually. The action plan reflects our current ambitions and will be revised as progress is made.