EUROPEAN COMMISSION
DG Competition

PUBLIC VERSION

Case M.10658 - NORSK HYDRO / ALUMETAL

(Only the English text is authentic)

REGULATION (EC) No 139/2004
MERGER PROCEDURE

Article 8/1 Regulation (EC) 139/2004
Date: 4/5/2023

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EUROPEAN
COMMISSION

Brussels, 4.5.2023
C(2023) 2821 final

COMMISSION DECISION

of 4.5.2023

declaring a concentration to be compatible with the internal market and the functioning of the EEA Agreement

(Case M.10658 – NORSK HYDRO / ALUMETAL)

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declaring a concentration to be compatible with the internal market and the functioning of the EEA Agreement

(Case M.10658 – NORSK HYDRO / ALUMETAL)

(Only the English version is authentic)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to the Agreement on the European Economic Area, and in particular Article 57 thereof,

Having regard to Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings[1], and in particular Article 8(1) thereof,

Having regard to the Commission's Decision of 6 October 2022 to initiate proceedings in this case,

Having given the undertakings concerned the opportunity to make known their views on the objections raised by the Commission,

Having regard to the opinion of the Advisory Committee on Concentrations,

Having regard to the final report of the Hearing Officer in this case,

1. INTRODUCTION

(1) On 1 September 2022, the Commission received the notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004[2] by which Norsk Hydro ASA (Norway) ('Hydro' or the 'Notifying Party') would acquire through its subsidiary Hydro Aluminium sole control of Alumetal S.A. (Poland) ('Alumetal' or the 'Target' and, together with Hydro, the 'Parties'). Hydro will therefore acquire within the meaning of Article 3(1), point (b), of the Merger Regulation sole control of the whole of Alumetal (the 'Transaction'). The Transaction is to be accomplished by way of a public bid.

(2) The Transaction relates mainly to the production and sale of aluminium foundry alloys and aluminium master alloys.

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1 OJ L 24, 29.1.2004, p. 1. With effect from 1 December 2009, the Treaty on the Functioning of the European Union ('TFEU') introduced certain changes, such as the replacement of 'Community' by 'Union' and 'common market' by 'internal market'. The terminology of the TFEU will be used throughout this Decision.

2 Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings (the "Merger Regulation") (OJ L 24, 29.1.2004, p. 1).

2. THE PARTIES

(3) Hydro and Alumetal are both producers of aluminium foundry alloys ('AFAs' or 'foundry alloys'). AFAs are semi-finished aluminium products in liquid form or ingot form, which customers (mainly automotive players, for example wheels manufacturers such as Ronal or Cromodora) use to cast parts. Alumetal is also a producer of aluminium master alloys ('AMAs'), which are used as an input in the production of semi-finished aluminium products such as AFAs, sheet ingots and extrusion ingots.

(4) Hydro is a fully integrated aluminium company and has activities throughout the aluminium value chain from bauxite, alumina and energy generation to the production of aluminium from bauxite/alumina, aluminium extruded products and aluminium recycling. Hydro does not produce AMAs. [Hydro corporate strategy][3] [4].

(5) Alumetal is a producer of AFAs and AMAs with plants located in Poland (Kety, Gorzyce and Nowa Sol) and Hungary (Komarom). In 2020 and 2021, over [90-100]% of AFAs sold by Alumetal were made from recycled aluminium.

3. THE CONCENTRATION

(6) Hydro intends to acquire Alumetal's shares via a tender offer announced on 29 April 2022. According to this tender offer, Hydro Aluminium, a subsidiary of Norsk Hydro, would acquire 100 % of Alumetal's shares from its current shareholders. Following the Transaction, Alumetal would be fully owned and solely controlled by Hydro.

(7) Following the opening of the Commission's in-depth investigation on 6 October 2022, Hydro's public tender offer for Alumetal's shares expired, on 10 October 2022. [Confidential information about the contractual aspects of the Transaction and its negotiation]. Public statements by Hydro as well as discussions between Hydro, Alumetal and Alumetal's shareholders following the Commission's opening of an in-depth investigation confirmed that all parties remained committed to the conclusion of the Transaction and Hydro's plans to launch a new tender offer for all the outstanding shares in the share capital of Alumetal.[5]

(8) [Confidential information about the contractual aspects of the Transaction and its negotiation]. In view of this confirmation, the Commission continues to have jurisdiction to review the transaction, [confidential information about the contractual aspects of the Transaction and its negotiation] constitute a good faith intention to conclude an agreement, within the meaning of Article 4(1) of the Merger Regulation.

(9) In view of the foregoing, the Transaction is a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

4. UNION DIMENSION

(10) Based on the information provided by the Notifying Parties, Hydro's turnover in 2021 amounted to EUR […] worldwide and EUR […] in the European Union

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3 [Notifying Party corporate strategy].

4 Form CO, paragraph 118.

5 https://www.hydro.com/fr-BE/medias/news/2022/phase-ii-review-of-proposed-acquisition-of-alumetal/; Parties' response to RFI 22, question 3(d).

('Union'). Alumetal's turnover in 2021 amounted to EUR […] worldwide and EUR […] in the Union.

(11) As a result, the Transaction has a Union Dimension within the meaning of Article 1(2) of the Merger Regulation because the aggregate worldwide turnover of the undertakings exceeds EUR 5 000 million and the Union-wide turnover of each of at least two of the undertakings concerned is above EUR 250 million and not each of the undertakings concerned achieves more than two-thirds of its aggregate Community-wide turnover within one and the same Member State.

5. THE PROCEDURE

(12) On 13 May 2022, the Notifying Party notified the Transaction for the first time.

(13) During its initial pre-notification and phase 1 investigation the Commission contacted market participants (mainly the Parties' suppliers and competitors), by requesting information through telephone calls and written requests for information pursuant to Article 11 of the Merger Regulation, including questionnaires. Overall, market participants raised concerns with the Transaction.

(14) In addition, the Commission also sent several written requests for information to the Parties and reviewed their internal documents and submissions.

(15) On 7 June 2022, the Notifying Party withdrew the notification of the Transaction.

(16) The Notifying Party notified the Transaction to the Commission for a second time on 1 September 2022.

(17) During the investigation, following the re-notification (Phase 1), the Commission again contacted market participants (mainly the Parties' suppliers and competitors), by requesting information through telephone calls and written requests for information pursuant to Article 11 of the Merger Regulation, including questionnaires.

(18) In addition, the Commission also sent several additional written requests for information to the Parties and reviewed their newly provided internal documents and submissions.

(19) On 22 September 2022, a State of Play meeting took place between the Commission and the Parties during which the Commission informed the Parties of the concerns resulting from the preliminary assessment of the Transaction.

(20) On 6 October 2022, the Commission adopted a Decision to initiate proceedings pursuant to Article 6(1)(c) of the Merger Regulation (the 'Article 6(1)(c) Decision'), after it found, based on the results of the preliminary investigation, that the Transaction raised serious doubts as to its compatibility with the internal market.

(21) On 7 October 2022, the Commission provided the Notifying Party with non-confidential versions of key documents of third parties collected during the investigation. The Commission provided additional documents on 19 October 2022 and on 6 December 2022.

(22) On 25 October 2022, given the failure of the Parties to provide replies to the Commission's request for the Parties' transaction-level data (i.e. data on their individual sales), the Commission adopted two Decisions, addressed to Norsk Hydro and Alumetal respectively, pursuant to Article 11(3) of the Merger Regulation, requesting them to supply this information as soon as possible and no later than

25 October 2022 and suspending the merger review time limit until receipt of the complete and correct information.

(23) Similarly, on 27 October 2022, given the failure of the Parties to provide replies to the Commission's requests for internal documents, the Commission adopted two decisions, addressed to Norsk Hydro and Alumetal respectively, pursuant to Article 11(3) of the Merger Regulation, requesting them to supply this information as soon as possible and no later than 3 November 2022 and suspending the merger review time limit until receipt of the complete and correct information.

(24) The suspensions lasted until 3 January 2023, when the requested documents were provided.

(25) On 26 October 2022, the Notifying Party requested in accordance with Article 10(3), second sub-paragraph of the Merger Regulation an extension to the Phase II review period of 15 working days.

(26) The Notifying Party provided its response to the Article 6(1)(c) Decision ('Response to the Article 6(1)(c) Decision') on 16 November 2022.

(27) On 22 November 2022, at a state of play meeting, the Commission provided the Notifying Party with the opportunity to discuss orally the main issues raised in the Response to the Article 6(1)(c) Decision and indicated the matters on which it was focusing its investigative efforts.

(28) In its in-depth (Phase 2) investigation, the Commission sent several requests for information to the Parties regarding various matters such as their sourcing practice and strategy, technological capabilities, transaction data, and additional internal documents.

(29) In addition to collecting and analysing a substantial amount of information from the Parties (including new internal documents and transaction data), the Commission collected information through additional telephone calls and written requests for information addressed to competitors and suppliers of the Parties pursuant to Article 11 of the Merger Regulation.

(30) On 19 January 2023, the Commission visited Hydro's Ardal production site in Norway. On 20 January 2023, the Commission held a technical meeting on recycled content in AFAs with representatives from Hydro at Hydro's headquarters in Oslo.

(31) On 1 February 2023, a meeting took place between the Commission and the Parties on the subject of submissions by the Notifying Party on economic matters.

(32) On 16 February 2023, and following the results of the in-depth market investigation, the Commission informed the Parties of the preliminary results of the Phase 2 investigation during a state of play meeting.

(33) On 30 March 2023, the Commission sent a draft decision pursuant to Article 8(1) of the Merger Regulation to the Advisory Committee with the view of seeking the Committee's opinion.

(34) The meeting of the Advisory Committee took place on 18 April 2023.

6. OVERVIEW OF THE PARTIES' ACTIVITIES

(35) The activities of the Parties overlap horizontally and are linked vertically in the following areas.

6.1. Horizontal overlap in the production and sale of aluminium foundry alloys

(36) Both Parties produce and sell AFAs. This activity leads to an affected market in the production and sale of solid advanced aluminium foundry alloys, which is assessed in detail in this Decision.[6]

6.2. Vertical relation between the production and sale of aluminium master alloys (upstream) and the production and sale of aluminium foundry alloys (downstream)

(37) Alumetal sells its AMAs to third parties to produce casthouse products, including AFAs, and both Parties produce and sell AFAs. While not giving rise to an affected market, this activity gave rise to some concerns from market participants and is assessed in detail in this Decision.

7. OVERVIEW OF THE INDUSTRY AND MARKET TRENDS

7.1. The production of non-recycled aluminium is traditionally a heavy CO2 emitter

(38) Aluminium products can be produced either based on new aluminium ('primary') made from bauxite/alumina (also referred to as 'smelting') or from recycled/re-melted aluminium (also referred to as 'refining'), or a mix of both.

(39) In general, the 'primary' aluminium production process can be broken down into three stages. It first starts with the mining of bauxite, an ore that contains usually between 30 % and 60 % of aluminium in addition to other minerals. Although aluminium may be found in and extracted from other minerals as well, in practice the most common raw material is bauxite.[7] Secondly, bauxite is processed into alumina via digestion, clarification, precipitation and calcination, usually via the so-called "Bayer" process.[8] Thirdly, alumina goes through electrolytic reduction within an aluminium smelter to make aluminium. The reduction area consists of several rectangular buildings, the length of which can exceed one kilometre. Inside there are hundreds of reduction cells or pots arranged in rows and hooked up to power sources via cables. The electric current coming from the power sources is the main force for the process of breaking down alumina into inter alia aluminium.[9] Molten aluminium is then extracted with crucibles, which are then taken to the casthouse of the smelter, where leftover alkali impurities such as sodium are removed in fluxing units and afterwards transferred to the casthouse furnace.[10]

(40) Given the high energy intensity of this process, primary aluminium production has a heavy carbon footprint. It is a leading source of carbon emissions in the Union and globally, being responsible for approximately 2-3% of global CO2 emissions from fossil fuels and industry.[11] Figure 1 from Hydro's internal documents reports on the climate impact of the aluminium industry, in particular its heavy carbon footprint.

Figure 1 – Climate impact of the aluminium industry

[Figure]

Source: Form CO, Annex 6.2.d, [Notifying Party internal document].

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6 The Parties' activities also minimally overlap for solid standard AFAs. However, given that this overlap does not lead to an affected market, it is not further assessed in this Decision.

7 Form CO paragraph 110.

8 Form CO paragraph 111, 112.

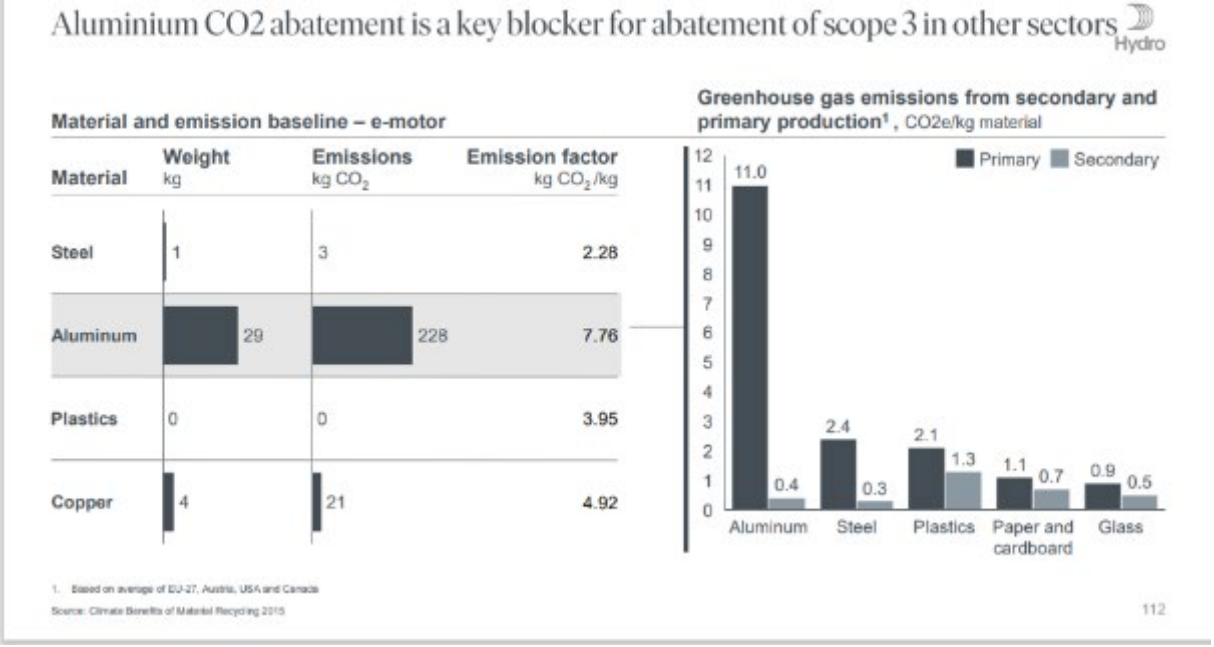
9 Form CO paragraphs 113 and 114.

10 Form CO paragraph 115.

11 Form CO, Annex 6.2.d, [Notifying Party internal document].

(41) Compared to other materials, aluminium production generates on average higher CO2/kg as demonstrated by the extract from Hydro's internal documents captioned in Figure 2. Its CO2 footprint is approximately 5 times higher than production of other materials such as steel, cardboard and plastics.[12]

Figure 2 – Average CO2 emissions for primary and secondary production across various materials



Source: Form CO, Annex 6.2.d, [Notifying Party internal document].

(42) In addition to its climate impact, aluminium production is further associated with serious environmental and social challenges. More than 40% of used aluminium is landfilled, while the production process generates various dangerous by-products and residues.[13] To this adds the fact that 90% of alumina is typically sourced from high biodiversity[14] risk countries.[15]

(43) In view of this, low-carbon aluminium is viewed as a significant lever for the European industry to reduce its carbon footprint, in line with the increasingly ambitious objectives of the European Green Deal and related climate legislation.[16]

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12 Form CO, Annex 6.2.d, [Notifying Party internal document].

13 Form CO, Annex 6.2.d, [Notifying Party internal document].

14 This is for instance the case of the Brazilian Amazon. […] 90% of the world's bauxite reserves are concentrated in tropical and sub-tropical regions (West Africa, Australia, South America and India) with significant land-usage in extraction, and associated biodiversity implications – several thousand hectares of forest cleared annually [Notifying Party internal document].

15 Form CO, Annex 6.2.d, [Notifying Party internal document].

16 On 14 July 2021, the European Commission adopted a series of legislative proposals setting out how it intends to achieve climate neutrality in the Union by 2050, including the intermediate target of an at least 55% net reduction in greenhouse gas emissions by 2030. The package proposes to revise several pieces of Union climate legislation, including the Union ETS, Effort Sharing Regulation, transport and land use legislation, setting out in real terms the ways in which the Commission intends to reach Union climate targets under the European Green Deal. See: https://climate.ec.europa.eu/eu-action/european-green-deal/delivering-european-green-deal_en.
See also Union legislation setting mandatory emission reduction targets for new cars since 2009: Regulation (EC) No 443/2009 of the European Parliament and of the Council of 23 April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO 2 emissions from light-duty vehicles, in force until 31/12/2019, afterwards replaced by: Regulation (EU) 2019/631 of the European Parliament and of the Council of 17 April 2019 setting CO2

7.2. Customers increasingly focus on sourcing low-carbon AFAs

7.2.1. Automotive customers are driving the push towards greener AFAs and more recycled content in AFAs

(44) As the main customer of AFAs in the EEA, covering up to 70% of demand,[17] the automotive industry is driving the shift toward low-carbon products.

(45) In the automotive sector, Union legislation sets mandatory emission reduction targets for new cars since 2009.[18] This is accompanied on a Union level by carbon monitoring systems such as for example the Carbon Border Adjustment Mechanism, which in particular aims to prevent an outsourcing of CO2 emissions outside of the Union. As aluminium is lighter than steel and therefore, in general, less fuel is consumed by the car for an equivalent usage, the use of aluminium in automotive production also meets the recent trend towards stricter fuel efficiency standards.[19]

(46) Furthermore, regulations such as the Commission's End-of Life Vehicle Directive[20] from 2000, which since then has been reviewed several times and is currently under review again, promotes not just the recycling of vehicles at the end of their life, but also aims to improve the environmental performance of all economic operators involved in the life-cycle of vehicles.

(47) The effects of these trends have already become visible in recent years as lighter aluminium is increasingly replacing heavier steel, for example in the automotive industry to reduce fuel consumption.

(48) Overall, the aluminium industry expects demand to grow by about 80% by 2050, with primary and recycled aluminium each covering roughly an equal amount of demand.[21] Low-carbon AFAs will represent an important share of this demand. As can be seen from Figure 3, the automotive industry will reach a share of 45% of low-carbon aluminium by 2030 and 100% by 2050.

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emission performance standards for new passenger cars and for new light commercial vehicles, and repealing Regulations (EC) No 443/2009 and (EU) No 510/2011 (recast). These trends have also been discussed in previous Commission decisions – for example, see M.10702 – KPS CAPITAL PARTNERS / REAL ALLOY EUROPE, section 4.3.

17 Form CO, paragraph 177.

18 Regulation (EC) No 443/2009 of the European Parliament and of the Council of 23 April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO 2 emissions from light-duty vehicles, in force until 31/12/2019, afterwards replaced by: Regulation (EU) 2019/631 of the European Parliament and of the Council of 17 April 2019 setting CO2 emission performance standards for new passenger cars and for new light commercial vehicles, and repealing Regulations (EC) No 443/2009 and (EU) No 510/2011 (recast).

19 M.9076 - NOVELIS / ALERIS, Commission Decision of 1 October 2019, paragraph 91.

20 Directive 2000/53/EC of the European Parliament and of the Council of 18 September 2000 on end-of life vehicles (consolidated text), via EUR-Lex - 02000L0053-20200306 - EN - EUR-Lex (europa.eu). The aluminium industry seems to further enhance its efforts, see e.g. Circular Aluminium Action Plan, pages 18-22. The Circular Aluminium Action Plan is the aluminium sector's strategy for achieving aluminium's full potential for a circular economy by 2030. Available at: https://circulareconomy.europa.eu/platform/en/knowledge/circular-aluminium-action-plan-strategy-achieving-aluminiums-full-potential-circular-economy-2030

21 International Aluminium Institute report September 2021: Aluminium Sector Greenhouse Gas Pathways to 2050: Position paper p. 8ff / Executive Summary p. 1, 2, Summary Infographic p. 2; download via: Aluminium Sector Greenhouse Gas Pathways to 2050 - International Aluminium Institute (international-aluminium.org) (website accessed on 03.10.2022).

Figure 3 – Share of low-carbon aluminium per industry

[Figure]

Source: Parties' response to RFI 24, Annex Q.4, p.6.

(49) The importance of low-carbon AFAs to automotive customers is explicitly mentioned in Hydro's internal documents. When comparing the interest in low-carbon aluminium by industry, Hydro found that [Hydro customer analysis].[22]

(50) Furthermore, […]automotive original equipment manufacturers ("OEMs") aspire to increase the use of recycled cast aluminium [Hydro market analysis], while reducing the use of primary (alumina-based) aluminium [Hydro market analysis]. The largest shifts to recycled cast aluminium are foreseen for the application in wheels, chassis, closures and body structure.

Figure 4 – Anticipated increase of recycled aluminium share for OEMs

[Figure]

Source: Form CO, Annex 1.2.55, Hydro, [Notifying Party internal document].

(51) The Notifying Party itself confirms the increasing demand for "*green*" aluminium.[23] A Hydro internal document, shown in Figure 5, [Hydro market analysis].[24]

(52) This is consistent with feedback received during the market investigation. The overwhelming majority of both customers and competitors[25] confirmed that demand for low-carbon AFAs in the EEA has increased over the past 3 years,[26] and that they expect a significant increase in the next 3 years.[27] One competitor explained that "*the share of low-carbon AFA increased to meet the targets of the automotive sector"*,[28] while another explained that there was "*actually small increase but expecting significant in the future"*.[29] Similarly, one customer explained that "*there is definitely a trend regarding low-carbon AFA and therefore we are expecting an increase"*.[30]

Figure 5: Hydro's forecast on the demand of recycled aluminium[31]

[Figure]

Source: Form CO Annex 6.2.g - Notifying Party internal document.

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22 Parties' response to RFI 9, Annex Q.1.1.2, [Notifying Party internal document].

23 Form CO, paragraph 168.

24 Form CO Annex 6.2.g – [Notifying Party internal document].

25 Throughout this Decision, when the Commission refers to the (number of) respondents in relation to a given question of the market investigation, this excludes all respondents that have not provided an answer to that question or replied 'I do not know', unless stated otherwise. For example, 'a majority of respondents' means a majority of respondents having replied to a given question and not having ticked 'I do not know'.

26 Phase I questionnaire Q4 to customers, question 36 and Phase I questionnaire Q3 to competitors, question 39.

27 Phase I questionnaire Q4 to customers, question 37 and Phase I questionnaire Q3 to competitors, question 40.

28 Phase I questionnaire Q3 to competitors, question 39.1.

29 Phase I questionnaire Q3 to competitors, question 39.1.

30 Phase I questionnaire Q4 to competitors, question 37.1.

31 As the overall demand for aluminium is expected to grow, especially for foundry alloys from 3.4 MT in 2021 to 4.1 MT in already 2024, and car producers are also expected to use more aluminium proportionally and in total, it can be concluded that with primary and recycled aluminium covering a roughly equal demand of the rise in demand, the demand for recycled aluminium will rise. For further information, see Ducker report: https://www.european-aluminium.eu/media/2714/aluminum-content-in-european-cars_european-aluminium_public-summary_101019-1.pdf or https://www.european-aluminium.eu/policy-areas/recycling-circular-economy/ (both websites accessed on 28.03.2023).

(53) In the context of the general trend in the aluminium industry to use more recycled aluminium, many customers are introducing CO2 footprint as a selection criterion in their Requests for Proposals to their AFA suppliers, in addition to working with suppliers on relaxing specifications (i.e. the specific chemical composition of the AFA), without compromising mechanical properties and quality. This is further addressed in Sections 7.2.5 and 7.2.4.

7.2.2. Market trend towards the electrification of vehicles

(54) […], the trend towards e-mobility is expected to accelerate the shift from steel to aluminium, as aluminium is especially important for e-mobility, where lightweight production is of utmost importance to increase reach.[32]

Figure 6: trend towards E-mobility

[Figure]

Source: RFI7_Annex Q21, slide 13 (Hydro).

(55) European automotive players in particular move towards sourcing "*green(er)"* aluminium and AFAs. [Hydro market analysis].

Figure 7: Rising demand of aluminium for e-mobility

[Figure]

Source: Form CO, Annex 1.2.47, Notifying Party internal document.

(56) The abovementioned vehicle-electrification has become an important driving force especially for developing new and advanced[33] alloys […], to the detriment of the less advanced alloys typically used for internal combustion engine vehicles. This is shown in the establishment of inter-sectoral collaboration agreements such as the collaboration agreement on Advanced and Sustainable Aluminium Alloys for High-Pressure Die Cast Components for e-Mobility ('AleMo'), entered into 22 June 2022 between Elkem ASA (silicon producer), Stena Recycling AS (waste recycler), Nemak Europe GmbH (automotive supplier, focussed on aluminium components), Hydro (project owner) and two R&D institutions. In addition, this project is funded by the Research Council of Norway. This project will, inter alia, explore the effects of minor and major alloying and impurity elements in aluminium.[34]

7.2.3. Customers adopt strict emissions reduction targets

(57) Aluminium customers have set ambitious objectives to reach net zero targets across industries, in line with regulations and shifting consumer preferences.

(58) As can be seen from Figure 8, these emission reduction targets cover all scopes (i.e. scope 1,[35] scope 2,[36] and scope 3[37]) and as such aim at achieving carbon neutrality, although at varying paces.

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32 The use of aluminium components in vehicles reduces CO2 emission (vehicle weight reduced by 100 kg gives 0,315l / 100 km less fuel consumption, which results in the reduction of 8g CO2 per km). Source: https://alumetal.pl/en/aluminium/aluminium-1 (website accessed on 28.03.2023).

33 As further explained in the market definition section below, advanced alloys refer to AFAs with an iron content of up to 0.55% and a copper content of up to 0.7%.

34 Parties' response to RFI 8, [Notifying Party internal document].

35 Direct emissions from owned or controlled sources.

36 Indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the reporting company.

37 Indirect emissions that occur in a company's value chain.

Figure 8 – Carbon neutrality targets for selected customers across industries

[Figure]

Source: Form CO, Annex 6.2.d, [Notifying Party internal document].

(59) To achieve the scope 3 reduction target, aluminium is a key lever given its significantly higher CO2 footprint compared to other materials and given that scope 3 emissions represent a large share of the carbon footprint of certain end products (for instance, 20-50% for cars and >90% for beverage cans).[38]

(60) This will not only lead to the emergence of green and circular aluminium products but also to the creation of multiple layers of green aluminium products (namely near zero, dark green and green prime). [Hydro market analysis].[39].[40]

Figure 9 – […] classes of green aluminium products […]

[Figure]

Source: Form CO, Annex 6.2.d, [Notifying Party internal document].

(61) [Hydro market analysis] at this stage no clear industry standard has emerged as to the appropriate carbon footprint level and the scopes to be taken into account for the purpose of defining low-carbon aluminium products. While this is now entirely in the hand of the suppliers, who have adopted diverging levels and included different scopes in their footprint calculations, the trend remains however toward lowering carbon footprint levels with possibly even stricter requirements in the future.

7.2.4. Customers are introducing CO2 footprint as a key selection criterion but still unwilling, at this stage, to pay a surcharge for low-carbon AFAs

(62) The importance of sustainability considerations in the aluminium sector in general and the AFA market in particular greatly impact competitive dynamics therein with CO2 footprint becoming a key selection criterion.

(63) Indeed, several AFA customers have introduced CO2 footprint as a selection criterion for their Requests for Proposal to their AFA suppliers, or are considering doing so. [Hydro customer analysis].

Figure 10 – Automotive customers' view on low-carbon aluminium

[Figure]

Source: Reply to RFI 24, Annex Q4, p. 12.

(64) The results of the market investigation are consistent with this trend. The Commission found that lowering carbon footprint is increasingly important to customers and is already being used as a purchase criterion. Market participants emphasised this in their market feedback. A competitor explained for example that "[t]*he customer wants more and more end of life scrap used in their products to enable them to achieve their carbon footprint targets*".[41] A customer confirmed that the "*requirement for low CO2 is now in most of the RFQ* [request for proposals] *we receive*".[42]

(65) [Hydro price strategy].[43].

38 Form CO, Annex 6.2.d, [Notifying Party internal document].
39 Form CO, Annex 6.2.d, [Notifying Party internal document].
40 Form CO, Annex 6.2.d, [Notifying Party internal document and market analysis.].
41 Phase I questionnaire Q3 to competitors, question 40.1.
42 Phase I questionnaire Q4 to competitors, question 37.1.
43 Hydro's response to RFI 19 – [Notifying Party internal document].

Figure 11 – Importance of low-carbon to customers […]

[Figure]

Source: Reply to RFI 24, Annex Q4, p. 4.

(66) Customer current unwillingness to pay an upcharge for green AFAs is […] confirmed by the feedback received from market participants. One customer stressed in this respect the following: "*we see a very few customers request it but customers are not ready to pay for it*".[44]

7.2.5. Customers, in collaboration with suppliers, are widening alloys specification to allow for increased post-consumer scrap content

(67) By widening specifications (i.e. the specific chemical composition of an AFA) without compromising mechanical properties and quality, customers aim at using a greater share of recycled aluminium also in alloy types and applications which have typically been served mainly by primary aluminium alloys, for instance for wheels.

(68) This corresponds to the feedback received during the market investigation, where a majority of competitors indicated the existence of ongoing or ended R&D projects with their customers to widen alloy specifications.[45] [Alumetal commercial strategy].

(69) The Parties' internal documents discuss on multiple occasions deviations from specification to make the use of post-consumer scrap ('PCS')[46] in the production of advanced AFAs easier, in line with the sustainability objective. [Confidential commercial strategies].

Figure 12 – Increase in alloy tolerance

[Figure]

Source: Form CO, Annex 5.4.1.1, p. 18.

(70) [Hydro customer analysis].[47].[48]

7.3. Suppliers are positioning themselves to serve the growing demand for low-carbon AFAs

(71) Pushed by strict regulatory targets and frameworks as well as high-incentive mechanisms, sustainability has become an important issue for both producers and customers of AFAs.

(72) While customers adopt strict emission reduction objectives, suppliers implement various levers such as using more recycling content in order to achieve these targets. As discussed in Section 7.2.5 above, suppliers are widening the specifications of their alloys, in order to allow for this increase in recycled content.

(73) As the demand for low-carbon AFAs grows, suppliers adjust to serve customers. In doing so, some suppliers develop a specific branding for low-carbon AFAs and aim to certify the carbon footprint of their products.

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44 Phase II questionnaire Q8 to customers, question I.10.

45 Phase II questionnaire Q8 to customers, question K.B.17.

46 PCS is previously used aluminium. PCS is different from pre-consumer scrap which refers to 'leftovers' in the production process and hence has not yet been used by consumers.

47 Form CO, Annex 5.4.1.1, p. 74.

48 Form CO, Annex 5.4.1.1, p. 77.

7.3.1. Recycling is to achieving sustainability targets

(74) In reaction to customers' decarbonisation objectives, aluminium suppliers have embarked on a decarbonisation drive, adopting various targets, as can be seen from a Hydro internal document reproduced in Figure 13.

Figure 13 – Decarbonisation target of a selection of aluminium suppliers

[Figure]

Source: Form CO, Annex 6.2.d, [Notifying Party internal document].

(75) In order to achieve these targets, aluminium suppliers will have to implement a variety of measures, known as 'levers', […]. Those levers have different feasibility and maturity degrees, and come at varying costs in addition to having different CO2 impacts.

Figure 14 – Decarbonisation levers, maturity level, associated impact and cost

[Figure]

Source: Form CO, Annex 6.2.d, [Notifying Party internal document].

(76) While certain actions include decarbonisation of the upstream bauxite and alumina value chain (i.e. electrification of mining operation), technology improvements of the smelting process (i.e. inert anodes)[49],or the use of renewable energy in the smelting process,[50] suppliers can also focus on introducing or increasing the share of PCS in their production process. Indeed, the production of recycled aluminium from scrap has an energy usage around 95%[51] lower than that of non-recycled aluminium and generates, as evidenced by the slide captioned in Figure 15, significantly less CO2 emissions.

Figure 15 – Aluminium emissions from recycled vs non-recycled aluminium

[Figure]

Source: Form CO, Annex 6.2.d, [Notifying Party internal document].

(77) Recycled aluminium, particularly PCS,[52] provides aluminium suppliers with a powerful instrument to decarbonise their production process. [Hydro market analysis].[53] in addition to an high impact on reducing CO2 emissions.

(78) Nevertheless, as recycled aluminium contains a higher level of impurities compared to non-recycled aluminium, its use in very demanding applications is for now limited. For those very demanding applications, suppliers are typically only able to add a limited amount of recycled content, if any, compared to less demanding

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49 Some market players also focus on improving the technology used in the melting process. There are several ongoing inert anodes and other experimental decarbonization technologies projects in the market. See for instance Rusal and Rio Tinto respectively available at: https://rusal.ru/en/innovation/technology/inertnyy-anod/ and https://www.riotinto.com/news/releases/2021/ELYSIS-Start-of-construction-of-commercial-scale-inert-anode-cells- (both websites accessed on 28.3.2023).

50 For example, Hydro and Alcoa rely on hydroelectric power for part of their primary aluminium production.

51 See report from European Aluminium an industry association available at: https://european-aluminium.eu/wp-content/uploads/2022/08/2020-05-13_european-aluminium_circular-aluminium-action-plan_executive-summary.pdf (website accessed on 28.3.2023).

52 Pre-consumer scrap or scrap generated during the production process in typically not considered as contributing to lowering carbon footprint since the allocation of a low CO^2 footprint to such a scrap incentivises the production of waste.

53 Form CO, Annex 6.2.d, [Notifying Party internal document].

applications, where the share can be significantly higher. As explained in Section 7.2.5, customers are however increasingly keen on widening their alloy specifications and working on several initiatives to increase the share of PCS even for those demanding applications.

7.3.2. Branding

(79) Hydro has developed two brands for the sale of its low-carbon aluminium products including AFAs. First, Hydro Reduxa is a certified low-carbon aluminium with a maximum carbon footprint of 4.0 kg CO2 per kg of aluminium which comes, amongst others, in the form of AFAs. Second, Hydro also developed the CIRCAL brand, which is a range of prime quality aluminium made with a minimum of 75% recycled, post-consumer scrap, although it does not cover AFAs for the moment.

(80) [Hydro commercial strategy].[54]

Figure 16 – Hydro's future branding strategy for low-carbon AFAs

[Figure]

Source: Reply to RFI 24, Annex Q4, p. 22.

(81) In line with this, several other competitors have developed their own brands for low-carbon aluminium products, including low-carbon AFAs. The Hydro internal document captioned in Figure 17 lists low-carbon brands of certain competitors of the Parties. Some suppliers have developed several brands with different carbon footprints or recycled content levels.

Figure 17 – Overview of the low-carbon brands of the Parties' competitors

[Figure]

Source: Form CO, Annex 6.2.d, [Notifying Party internal document].

(82) [Hydro market analysis].[55]

7.3.3. Certificates of origin are key to guarantee and inform about the CO2 footprint

(83) Another parallel trend that the development of low-carbon AFAs resulted in is the increased reliance on certificates of origin. Suppliers provide certificates of origin that enable customers to verify the sustainability benefits when reporting on their own operations. This is confirmed by several sources.

(84) First, the feedback received from market participants confirmed the importance of those certificates. Indeed, a majority of customers purchasing low-carbon advanced AFAs confirmed that they require formal certification from their suppliers.[56] Similarly, a majority of producers supplying low-carbon advanced AFAs confirmed that they market such low-carbon advanced AFAs specifically guaranteeing certain emission levels.[57] In this respect, one competitor stressed that "*the scope of included emissions is scope1 scope2 scope3 and we provide supporting documents if required*"[58] while another one explained that "*internally we have analysed the Scope 2, and asked for feedback from suppliers for Scope 1 and 3. So we can declare to our customer the CFP of the alloy we supply them*".[59]

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54 Parties' response to RFI 24, Annex Q4, p.22.
55 Parties' response to RFI 24, Annex Q3, slide 14.
56 Phase II questionnaire Q8 to customers, question I.9.
57 Phase II questionnaire Q7 to competitors, question H.10.
58 Phase II questionnaire Q7 to competitors, question H.10.
59 Phase II questionnaire Q7 to competitors, question H.10.

(85) [Hydro strategic considerations].

(86) [Hydro market analysis].[606162]

(87) [Hydro strategic considerations].

Figure 18 – Certification as a key parameter in assessing competitors' low-carbon offering

[Figure]

Source: Reply to RFI 24, Annex Q3, p. 3.

(88) In the third place, the Reduxa prospectus[63] provides an example of the importance that Hydro attaches to carbon footprint certificates. Hydro states, as can be seen from Figure 19, that sustainability is more than just the carbon footprint, referring to all the certificates that it provides to verify the carbon footprint of its Reduxa product.

Figure 19 – Hydro's prospectus on Reduxa

Source: Form CO – Annex 6.2.f, p. 2.

(89) As such, traceability becomes a critical differentiating factor. Ultimately, while several suppliers, in particular refiners, would be able to produce low-carbon AFAs, certain customers might only consider those that are capable of certifying the carbon footprint of their AFAs.

60 Form CO, Annex 6.2.d, [Notifying Party internal document].
61 Form CO, Annex 6.2.d, [Notifying Party internal document].
62 Form CO, Annex 6.2.d, [Notifying Party internal document].
63 The marketing documents used by Hydro for its low-carbon aluminium brand Reduxa.

7.3.4. Suppliers attempt to price differentiate in what is still a niche

(90) Thanks to branding and footprint certification, suppliers try, as further explored in Section 8.2.1.3.3, to achieve an upcharge on low-carbon AFAs. One customer explained that "[i]*n my opinion the supplier base and pricing is different for low-carbon AFAs*"[64] while another one stressed that suppliers of low-carbon AFAs "*request a price premium for it"*.[65] As explained in Section 8.2.1.3.3, customers are however resisting such an upcharge.

(91) While low-carbon volumes are expected to significantly increase in the coming years, they are currently still limited. [Hydro commercial strategy].[66] In 2021, Hydro sold […] KMT of Reduxa-branded products, representing between [10-20] and [10-20]%% of its total sale of solid advanced AFAs. Since Hydro is a leading player in low-carbon AFAs with its Reduxa offering, supplied volumes by other competitors are expected to be equally limited.

7.4. Future perspective on low-carbon AFAs

(92) The trends described in recitals (44) to (91) are at the heart of the Transaction rationale. As will be described in detail in this Decision, Hydro is seeking through its acquisition of Alumetal to acquire a strong position in AFAs made from scrap, including know-how and capabilities in scrap sourcing, sorting and utilisation, as can be seen in Figure 20.

Figure 20: Assessment of Alumetal's potential

[Figure]

Source: Parties' response to RFI 13, Annex Q21, [Notifying Party internal document].

(93) [Hydro commercial strategy].

Figure 21 –Hydro's contemplated synergies form the acquisition of Alumetal

[Figure]

Source: Hydro, Parties' presentation to the Commission […].

(94) Competitors of the Notifying Party are expected to adopt similar strategies by increasing the share of recycled material in the advanced AFAs they produce. Some of these competitors are already implementing equivalent strategies with respect to other aluminium products (e.g. Alcoa with its Ecodura offering for billets containing more than 50% of scrap) and would likely do the same for AFAs.

8. MARKET DEFINITION

8.1. Legal framework

(95) The main purpose of market definition, as explained in the Commission Notice on the definition of the relevant market for the purposes of Community competition law (the 'Market Definition Notice'), is to identify in a systematic way the competitive constraints that the undertakings involved face. The objective of defining a market in both its product and geographic dimension is to identify those actual competitors of the undertakings involved that are capable of constraining those undertakings' behaviour and of preventing them from behaving independently of effective

64 Phase II questionnaire Q8 to customers, question I.8.
65 Phase II questionnaire Q8 to customers, question I.8.
66 Parties' response to RFI 24, Annex Q4, p. 25.

competitive pressure.[67] The Market Definition Notice further explains "*from an economic point of view, for the definition of the relevant market, demand substitution constitutes the most immediate and effective disciplinary force on the suppliers of a given product, in particular in relation to their pricing decisions"*.[68]

(96) As a second competitive constraint, "supply-side substitutability may also be taken into account when defining markets in those situations in which its effects are equivalent to those of demand substitution in terms of effectiveness and immediacy".[69]

(97) With regard to geographic market definition, paragraph 8 of the Market Definition Notice states that "[t]he relevant geographic market comprises the area in which the undertakings concerned are involved in the supply and demand of products or services, in which the conditions of competition are sufficiently homogeneous and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different in those area".[70]

(98) More specifically, the Commission takes a view on the basis of broad indications as to the distribution of market shares between the Parties and their competitors, as well as an analysis of pricing and price differences at national and Union or EEA level.[71] In a further step, the Commission will identify possible obstacles and barriers isolating companies located in a given area from the competitive pressure of companies located outside that area, so as to determine the precise degree of market interpenetration at national, EEA or global level.[72] For this purpose, the Commission will consider the following type of evidence: past evidence of orders to other areas, basic demand characteristics, views of customers and competitors, current geographic pattern of purchases, trade flows and pattern of shipments and barriers and switching costs associated to divert orders to companies located in other areas.[73] It is important to note that, "[a]*ccess to distribution in a given area, regulatory barriers still existing in certain sectors, quotas and custom tariffs might also constitute barriers isolating a geographic area from the competitive pressure of companies located outside that area*".[74]

8.2. Aluminium Foundry Alloys

(99) Both Parties are active in the production and sale of AFAs, resulting in a horizontal overlap between their activities. The Parties' activities do not overlap with respect to the other aluminium casthouse products produced by Hydro since AFAs are the only casthouse products produced by Alumetal.

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67 Commission Notice on the definition of the relevant market for the purposes of Community competition law, OJ C 372, 9.12.1997, paragraphs 1 and 2.

68 Market Definition Notice, paragraph 13.

69 Market Definition Notice, paragraph 20.

70 Market Definition Notice, paragraph 8.

71 Market Definition Notice, paragraph 28: This initial view is used basically as a working hypothesis to focus the Commission's enquiries for the purpose of arriving at a precise geographic market definition.

72 Market Definition Notice, paragraphs 29 and 30: This further analysis includes an examination or requirements for a local presence in order to sell in that area, the conditions of access to distributors channels, costs associated with setting up a distribution network, and the presence or absence of regulatory arising from public procurement, price regulations, quotas and tariffs limiting trade or production, technical standards, monopolies, freedom of establishment, requirements for administrative authorisations, packaging regulation etc.

73 Market Definition Notice, paragraphs 45 to 50.

74 Market Definition Notice, paragraph 50.

(100) AFAs refer to a type of aluminium casthouse product made by (i) directly mixing pure aluminium with various other metals, called alloying elements (silicon, manganese, iron, titanium, strontium, magnesium, copper, etc.) or introducing these alloying elements through 'master alloys'; or by (ii) re-melting aluminium scrap and, if needed to meet the customer's specifications, refining the product composition by mixing the melted scrap with standard ingots (i.e. solid pure aluminium) and/or master alloys/alloying elements.

(101) Based on these two production processes, Hydro refers to AFAs made directly from pure aluminium as being PFAs while AFAs made from recycled metal (either recycled end-of-life aluminium products or production process scrap) are referred to as secondary aluminium foundry alloys ('SFAs').

8.2.1. Product market definition

8.2.1.1. The Commission's decisional practice

(102) The Commission has not previously investigated aluminium foundry alloys. When dealing with other aluminium casthouse products, the Commission has considered separate relevant product markets according to the different uses/shapes in which these products are produced (e.g. standard ingots, extrusion billets, rolling slabs, wire rod and foundry alloys), but ultimately left the question open.[75] In its past decisions, the Commission initially also considered that primary aluminium products (produced in smelters from alumina) and secondary aluminium products (produced in remelters from scrap) were part of different product markets and as such the market should be defined according to the production process.[76] In more recent decisions, however, the Commission has found evidence of substitutability between the two production processes (in particular given the trend of more recycling and thus secondary production) and ultimately left the question open.[77]

8.2.1.2. The Notifying Party's arguments

(103) The Notifying Party argues that the Commission has previously left open the question of whether the relevant product market should be defined more narrowly by distinguishing between the different shapes in which aluminium products are produced (i.e., for example, ingots, billets, slabs and foundry alloys).

(104) The Notifying Party further submits that for the case at hand, it is not necessary to make a definitive decision on the exact market definition because even if AFAs were to be regarded as belonging to their own distinct product market, the Transaction would not raise any concerns. The Notifying Party explains that since Alumetal only produces aluminium casthouse products in the form of AFAs, defining the relevant market as consisting only of AFAs is conservative because a more broadly defined product market would mean that the share increment brought about by the Transaction would be smaller.

(105) Regarding a possible segmentation by form of AFAs (i.e. solid vs liquid), the Notifying Party claims that there is no need to further segment the product market depending on whether an AFA is supplied in the typical ingot form or in liquid form.[78] From a demand perspective, the Notifying Party argues that since AFAs in liquid and in ingot form have identical properties apart from their state, they are

[75] M.7342 - Alcoa/Firth Rixson, paragraph 93; M.4441 EN+/Glencore/Sual/UC Rusal, paragraph 27.
[76] M.4827 - Rio Tinto/Alcan, paragraph 21.
[77] Form CO, paragraph 367.
[78] Form CO, paragraph 185.

perfectly substitutable.[79] From a supply perspective, the Notifying Party submits that supplying AFAs in liquid form is an extra service that a supplier can offer, for convenience, to a closely located customer. This, according to the Notifying Party, does not mean that a supplier of liquid AFAs would be unable to supply such volumes in ingot form and to compete with all its capacity also in the solid/ingot form AFAs segment. Accordingly, the Notifying Party claims that looking at a separate solid/ingot form AFAs market is completely artificial.[80]

(106) Regarding a possible segmentation of AFAs by alloy type, the Notifying Party does not consider that AFAs can be split by alloy types. Indeed, the Notifying Party argues that, firstly, from a demand perspective, each alloy type is typically used for a number of end uses and, conversely, a number of different alloy types can be used for the same end use. The Notifying Party also consistently claimed during the initial phases of the market investigation that it is not in a position to provide alloy-level or segment level data but ultimately provided such data at a later stage of the investigation.[81] Secondly, the Notifying Party argues that, from a supply perspective, foundry alloys are produced from aluminium mixed with AMAs according to customer specifications, and that AMAs are widely available. Furthermore, the type of AMAs does not affect the production process of AFAs. Depending on the choice of AMA, the resulting foundry alloy would, according to the Parties, fall into different types of alloys. There is therefore, according to the Notifying Party, perfect supply side substitutability between the alloy types, and indeed, they submit that the industry does not track sales of foundry alloys by alloy types. Therefore, according to the Notifying Party, it is not necessary to distinguish between different types of alloys.[82]

(107) Regarding a possible segmentation of AFAs by end-use, the Notifying Party argues that it is not necessary to further segment the relevant product market according to the different end-use applications.[83] According to the Notifying Party, this is because AFAs are predominantly used in the automotive sector (70% of the demand for AFAs in Europe). In 2021, [90-100]% of Hydro's sales and approximately [80-90]% of Alumetal's sales of AFAs were to automotive customers.[84] The Notifying Party further submits that it expects the customer footprint of the Parties' competitors to be similar.[85] The Notifying Party did not provide its view on possible more precise end-use segments such as cylinder heads or structural parts since it submitted that, in any event, it is not necessary or meaningful to segment the relevant market(s) by end-use applications.[86]

(108) Regarding a possible segmentation of low-impurity AFAs and standard AFAs, the Notifying Party acknowledges that the chemical composition is what customers care about,[87] and that it is possible for all AFA producers to produce any AFA regardless

79 Form CO, paragraph 185.
80 Form CO, paragraph 186.
81 Parties' response to the Request for information no 27 and mapping data submitted as Annexes 6.2.c.1 to Form CO.
82 Form CO, paragraph 367.
83 Form CO, paragraph 178.
84 Form CO, paragraph 178.
85 Form CO, paragraph 178.
86 Response to the Article 6(1)(c) decision, paragraph 29.
87 Form CO, paragraph 278.

of the production process (smelter production vs refiner[88] production).[89] Nevertheless, the Notifying Party considers that supply-side substitutability from a production point of view between smelter production and refiner production is limited as for economic reasons a producer would focus on either AFA production from alumina or from scrap based on the production equipment available to the producer.[90] Therefore, the Notifying Party considers that it is more appropriate to distinguish AFAs according to the production process and the input product used. More specifically, the Notifying Party submits, with respect to the impurity level of AFAs, that the purity level of a given alloy can be defined by looking at its iron (Fe) and copper (Cu) content such that any AFA the content of which is equal to or less than 0.2% Fe and 0.03% Cu is considered a PFA. If one of these chemical compositions is higher, then the foundry alloys will typically be considered an SFA.

(109) The Notifying Party did not provide its views as to a possible segmentation of the market for AFAs according to carbon footprint. The Notifying Party simply explains that while it is true that Hydro is selling some [Hydro sales volumes] of its AFAs under the Reduxa brand as low-carbon AFAs, Hydro is by no means the only alumina-based producer to do so. The Notifying Party further adds that AFAs produced by Alumetal are also low-carbon ones similarly to those produced by other suppliers relying on scrap.

8.2.1.3. The Commission's assessment

(110) In light of the principles outlined in Section 8.1, the Commission considers that for the purpose of defining the relevant product market in this Decision, it is not relevant to consider separate product markets for each of the primary and secondary AFAs. Instead, as explained in Section 8.2.1.3.1, the Commission considers that it is appropriate to identify a separate product market for advanced AFAs distinct from that of standard AFAs, defined by chemical composition.

(111) The Commission further considers that solid advanced AFAs (i.e. AFAs with an iron content of up to 0,55% and a copper content of up to 0,7%) constitute a product market distinct from liquid advanced AFAs, as assessed in recitals (120) and (121).[91]

(112) Furthermore, the Commission considers that there are indications that low-carbon AFAs may constitute a separate product market, as shown in Section 8.2.1.3.3. However, the Commission considers that the exact product market definition can be left open on this specific point for the purpose of this Decision given that the Transaction does not result in a significant impediment to effective competition irrespective of a further distinction of (solid advanced) AFAs based on their carbon footprint.

(113) Finally, while there is some degree of differentiation between end-uses,[92] ultimately the Commission considers that end-uses do not constitute separate product markets,

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88 Unlike remelters which typically only liquidise aluminium scrap without changing its chemical composition, refiners recycle aluminium by blending different types of scrap resulting in a change to its chemical composition.

89 Form CO, paragraph 140.

90 Form CO, paragraph 140.

91 See Section 8.2.1.3.1.

92 The broad categories identified during the Commission's investigation are: non-automotive, automotive – wheels, automotive – engine, automotive – structural parts. These categories are in line with the ones consistently tracked by Hydro in the ordinary course of business. [Notifying Party internal documents].

as assessed in detail in Section 8.2.1.3.4. Nevertheless, these sub-segments will be considered in the Commission's competitive assessment.

8.2.1.3.1. The chemical composition of AFAs is key to customers: advanced AFAs is a separate market from standard AFAs

(114) The Commission's market investigation found that the chemical composition of AFAs, which gives alloys specific mechanical properties, is essential for customers. Therefore, and as will be shown in the recitals below, contrary to what the Parties argue, primary and secondary AFAs do not constitute a separate product market.

(115) While the primary and secondary-based distinction mirrors the differences in the production processes and the used inputs, it does not capture the most critical feature of the AFAs market, which is the physical properties of the produced AFA (e.g. resistance to corrosion, cracking, oxidation, fatigue).[93] These physical properties derive from the specific chemical composition (the 'chemical specification') and can be obtained irrespective of the production input used.[94] The used input (alumina or scrap) is not a decisive factor for the chemical composition of the produced AFAs since (some) recycled/scrap-based suppliers such as Alumetal can produce high purity alloys while alumina-based AFAs suppliers can equally lower the purity of their produced AFAs by adding alloying elements (see recital (124)). As further explained below (Section 9.1.4.3.1.2), know-how and capabilities in scrap utilisation are critical for scrap-based AFAs suppliers to replicate the specifications of AFAs produced from alumina, which typically have low impurity levels. This is confirmed by Hydro's internal documents explaining that "[Hydro market analysis]".[95]

(116) In view of this, the Commission will refer to both AFA producers from alumina and recycled/scrap-based suppliers of AFAs that are capable of producing advanced AFAs as being 'advanced players', consistent with the Notifying Party's view in its internal documents. Conversely, suppliers from recycled or scrap material that are not capable of producing advanced AFAs will be referred to as 'standard players'.

(117) The precise chemical composition of alloys refers to specific limits on the content of non-aluminium elements (such as for example copper, manganese or iron) present in AFAs.[96] These elements can be either alloying elements (i.e. elements intentionally added to the aluminium in order to give it specific properties) or impurities (i.e. elements inevitably present in the base aluminium although not required to give specific properties to the alloy).[97] Typically, impurities cannot be removed from AFAs, only diluted with very pure aluminium.[98] The chemical composition of a given alloy can be composed of many different elements,[99] and, in theory, this could lead to an almost infinite number of alloys. While there exists some level of standardisation in the industry,[100] in practice many alloys are customised by customers to precisely meet their specific needs.[101]

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93 Form CO, paragraph 126.
94 Minutes of a call with a competitor dated 5 May 2022, paragraph 4.
95 Hydro's response to RFI 19 – [Notifying Party internal document].
96 Form CO, paragraph 121.
97 Hydro's response to RFI 19 – [Notifying Party internal document].
98 Response to the Article 6(1)(c) decision, paragraph 6.
99 In the response to RFI 17 on transaction data, the Parties identified as many as 31 elements for which customers have specified a minimum and/or maximum content.
100 Hydro's response to RFI 19 – [Notifying Party internal document].
101 Form CO, paragraphs 175 and 176.

(118) A majority of customers and competitors consider that, for a given end-use, foundry alloys require a certain chemical composition, which can be obtained irrespectively of the production input (i.e. alumina or recycled material).[102] One competitor stated that "[p]*rimary Foundry Alloys can be produced either with scrap or with alumina. The obtained chemical analysis fulfil the specification of the alloy and therefore are considered interchangeable. The final result in terms of mechanical and technical properties for customers would be the same but the raw material used is different"*.[103] A customer further confirmed that *"[t]he source of aluminium is not a critical point; the most important factor for it is the chemical composition"*.[104] In Figure 22, for example, an extract from a customer request for quote shows chemical composition as a key factor to respect in the sales process.

Figure 22 – Extract from customer request for quotes

[Figure]

Source: Alumetal's response to RFI 20- Part 02 –[Internal document].

(119) Therefore, the production process of an AFA (i.e. PFA or SFA) is not as such a relevant factor for customers. The limited importance of the production process to the final customer requirements is highlighted by the fact that many traditional smelters (such as Hydro itself, or Alcoa) are increasing the scrap content in their AFA production, and therefore producing a product that is in essence highly similar to that produced by traditional refiners.[105]

(120) Industry players broadly categorise AFAs based on the purity level reached by each alloy, as defined by two main common impurities found in AFAs: iron and copper. Indeed, market participants explained that, broadly speaking, pure alloys tend to have low iron and copper:[106] as one market participant explained "[…] *high grade secondary metals. These alloys, that include low iron and copper contents*".[107]

(121) Furthermore, in Hydro's internal documents, there are numerous references to what it refers to as "High Grade SFA", i.e. high purity scrap-based alloys produced by refiners that are in competition with alloys produced by smelters.[108] [The Parties' commercial strategy].[109]

(122) In terms of chemical composition, the Commission considers that, for the purpose of this Decision, the most appropriate maximum limit for iron and copper content can be placed at 0,55% iron content and 0,7% copper content for advanced AFAs. Indeed, these limits have been identified in Hydro's internal documents, prepared over the ordinary course of business.[110] Furthermore, the appropriateness of these limits has further been confirmed by market participants. Indeed, a majority of customers and a majority of competitors consider that these levels are appropriate to

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102 Phase I questionnaire Q1 to competitors, question 8; Phase I questionnaire Q2 to customers, question 7, Phase II questionnaire Q7 to competitors, G.A.1 and H.1, Phase II questionnaire Q8 to customers, I1.

103 Phase I questionnaire Q1 to competitors, question 8.1

104 Minutes of a call with a customer of 6 May 2022, paragraph 11.

105 Form CO, paragraph 93; https://www.alcoa.com/global/en/stories/releases?id=2022/04/alcoa-advances-sustainably-with-recycled-aluminum-produced-using-renewable-energy (website accessed on 28.3.2023).

106 Minutes of a call with a competitor of 4 November 2022, paragraph 9.

107 Minutes of a call with a competitor of 4 November 2022, paragraph 20.

108 For example: Hydro's response to RFI 19 – HYD_0000109307_200608, HG SFA definition.

109 Hydro's response to RFI 19 – [Notifying Party internal document].

110 For example: Hydro's response to RFI 19 – HYD_0000109307_200608, HG SFA definition, slide 3.

capture the bulk of the alloys used in applications requiring advanced physical properties.[111]

(123) The market investigation further showed that, from a demand perspective, advanced and standard alloys are not substitutable. As outlined above, chemical composition is key for customers of AFAs, since it drives the technical performance of the material. Indeed, one customer explained that "[c]*hemistry (linked to technical constraints) required must be respected at 100%*".[112] Furthermore, a majority of customers explained that they cannot replace advanced AFAs with standard AFAs in their production process.[113] Finally, according to a majority of customers, prices differ between advanced and non-advanced AFAs.[114]

(124) From a supply perspective, the Commission has found that there are also limits to substitutability between advanced and standard AFAs. Indeed, while in theory all AFA producers can produce all types of AFAs, in practice there are constraints on producers' capacity to competitively produce all types of alloys. For traditional smelters, who typically produce very pure alloys, they are at a cost disadvantage when producing standard alloys, given that smelters must add alloying elements to their alumina-based aluminium, and given that scrap-based aluminium is generally cheaper than primary aluminium.[115] For refiners, access to good quality scrap is essential. Indeed, once impurities such as iron or copper are present in aluminium scrap, the only way to reduce the AFA iron or copper content is to dilute it with pure aluminium.[116] Since this pure aluminium must be purchased from smelters, this places refiners at a relative cost disadvantage compared to smelters. However, and as will be outlined more in depth in Section 9.1.4, some (but not all) refiners are able to produce cost-competitive advanced AFAs, because of their scrap sourcing know-how.

(125) Given the above, and for the purposes of this Decision, the Commission considers that advanced AFAs constitute a product market distinct from standard AFAs.

8.2.1.3.2. Solid AFAs with distinct characteristics compared to liquid AFAs

(126) The Commission's market investigation found that solid AFAs and liquid AFAs form distinct product markets. Indeed, both on the demand side and on the supply side, the technical characteristics of liquid aluminium mean that it is not substitutable with solid aluminium.

(127) On the demand side, from a cost perspective, it is advantageous for customers to request liquid aluminium, because it saves energy. Indeed, since the metal is already molten, one step of the production process is eliminated.[117] Nevertheless, liquid deliveries have important constraints. Firstly, there is a maximum delivery distance for liquid AFAs. Beyond around 350 to 400 kilometres, liquid deliveries become nearly impossible, due to the difficulty of keeping the metal at the correct temperature.[118] Secondly, specific infrastructure, such as dedicated equipment and casthouses, are needed by the customer in order to be able to receive liquid

111 Phase II questionnaire Q7 to competitors, question G.A.7 ; Phase II Q8 to customers, question I.5.
112 Phase II questionnaire Q8 to customers, question I.12.
113 Phase II questionnaire Q8 to customers, question I.11.
114 Phase II questionnaire Q8 to customers, question I.15.
115 Form CO, footnote 51.
116 Minutes of a call with a competitor of 5 May 2022, paragraph 5.
117 Minutes of a call with a competitor of 4 November 2022, paragraph 19.
118 Hydro's response to RFI 19 – [Notifying Party internal document].

aluminium deliveries.[119] As one customer explains: "[t]*he use of solid and liquid AFAs depends on the production infrastructure of the customers. Therefore, some customers should be able to use both forms. Some customers may just use one form*".[120] This has been confirmed by market participants since a majority of customers consider that they typically cannot purchase both solid and liquid forms of AFAs for a given use, given their product characteristics, delivery conditions, applications and prices.[121]

(128) On the supply side, the Commission first notes that producers also face specific constraints. First, suppliers typically require a minimum order volume and thus do not deliver to medium-or-small sized customers, given the additional difficulties to transport the liquid metal.[122] Second, producers need to carry out additional investments in order to supply liquid volumes. As one competitor explained: "[o]*ne cannot easily switch from solid to liquid delivery without big investments. The equipment is necessary"*.[123] [Alumetal product information].[124]

(129) Furthermore, the supply of liquid AFAs is subject to different competitive dynamics. Indeed, given that liquid aluminium must be used rapidly following delivery, deliveries of liquid aluminium are much more frequent, often daily or even twice a day.[125] Furthermore, commercial terms are typically governed by long-term contracts, with spot deliveries being less frequent.[126] Figure 23 further illustrates the differences in the supply of liquid AFAs in comparison to solid ones, confirming that industry players distinguish between solid and liquid alloys in the ordinary course of business.

Figure 23 – [Notifying Party internal document]

[Figure]

Source: Form CO, Annex 1.2.74, p. 66.

(130) As a consequence of the factors outlined (126) to (129), there is a high level of mutual dependency between customers and suppliers for liquid aluminium. For customers, proximity to their supplier is key, and there is a more limited number of suppliers available, both for distance reasons and because not all suppliers sell liquid aluminium. Hydro, for example, does not supply liquid aluminium. For suppliers, customer concentration is higher.[127] Indeed, some production plants are even constructed to support one particular customer: the Notifying Party submits that this is the case of one competitor.[128]

(131) Given the above, and for the purposes of this Decision, the Commission considers that solid AFAs constitute a product market distinct from liquid AFAs.

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119 Minutes of a call with a competitor of 4 November 2022, paragraph 17.

120 Phase II questionnaire Q8 to customers, question D.5.

121 Phase I questionnaire Q6 to customers, question 9; Phase II questionnaire Q8 to customers, question D.4.

122 Minutes of a call with a competitor of 4 November 2022, paragraph 18; Form CO, Annex 5.4.1.1, page 78.

123 Minutes of a call with a competitor of 4 November 2022, paragraph 19.

124 Parties' response to RFI 20 – [Alumetal Internal Document].

125 See for example: Alumetal's response to RFI 20 – Part 03 – ALU_0000202312-FW_ 05.10; Alumetal's response to RFI 20 – Part 03 – ALU_0000215988-AW_ [Alumetal Internal Document]d.

126 Hydro's response to RFI 19 – [Notifying Party Internal Document].

127 Hydro's response to RFI 19 – [Notifying Party Internal Document].

128 Form CO, Annex 1.2.74, p.32.

8.2.1.3.3. Specific demand for low-carbon AFAs

(132) The Commission has found first indications of specific demand for low-carbon AFAs. Firstly, extracts from the Parties' internal documents show that the demand for such AFAs is increasing. [Hydro's market analysis].[129] Figure 24 illustrates the automotive sector's (the largest customer industry for advanced AFAs) push to green its production, and the role green aluminium plays in this drive.

Figure 24 – Trends in green aluminium

[Notifying Party document]

(133) Secondly, the Commission observes that internal documents of the Parties confirm not only the increase in demand for low-carbon AFAs but also the importance of the carbon footprint for customers. [Parties' commercial strategies].[130] [Parties' commercial strategies].[131] As one customer explained: "[t]*here is a trend towards low carbon emission....and recycling is an asset as well as producing primary Al from hydroelectricity*".[132] A competitor also stated: "[s]*everal companies in the market are trying to reduce their CO2 footprint. This trend is driven by OEM customers amongst others*".[133]

Figure 25 – Reduxa business plan

[Notifying Party document]

Source: Form CO, Annex 5.4.1.11, p.14.

(134) Thirdly, other AFA suppliers have also recognised this increased sustainability drive and have produced offerings of low-carbon advanced AFAs. Figure 26 illustrates low-carbon advanced offerings from competitors. [Hydro market analysis].[134]

Figure 26 – Advanced AFA offerings from smelters

[Notifying Party internal document]

Source: Parties' response to RFI 24, Annex Q3, p. 3.

(135) [Parties'internal documents] customers, at least for the time being, are generally unwilling to accept price surcharges for low-carbon advanced AFAs. [Hydro commercial strategy][135] This suggests that customers may indeed switch to non-low-carbon AFAs in response to price increases and that, at least for the time being, they consider a low carbon footprint as 'nice to have' but not a separate product. This has been confirmed by market participants, which suggest that this general trend may be, at least for the time being, an ongoing change for all AFAs rather than the creation of a separate segment or product.

Figure 27 – Customers' willingness to pay for green aluminium

[Notifying Party internal document]

Source: Parties' response to RFI 24, Annex Q3, p. 4.

(136) In general, the market investigation in this regard has been mixed. In the in-depth investigation, a majority of customers and of competitors have confirmed that they do not consider the competitive dynamics for low-carbon AFAs to be different to that

129 Hydro's response to RFI 19 – [Notifying Party document].
130 Form CO, Annex 1.2.74, p.5.
131 Form CO, Annex 5.4.2.1, p.65.
132 Phase II questionnaire Q8 to customers, question I.8.
133 Minutes of a call with a competitor of 4 November 2022, paragraph 25.
134 Hydro's response to RFI 19 – [Notifying Party internal document].
135 Parties' response to RFI 24, Annex Q3, p. 4.

of the rest of AFAs.[136] In the Phase 1 investigation, however, the results were split, both for competitors and for customers.[137] It therefore appears that low-carbon AFAs are an emerging market, but one that is not yet defined and that not all market participants would view it as a separate product market. As one competitor explained: "[t]*he quality of a low carbon aluminium foundry alloys compared to the non low-carbon one is really similar and therefore a customer can easily substitute them. For this reason in the past customers do not consider them as a separate type of products. Today, due to the need to increase the quantity of recycled material and use a raw material with a low carbon footprint, probably customers start to consider them as different products as they influence the carbon footprint of their final products*".[138]

(137) However, for the purpose of this Decision, it can be left open whether low-carbon advanced AFAs constitute a product market distinct from the rest of advanced AFAs as the potential horizontal overlap of the Parties' activities involving advanced AFAs does not result in a significant impediment to effective competition under any plausible product market definition. Nevertheless, given that offering low-carbon AFAs is an element of differentiation for suppliers, this segment will be assessed in this Decision.

8.2.1.3.4. Differentiation between customer industries and specific end-uses

(138) The Commission further investigated whether AFAs should also be segmented by end-use.

(139) The market investigation suggests that there could be a relevant distinction between automotive customers and non-automotive customers. Some respondents to the market investigation considered that automotive customers are more stringent since they require suppliers to undergo a qualification process and to homologate the material.[139] According to some respondents to the market investigation, this process is complex.[140] For instance, one customer explained that "*validation for powertrain / automotive suppliers takes a long time, requires customer approval and it is usually very expensive*".[141]

(140) Furthermore, as confirmed by the Notifying Party, suppliers to the automotive industry will typically be required to hold certain relevant certifications.[142] In particular, these suppliers need to be certified under the IATF 16949 quality standard and/or the ISO 9001 norm. In this respect, all of the respondents that expressed a view considered that the IATF 16949 certification is either imperative or provides a significant advantage in order to competitively supply AFAs to automotive customers in the EEA.[143]

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136 Phase II questionnaire Q7 to competitors, question H.7; Phase II questionnaire Q8 to customers, question I.7.

137 Phase I questionnaire Q2 to customers, question 9; Phase I questionnaire Q1 to competitors, question 10.

138 Phase I questionnaire Q1 to competitors, question 10.

139 Phase I questionnaire Q1 to competitors, question 25.2.

140 Phase I questionnaire Q1 to competitors, question 25.2.

141 Phase I questionnaire Q2 to customers, question 25.2.

142 Form CO, paragraph 177.

143 Phase I questionnaire Q1 to competitors, question 12; Phase I questionnaire Q2 to customers, question 12.

(141) In addition, in the ordinary course of business, Hydro typically distinguishes between two broad end-industries, namely automotive and non-automotive. [Hydro market analysis].[144] [Hydro market analysis].

(142) [Hydro strategic considerations].[145] [Hydro strategic considerations].[146]

Figure 28 – Hydro split of AFAs in Europe by end industry and purity level

[Notifying Party internal document]

Source: Form CO, Annex 1.2.47, p. 5.

(143) In addition to this distinction by end-industries, it appears that AFAs can also be segmented according to more precise end-uses for each industry. This is true for all end-industries and in particular for passenger cars.

(144) First, the Commission observes that the Parties' internal documents consistently track AFA sales [Parties' market analyses]. Indeed, the Notifying Party's internal documents (see for instance Figure 29 and Figure 30) [Hydro market analysis].

Figure 29 – Specific passenger car end-uses identified by Hydro

[Notifying Party internal document]

Source: Form CO, Annex 5.4.1.1, p. 18.

Figure 30 – AFA segments identified by Hydro

[Figure]

Source: Hydro's response to RFI19 - HYD_ [Notifying Party internal document]

(145) [Hydro market analysis].[147]

(146) Consistent with Hydro's ordinary course of business practice, Alumetal also tracks its market position [Hydro market analysis]. For instance, [Alumetal market analysis] [148] [Alumetal market analysis].[149] [Alumetal market analysis], Alumetal reports in the slide captioned in Figure 31 its sales over the last 3 years for [Alumetal market analysis].

Figure 31 – Alumetal's alloys sales by specific passenger cars end uses

[Alumetal internal document]

Source: Form CO, Annex 5.4.2.1, p. 28.

(147) Second, the results of the market investigation provided several indications that each of the specific end-use applications within passenger cars may constitute a separate product market or at least a segment differentiated from the rest of other passenger car end-uses, as is detailed below.

(148) From a **demand** side perspective, both customers and competitors recognise that there are technical differences between the properties required of AFAs according to the specific passenger car end uses concerned.

(149) The Notifying Party's internal documents, as captioned in Figure 32, confirm that, for each passenger car end-use, AFAs need to meet different product characteristics (*e.g.* resistance to corrosion, cracking, oxidation, fatigue) and are as such made from

144 Form CO Annex 5.4.1.1.a, Annex 5.4.1.1.b and Annex 5.4.1.1.c.
145 Form CO, Annex 5.4.1.1, p. 20.
146 Form CO, Annex 1.2.47, p. 5.
147 Hydro's response to RFI19 – HYD_0000014369_2728420.
148 Form CO, Annex 5.4.2.2, p. 7.
149 Form CO, Annex 5.4.2.2, p. 7.

different types of alloys, have different purity levels and are thus sometimes typically produced from different inputs. [Hydro product analysis].[150]

Figure 32 – Typical alloys by passenger car end-use application

[Notifying Party internal document]

Source: Form CO, Annex 1.2.47, [Notifying Party internal document].

(150) From a **supply** side perspective, some customers pointed to the unique chemical composition of certain alloys used for specific end-uses, which are not produced by all suppliers. For technical reasons such as contamination, suppliers avoid producing these alloys in the same lines as other alloys. For instance, one customer explained that "[…] *engine-piston foundry alloy / Low impurity foundry alloys are somehow limited in supply, they might not fit the commercial or technical targets of many companies therefore influencing their price, volume availability and number of suppliers willing to produce them*".[151] This is in line with the Notifying Party's submission explaining that [Hydro commercial operations]" .[152]

(151) Suppliers of AFAs thus seem to specialise somewhat in different passenger car end-uses. [Parties' commercial operations].[153] [Parties' commercial operations].[154]

Figure 33 – Alumetal's plant specialisation

[Alumetal internal document]

Source: Form CO, Annex 5.4.2.1, p. 22.

(152) Nevertheless, because the physical properties of alloys depend on their chemical composition, it appears that the differentiation between end-uses is principally driven by the alloy type, and in particular purity levels. Figure 34 shows [Hydro commercial operations]. Given that, as shown in recital (117), the difficulty in producing advanced AFAs relates to the purity level of the alloy, it appears that the differentiation between end-uses is already largely captured by the distinction between advanced AFAs and standard AFAs.

Figure 34 – Alloy types by purity and end-use

[Notifying Party internal document]

Source: Hydro's response to RFI 19 – [Notifying Party internal document].

(153) More generally, with regard to a differentiation between automotive and non-automotive customers, it similarly appears that such a distinction would largely be captured by a distinction between advanced and standard AFAs.

(154) Furthermore, on the demand side, the vast majority of AFA customers are in any event automotive customers (the Parties estimate that [90-100]% of advanced AFA demand in Europe is from automotive customers).[155] On the supply side, it appears that most if not all suppliers produce AFAs for automotive customers. This was confirmed in the Commission's market investigation, in the course of which most competitors (close to 100%) indicated that they produced AFAs for automotive

150 Form CO, Annex 5.4.1.1, p. 59.
151 Phase I questionnaire Q2 to customers, question 10.1.
152 Form CO, footnote 93.
153 Form CO, Annex 5.4.1.12, p. 13.
154 Form CO, Annex 5.4.2.2, p. 6.
155 Hydro's response to RFI 19 - Part02_SeeID_2754 - [Notifying Party internal document].

uses.[156] Furthermore, a majority of competitors indicated that their production lines for the production of AFAs are generally capable of producing all types of alloys.[157] Finally, as shown in recital (152), differentiation according to end-use is largely captured by the purity level of the alloy, and therefore already captured by an advanced/standard distinction.

(155) Therefore, for the purposes of this Decision, the Commission considers that a separation of AFA alloys on the basis of end-industry or more specific end-uses into distinct product markets is not relevant. Nevertheless, these sub-segments will be considered in the Commission's competitive assessment.

8.2.1.4. Conclusion on product market definition

(156) For the purpose of this Decision, the Commission concludes that the relevant product market to be assessed is solid advanced AFAs, with a plausible sub-segmentation between low-carbon AFAs and non low-carbon AFAs.

8.2.2. Geographic market definition

8.2.2.1. The Commission's decisional practice

(157) The Commission has never assessed the market for AFAs. Regarding primary and secondary aluminium, it has previously considered the geographic markets to be global, but ultimately left the question open.[158]

(158) In a more recent decision regarding neighbouring aluminium casthouse products, such as extrusions, the Commission reviewed the impact of the transaction for soft alloy extrusions in the following possible markets: (i) in the EEA as a whole; (ii) in the Nordic Region; and (iii) and in the United Kingdom.[159] The Commission also assessed the potential sub-segments for automotive in the EEA as a whole, and for large extrusions in the EEA as a whole and in the Nordic Region.[160]

8.2.2.2. The Notifying Party's arguments

(159) The Notifying Party submitted that the relevant geographic market for AFAs is at least EEA-wide.[161] In particular, the Notifying Party explained that, in past decisions, the Commission determined that primary aluminium casthouse products (such as foundry alloys) are traded at a worldwide market level.[162] The Notifying Party further argued that the factors underlying the Commission's considerations in those decisions apply *mutatis mutandis* also to secondary aluminium casthouse products, including SFAs.[163]

(160) In the Response to the Article 6(1)(c) decision, the Notifying Party described the evidence on file that in its view showed that the market is broader than the EEA market.[164] First, it relied on feedback from customers cited in the Article 6(1)(c) decision.

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156 Phase I questionnaire Q3 to competitors, question 4; Phase II questionnaire Q7 to competitors, question F.1.
157 Phase I questionnaire Q3 to competitors, question 15.
158 M.4441 EN+/Glencore/Sual/UC Rusal – paragraph 28.
159 Case M.6756 Norsk Hydro/ Orkla/ JV, paragraph 79.
160 Case M.6756 Norsk Hydro/ Orkla/ JV, paragraph 79.
161 Form CO, paragraph 189.
162 Form CO, paragraphs 190-191.
163 Form CO, paragraphs 190-191.
164 Response to the Article 6(1)(c) decision, Section II.2.2

(161) Second, it claimed that import data from Eurostat showed cross-border trade and purchases from outside the EEA. Third, it claimed that transport costs are low relative to the product's value (approximately [10-20]% of Hydro's product margin).

(162) In the Response to the Article 6(1)(c) decision, the Notifying Party also contested the alleged preliminary conclusion that there might be separate regional markets within the EEA.[165] First, the Notifying Party argued that, based on Eurostat data, countries within the EEA import also from non-neighbouring countries.

(163) Second, the Notifying Party presented an analysis of the Parties' 'catchment areas'. Based on the trucking distance for 80% of the volumes from Hydro's Norwegian plants and the eight different ports it transports to, Hydro's customers are spread over the entire EEA. A similar analysis on Alumetal's data showed that in 2021 it supplied customers in most of the EEA except in a few regions where it has limited sales and a small number of customers such as [Alumetal sales information]. The Notifying Party argued that a similar geographic reach is possible for suppliers that transport by sea, such as Hydro, or that use road transport, such as Alumetal.

(164) Third, neither Hydro nor Alumetal have regional teams within their AFAs businesses and, according to the Notifying Party, Hydro's documents on competition do not indicate regional markets.

(165) The Notifying Party also contests the Commission's preliminary calculation of national market shares based on the market reconstruction included in the Article 6(1)(c) decision.[166] First, it argues that the calculations do not distinguish between PFAs and SFAs, which are not competing according to the Notifying Party. Second, the national market size is inaccurate as, even considering the total market size to be only the total imports based on Eurostat data (thus excluding local production), the Parties would have a lower combined market share. Third, based on the ratio between the actual sales of the Parties and the total imports from Eurostat, there would be no significant differences in the Parties' presence across countries, with the possible exception of Spain.

(166) The Notifying Party makes two comments on the argument that geographical differentiation is higher for certain AFAs such as liquid and low-carbon AFAs. First, since the Parties' activities do not overlap in liquid AFAs, it would not be required to define a precise geographic scope for liquid AFAs.[167] Second, there would be evidence that low-carbon AFAs are not necessarily sourced regionally, such as from BMW.[168]

8.2.2.3. The Commission's assessment

(167) In light of the principles outlined in Section 8.1, the Commission considers that, for the purpose of assessing the impact of the Transaction on competition in the production and supply of AFAs in the EEA in this Decision, the market for advanced

165 Response to the Article 6(1)(c) decision, Section II.2. For the avoidance of doubt, the Commission notes that it never came to such a conclusion, even on a preliminary basis. Rather, the Commission preliminarily considered in the Article 6(1)(c) decision that the geographic market for AFAs was at most EEA wide and that the Commission would investigate the existence of possible markets narrower than EEA in its in-depth investigation.

166 Response to the Article 6(1)(c) decision, Section II.2.

167 Response to the Article 6(1)(c) decision, Section II.2.

168 Response to the Article 6(1)(c) decision, Section II.2.

solid AFAs can be considered at most EEA-wide, with a significant degree of differentiation, in particular at the regional level.[169]

8.2.2.3.1. Different market characteristics between the EEA and other areas globally, and limited role of imports to the EEA

(168) The Commission's market investigation has not revealed evidence that would allow the Commission to consider the markets for AFAs to be wider than the EEA.

(169) First, several customers explained that EEA-based foundries typically supply AFAs within the EEA. One customer explained that "[u]*sually EU d'foundries supply in EU, but purchases are global (at least in the past: now tendency to localization)*".[170] Another customer stressed that "[b]*ased on market experience, AFA producers in EEA usually sell their production in EEA […]*".[171] This is also confirmed by the fact that Hydro and Alumetal generated respectively [90-100]% and [90-100]% of their sales for foundry alloy operations in the EEA in 2021.[172] The fact that both Parties, which are large European AFA players, sell most of their production in the EEA, and that EEA-based foundries typically supply AFAs within the EEA, would indicate that suppliers active outside the EEA are largely different from those active in the EEA. Furthermore, a majority of customers indicated purchasing over 60% of their alloys within the EEA, or even more locally.[173] From the customers' data collected by the Commission as explained in Section 9.1.2, there does not seem to be a significant volume of sales in the EEA from Chinese or Indian producers.

(170) Second, the Parties' internal documents show that they track the competitive landscape for AFAs at a European level. For example: [Hydro market analysis].[174] [Hydro market analysis] .

Figure 35 – Analysis of European automotive sector

[Figure]

Source: Hydro's response to RFI19 - [Notifying Party internal document]

(171) Third, imports appear, for many AFA customers in the EEA, to play only a minor role. A majority of customers indicated that they do not import AFAs into the EEA for their plants in the EEA.[175] Those who import AFAs into the EEA nevertheless stress that a large part of their demand comes from the EEA since they seek to source locally as much as possible. For instance, one customer explained that "*the percentage of imports is very small. Depending on the market situation, in general below 5%*".[176] Another customer highlighted the fact that relying on imports "[…] *depends on competition, availability, price, quality. At the moment no need for that to purchase outside the EEA*".[177] General customer reluctance to use imports at least on a significant scale seems mainly explained by longer lead times and the corresponding supply chain disruption risks. For example, one customer explained: "*lead times are very high. In EEA lead times are between 3-5 days. Oustide EEA*

169 I.e. with regard to clusters of countries within the EEA.
170 Phase I questionnaire Q4 to customers, question 17.1.
171 Phase I questionnaire Q4 to customers, question 17.
172 Parties'response to RFI 22, question Q2.
173 Phase II questionnaire Q8 to customers, question I.16
174 Hydro's response to RFI19 - [Notifying Party internal document].
175 Phase I questionnaire Q4 to customers, question 20.
176 Phase I questionnaire Q4 to customers, question 20.
177 Phase I questionnaire Q4 to customers, question 20.

lead times are 14-16 weeks".[178] It should be noted, however, that a small number of customers appear to have organised their business to be able to use a significant share of imports. For example, one customer explained that "[the customers] *have local safety stocks with our suppliers from outside EEA*", in order to accommodate longer lead times from suppliers located outside of the EEA.[179] This, however, does not call into question the fact that imports only play a minor role in the EEA.

8.2.2.3.2. Regional clusters in light of transport costs

(172) As explained in the Article 6(1)(c) decision, the first market reconstruction – while quite partial – preliminarily showed that the Parties' and their competitors' sales volumes are not evenly distributed across the EEA, thus likely resulting in somewhat differentiated conditions of competition in different areas within the EEA.[180]

(173) The Commission further investigated during the in-depth investigation the relevance of narrower geographic markets for solid advanced AFAs than an EEA-wide market.

(174) First, regarding customers, in the first place, when asked the percentage of advanced AFAs purchased from suppliers located nationally, three customers indicated that they purchase the majority (at least 61%) of their advanced AFAs nationally. Seven customers indicated that at least 61% of their AFAs is produced regionally, eight within the EEA and only two globally (excluding the EEA).[181][182] In the second place, 55% of customers indicated that the typical distance from which they purchase AFAs is 1 500 km or less.[183] Of the 13 who provided explanations, two mentioned that this is because of transportation costs and one because it purchases AFAs in liquid form.[184] And in the third place, only 35% of customers consider that the average distance advanced AFAs can be transported from supplier to customer is more than 2 000 km.[185]

(175) Second, regarding competitors, firstly, none of the producers of advanced AFAs replied that it provides more than 20% of its sales to customers located in the rest of the world. Six explained that they provide from 81 to 100% of the AFAs from the EEA-production to customers located regionally within the EEA and four sell from 61% to 80% to regional customers.[186] Secondly, seven competitors out of ten replied that the average distance that advanced AFAs can be transported from the supplier to the customer to be still competitive is less than 1 000 km.[187] Thirdly, five competitors explained that, in their experience, the supplier does not need to be closer to the EEA customers' facilities, while seven indicated that customers generally prefer to source domestically at the EEA-level (five) or at a smaller level (two).[188]

(176) The Commission also underlines that, as already highlighted in the Article 6(1)(c) decision, in internal documents the Parties consider regional clusters.

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178 Phase II questionnaire Q8 to customers, question I.32.
179 Phase II questionnaire Q8 to customers, question I.32.
180 Response to the Article 6(1)(c) decision, Section II.2.
181 Phase II questionnaire Q8 to customers, question I.16.
182 Customers could give assign the same percentage to different distances.
183 Phase II questionnaire Q8 to customers, question I.18.
184 Phase II questionnaire Q8 to customers, question I.19.
185 Phase II questionnaire Q8 to customers, question I.20.
186 Phase II questionnaire Q7 to competitors, question H.18.
187 Phase II questionnaire Q7 to competitors, question H.22.
188 Phase II questionnaire Q7 to competitors, question H.24.

(177) [Hydro market analysis].

Figure 36 – […] competitors (including Alumetal) according to their geographic reach

[Notifying Party internal document]

Source: Form CO, Annex 5.4.1.1, p. 99.

(178) [189][190] [Hydro strategic analysis] is illustrative of the fact that the market is at least geographically differentiated with the EEA.

Figure 37 – Hydro's customers within Alumetal's catchement areas

[Notifying Party internal document]

Source: Form CO, Annex 1.2.74, p. 76.

(179) As shown in Figure 38, [Hydro market analysis] confirms that there is important regional differentiation within the EEA.

Figure 38 – Hydro's customer catchment areas for Real Alloy and Oetinger

[Notifying Party internal document]

Source: Form CO, Annex 1.2.74, p. 75.

(180) As regards geographic differentiation for low-carbon AFAs, one competitor explained that '*Low-carbon foundry alloys are produced mainly locally. Imports are typically higher carbon footprint'.*[191] The need to ensure that the carbon footprint of the supplied / sourced AFA is contained usually leads customers to source locally. However, given the limited supply options available to customers, the distance to source these low-carbon AFAs, in particular the advanced ones, tends, as confirmed by a majority of the respondent to the Commission's market investigation, to be greater for low rather than non-low carbon AFAs.[192]

(181) Overall, the Commission considers that, in view of the evidence collected in its investigation, competitive conditions are very different within the EEA compared to outside of the EEA, but also that these conditions vary to some extent between different regions within the EEA. On that basis, and for the purpose of this Decision, the Commission considers that the geographic market definition for solid advanced AFAs (including for a potential separate segment for low-carbon solid advanced AFAs) is EEA-wide at most, with a significant degree of differentiation, in particular at the regional level.

8.2.2.4. Conclusion on geographic market definition

(182) For the purpose of this Decision, the Commission concludes that the relevant geographic market to be assessed is at most EEA-wide. In addition, there is evidence of geographic differentiation within the EEA, which will be considered in the competitive assessment.

8.2.3. Conclusion on market definition

(183) In light of the elements considered in Section 8.2.2.3, the Commission concludes that, for the purpose of this Decision, the relevant market to be assessed is the market for the production and supply of solid advanced AFAs in the EEA, which is

189 Form CO, Annex 1.2.74, p. 75.
190 Form CO, Annex 1.2.74, p. 75.
191 Phase I questionnaire Q3 to competitors, question 25.3.
192 Phase I questionnaire Q3 to competitors, question 20; Phase I questionnaire Q4 to customers, question 16.

differentiated both in terms of product characteristics and of the homogeneity of the conditions of competition across the whole EEA.

8.3. Aluminium Master Alloys

(184) AMAs are semi-finished products used to change the mechanical and physical properties of AFAs (e.g. strength, resistance to corrosion etc.) and other aluminium products. An AMA has as a base metal aluminium that is combined with a relatively high percentage of one or two other elements called 'alloying elements'.

8.3.1. Product market definition

8.3.1.1. The Commission's decisional practice

(185) The Commission has not previously investigated aluminium master alloys, but has investigated the neighbouring market of aluminium flat rolled products used for automotive body sheet ('automotive ABS') and considered that the relevant product market can be differentiated based on alloy-series, taking into consideration the chemical composition of the alloy.[193]

8.3.1.2. The Notifying Party's arguments

(186) The Notifying Party submits that the relevant product market for AMAs should comprise all AMAs and should not be segmented further according to the alloying element.[194] The Notifying Party considers that AMAs master alloys are commodity products that are produced according to the same specifications (including alloying elements) by all producers. Furthermore, the Notifying Party mentions that the alloying elements are widely available and there is perfect supply-side substitutability between the various series/alloy types.[195]

8.3.1.3. The Commission's assessment

(187) First, the market investigation revealed that the large majority of customers consider AMAs overall as a different market segment due to different competitive dynamics (such as available suppliers, available volumes, prices, etc.) from other aluminium products.[196] Regarding a narrower sub-segmentation of the AMAs based on alloying elements,[197] the majority of companies that buy AMAs for their production of AFAs, do not consider that AMAs should be further differentiated since competitive dynamics (such as available suppliers, available volumes, prices) are the same regardless of the alloying element.[198] Also, even though the supply-side substitutability has limitations related to the available technology and alloying elements, on balance, the majority of producers are able to produce most of the standard AMAs.[199]

(188) Second, even though the majority of customers and competitors indicated that some quantities of AMAs can be replaced by the pure alloying element (like pure Fe,

193 Commission Decision form 01 October 2019, case M.9706 – Novelis / Aleris, recital 286.
194 Response to the Article 6(1)(c) decision, paragraph 95.
195 Form CO, paragraphs 202-203.
196 Phase II questionnaire Q8 to customers, question G.A.1.
197 The market investigation assessed the following AMA categories: AMA overall low-carbon master alloys, AlCu, AlMn, AlSi, AlMg, AlFe, AlCr, AlTi, AlV, AlZr, AlZn.
198 Phase II questionnaire Q7 to competitors, question L.A.6; Phase I questionnaire Q4 to customers, question 5.
199 Phase II questionnaire Q7 to competitors, question L.A.9.

Si etc.);[200] some types of alloys like AlFe, AlCr, AlTi, AlV, AlZr cannot be replaced with the alloying element at all. Moreover, master alloys help the production process as it is easier to get the needed specifications;[201] also, the use of the alloying element tends to create a poorer yield as it usually needs a higher temperature to melt and creates higher waste.[202] As one customer further explains: *"If a master-alloy can be replaced by pure alloying elements in the downstream process depends on various parameters. Depending on the production technology, pure alloying elements might not be an option for the production. It also depends on the physical availability of the alloying elements with the correct chemical composition with respect to the tolerated values in the end product. Depending on the price of the pure alloying element it can be more economical to use master alloys compared to the pure elements."*[203] Therefore, on balance AMAs cannot be replaced by pure alloying elements for the production of AFAs, therefore alloying elements will not be further considered in the assessment of the product market for AMAs.

(189) On balance, for the purpose of this Decision, the product market can be defined as all AMAs, without a distinction based on the alloying element(s).

8.3.2. Geographic market definition

8.3.2.1. The Commission's decisional practice

(190) The Commission has not previously investigated aluminium master alloys that are used in the production of AFAs, but has investigated the neighbouring market of aluminium ABS, and it has considered that the market for the production and supply of aluminium ABS is EEA-wide in scope.[204]

8.3.2.2. The Notifying Party's arguments

(191) Regarding the geographic market definition, the Notifying Party argues that the geographic market should be considered as global. Transporting aluminium master alloys across the EEA and beyond would not face any appreciable obstacles in terms of cost, regulatory requirements or customer preferences. [Hydro commercial arrangements] and the Article 6(1)(c) decision mentions that most of the customers who responded in the market investigation state that they could replace most of their AMAs with imports of AMAs.[205]

8.3.2.3. The Commission's assessment

(192) The results of the market investigation indicates that the relevant geographic market for AMAs is most likely EEA-wide. While the views of customers are mixed on this point, the majority of competitors who expressed a view mention that the conditions of competition differ between different areas within the EEA.[206] There seems to be some price differentiation between different areas within the EEA due to energy, transport and labour costs,[207] but there are also indications of similar EEA market

200 Phase II questionnaire Q8 to customers, question G.A.2; Phase II questionnaire Q7 to competitors, question L.A.7.

201 Minutes of a call with a competitor of 4 November 2022, paragraph 21.

202 Form CO, paragraph 204.

203 Phase I questionnaire Q4 to customers, question 6.

204 Commission Decision form 1 October 2019, case M.9706 – Novelis / Aleris, recitals 358-359.

205 Response to the Article 6(1)(c) decision, paragraph 97.

206 Phase II questionnaire Q7 to competitors, question L.A.12; Phase II questionnaire Q8 to customers, question G.A.7.

207 Phase II questionnaire Q7 to competitors, questions L.A.13 and L.A.14; Phase II questionnaire Q8 to customers, questions G.A.7 and G.A.8.

trends, as one customer explains: '*there are small differences, but in general the market behaves in quite similar in trends*'[208]. Also, a competitor mentions: '*We supply master alloys all across EEA and we manage to stay competitive regardless of the distance to the customer*'. Moreover, the majority of respondents state that they could replace most of the AMAs sourced in the EEA with imports of aluminium master alloys,[209] and the majority of the respondents mention EEA-wide suppliers for AMAs.[210]

(193) On balance, for the purpose of this Decision the geographic market definition for AMAs can be defined as EEA-wide.

9. COMPETITIVE ASSESSMENT

9.1. Aluminium Foundry Alloys

9.1.1. Legal framework

(194) Under Article 2(2) and (3) of the Merger Regulation, the Commission must assess whether a proposed concentration would significantly impede effective competition in the internal market or in a substantial part of it, in particular through the creation or strengthening of a dominant position.[211]

(195) In this respect, a merger can entail horizontal and/or non-horizontal effects.

(196) Horizontal effects are those deriving from a concentration where the undertakings concerned are actual or potential competitors of each other in one or more of the relevant markets concerned. These effects can be coordinated or non-coordinated. The Commission appraises horizontal effects in accordance with the Horizontal Merger Guidelines ('HMG').[212]

(197) According to paragraph 25 of the HMG, a merger giving rise to non-coordinated effects would significantly impede effective competition by creating or strengthening the dominant position of a single firm, one which, typically, would have an appreciably larger market share than the next competitor post-merger.

(198) Paragraph 17 of the HMG further explains that 'according to well-established case law, very large market shares — 50 % or more — may in themselves be evidence of the existence of a dominant market position. However, smaller competitors may act as a sufficient constraining influence if, for example, they have the ability and incentive to increase their supplies'.

(199) Paragraph 26 of the HMG adds that '[a] number of factors, which taken separately are not necessarily decisive, may influence whether significant non-coordinated effects are likely to result from a merger'. In addition to market shares that, according to paragraph 27 of the HMG, are normally 'important factors in the assessment' and first indicators of market power and increases in market power, a non-exhaustive list of other relevant factors that might lead to a significant impediment to effective competitions are explained in paragraphs 28-38 of the HMG.

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208 Phase II questionnaire Q8 to customers, question G.A.8.

209 Phase II questionnaire Q7 to competitors, question L.A.16.

210 Phase II questionnaire Q8 to customers, question G.B.3.

211 With regard to the application of the Merger Regulation in the EEA, see Annex XIV to the EEA Agreement.

212 Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings ('Horizontal Merger Guidelines'), OJ C 31, 5.2.2014.

(200) These factors, which taken separately are not necessarily decisive, may influence whether significant non-coordinated effects are likely to result from a merger, in particular whether merging firms have large market shares, merging firms are close competitors, customers have limited possibilities of switching supplier, competitors are unlikely to increase supply if prices increase, the merged entity would be able to hinder expansion by competitors, and the merger eliminates an important competitive force.[213]

(201) Accordingly, Section 9.1 assesses for the EEA-wide market for the production and supply of solid advanced AFAs: (i) market shares and Herfindahl-Hirschman Index ('HHI'), (ii) closeness of competition between the Parties, (iii) Alumetal's role as an important competitive force, as well as (iv) supply alternatives and their constraint on the merged entity.

9.1.2. Market structure and market shares

(202) With respect to the market structure, the Parties were not aware of any third party source (including industry reports) on sales and market-share information for AFAs in the EEA.[214] They were initially unable to identify suppliers accounting for approximately half of the estimated total market size for AFAs.[215] The relevant information was submitted based on their internal market intelligence. In order to verify the validity of the estimates submitted by the Parties, the Commission reconstructed the market.[216]

9.1.2.1. The Notifying Party's arguments

(203) In the Form CO, the Notifying Party argued that – irrespective of how the relevant market would be defined – the Transaction either does not give rise to any affected markets or there is a horizontally affected market where the market share increment brought about by the Transaction is limited.[217] In order for the Commission to carry out its own assessment, the Notifying Party provided the Parties' combined market shares estimates for an overall AFAs market as well as for separate PFA and SFA markets as defined in recital (101). Table 1 presents these market shares estimates based on merchant sales volumes (in metric tonnes).

(204) According to the Parties' own estimates, the combined entity would be the market leader both in the EEA AFA market, with a combined share of [10-20]%, as well as in the EEA PFA market, with a combined share of [20-30]%. However, for a significant portion of merchant sales, the Notifying Party could not identify the suppliers they should be attributed to and assigned them under the aggregate label of 'Others' in Table 1. Furthermore, the Notifying Party provided an estimate of market shares in the PFA and "high-grade" AFA ("HG AFA")[218] market, as defined in recital (121), only for the Parties ([20-30]%).

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213 Horizontal Merger Guidelines, paragraph 24.

214 Form CO, paragraph 108.

215 Form CO, paragraph 264.

216 The first reconstruction took place in summer 2022 and the second one between December 2022 and January 2023.

217 Form CO, paragraph 108.

218 "The term 'HG SFA' is not a generally recognized concept but one that is used only by Hydro's external advisors, […], to denominate a high purity type of scrap-based SFA." (Form CO, paragraph 88).

(205) In the Response to the Article 6(1)(c) decision and in the response to RFI 27, the Notifying Party argued that the combined market shares of the merged entity would be low regardless of which market definition was adopted, and that the market was not oligopolistic.[219] The Notifying Party revised the market shares estimates provided in the Form CO, based on the Parties' actual sales volumes and the Parties' best estimates of their competitors' sales, as presented in the Form CO and in Annex 5.4.1.1 to the Form CO.[220]

(206) In the overall AFAs market, according to the new market share estimates provided by the Notifying Party in the Response to the Article 6(1)(c) decision, the combined share of the merged entity would be [10-20]% in the EEA. According to these updated figures, the market share increment for PFA and SFA would be zero.

(207) In addition, shares estimates for 'low impurity AFAs', defined as AFAs with an iron content less than or equal to 0.25%, were included. Following the classification in Annex 5.4.1.1. to the Form CO, low impurity AFAs are PFAs together with a fraction of HG AFAs.[221] Annex 5.4.1.1. to the Form CO includes the percentage of competitors' production based on iron content (PFA, HG AFA and SFA). Therefore, based on the estimate of these shares and on the total estimate of the competitors' production, the estimated production of low impurity AFAs of each competitor corresponds to the production of PFA and of HG AFA with two corrections.[222]

(208) First, the Notifying Party scaled down estimates of the shares of production of both PFA and HG AFA of SFA producers, included in Annex 5.4.1.1 to the Form CO. Alumetal's sales of 2019 with an iron content below 0.55% (PFA and HG AFA) were overestimated in Annex 5.4.1.1. to the Form CO. The Notifying Party assumed that the shares of production of both PFA and HG AFA were similarly overestimated for the other SFA producers, and so the shares of all SFA producers were scaled down by the same factor.

(209) Second, since only AFAs with an iron content below 0.25% are considered to be of low impurity, while HG AFAs include also AFAs with an iron content up to 0.55%, the Notifying Party applied a correction. To estimate the share of low impurity AFAs within HG AFAs, the Notifying Party assumed that, for PFA producers, the distribution of sales within the HG range was the same as Hydro's 2021 distribution. Similarly, the Notifying Party assumed that for SFA competitors, the distribution of sales within the HG range with a content of iron below 0.25%, was the same as Alumetal's 2019 distribution.

(210) Based on these corrections, the updated market shares estimates included in the Response to the Article 6(1)(c) decision and in response to RFI 27 are shown in Table 1. Hydro's market share for low-impurity AFAs is [20-30]%, while Alumetal's is approximately [0-5]%. The Parties estimated the shares of 15 other producers of low impurity AFAs, both recyclers and primary producers. Only one primary producer has a share above 20% and another one above 10%.

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219 Response to the Article 6(1)(c) decision, Section 2.2.1.

220 For competitors for which 2021 estimates were not submitted, the analysis is based on 2018-2019 figure included in Annex 5.4.1.1. to the Form CO.

221 As explained in the "Methodology note for the response to 6(1)(c) and State of Play" of December 2022, in the Arkwright report (Form CO, Annex 5.4.1.1.) PFA are defined as AFAs with an iron content below 0.2% while HG AFA have an iron content between 0.2% and 0.55%. The Parties highlighted that this is not an industry-standard.

222 "Methodology note for the response to 6(1)(c) and State of Play", December 2022.

(211) In the Response to the Article 6(1)(c) decision, the Notifying Party contested the results of the first Commission's market reconstruction included in the Article 6(1)(c) decision.[223] It claimed that the size of national markets was underestimated since import data from Eurostat showed that the size of imports is higher than the reconstructed national market.[224] Finally, it explained that the reconstructed market for AFAs does not show the characteristics of an oligopolistic market as it argues that competition does not seem to take place among a limited number of sizeable firms.

(212) In the Response to the Article 6(1)(c) decision, the Notifying Party also disagreed with the Commission's assessment of the market shares included in the Form CO.[225] First, it explained that in order to discard the competitors that the Notifying Party marked as 'Unknown', the Commission would have had to demonstrate that they have no ability and incentive to expand and serve customers who require large quantities. Second, it claimed that, although the Notifying Party used the European market demand for all AFAs in 2021, instead of the EEA market demand, the total market size is not unreliable since Turkey and Switzerland are not included.

Table 1 – Form CO and Response to the Article 6(1)(c) decision AFAs EEA market shares estimates in volume, 2021

	Form CO			**Response to the 6(1)(c) decision**			
	AFA (overall)	**PFA**	**SFA**	**AFA (overall)**	**PFA**	**SFA**	**Low impurity AFA (Fe≤0.25 %)**
Hydro	[5-10]%	[20-30]%	[0-5]%	[5-10]%	[20-30]%	[0-5]%	[20-30]%
Alumetal	[5-10]%	[0-5]%	[5-10]%	[5-10]%	[0-5]%	[10-20]%	[0-5]%
Combined	**[10-20]%**	**[20-30]%**	**[5-10]%**	**[10-20]%**	**[20-30]%**	**[10-20]%**	**[20-30]%**
Raffmetal	[5-10]%	[0-5]%	[10-20]%	[10-20]%	-	[10-20]%	-
Befesa	[5-10]%	[0-5]%	[5-10]%	[5-10]%	-	[10-20]%	-
Alcoa	[5-10]%	[20-30]%	[0-5]%	[5-10]%	[20-30]%	-	[20-30]%
Oetinger	[0-5]%	[0-5]%	[5-10]%	[5-10]%	[0-5]%	[5-10]%	[0-5]%
Trimet	[5-10]%	[5-10]%	[0-5]%	[5-10]%	[10-20]%	-	[5-10]%
Nicromet	-	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	-
EGA	[0-5]%	[10-20]%	[0-5]%	[0-5]%	[10-20]%	-	[10-20]%
Real Alloy	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[5-10]%	[0-5]%
Intals Somet	[0-5]%	[0-5]%	[5-10]%	[5-10]%	[0-5]%	[5-10]%	-
Stena	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[5-10]%	-
Kuusakoski	-	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	-
Alba	[0-5]%	[5-10]%	[0-5]%	[0-5]%	[5-10]%	-	[5-10]%
Rusal	[0-5]%	[5-10]%	[0-5]%	[0-5]%	[5-10]%	-	[5-10]%
RTA	-	[0-5]%	[0-5]%	[0-5]%	[0-5]%	-	[0-5]%
SAV	-	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%

223 See footnote 232.

224 Response to the Article 6(1)(c) decision, Section II.2.

225 Response to the Article 6(1)(c) decision, Section III.2.

	Form CO			Response to the 6(1)(c) decision			
	AFA (overall)	**PFA**	**SFA**	**AFA (overall)**	**PFA**	**SFA**	**Low impurity AFA (Fe≤0.25 %)**
Talum	-	-	-	[0-5]%	[0-5]%	-	[0-5]%
Egyptalum	-	-	-	[0-5]%	[0-5]%	-	[0-5]%
Glencore	-	-	-	[0-5]%	[0-5]%	-	[0-5]%
Others	-	-	-	[10-20]%	[0-5]%	[20-30]%	[0-5]%
Others (unknown)	[40-50]	[10-20]%	[50-60]%	-	-	-	-
Total	100%	100%	100%	100%	100%	100%	100%
Total (KMT[226])	[…]	[…]	[…]	[…]	[…]	[…]	[…]
Post-merger HHI	[0-1000]	[1000-2000]	[0-1000]	[0-1000]*	[1000-2000]*	[0-1000]*	[1000-2000]*
Delta HHI	[0-150]	[0-150]	[0-150]	[0-150]*	[0-150]*	[0-150]*	[0-150]*

Source: Form CO, the Response to the Article 6(1)(c) decision, Parties' response to RFI 27

*Note: the fields marked with * are Commission's calculations based on the data submitted in RFI 27 for the Response to the Article 6(1)(c) revised market shares.*

9.1.2.2. The Commission's assessment

(213) According to the HMG, "market shares and concentration levels provide useful first indications of the market structure and of the competitive importance of both the merging parties and their competitors".[227]

(214) Based on the estimates provided by the Notifying Party in the Form CO and in the Response to the Article 6(1)(c) decision, the merged entity would be the market leader, with, however, moderate shares, in AFAs, PFAs and low impurity AFAs. There are a number of competitors, known to the Notifying Party, which are also active in the market, even though for a significant portion of merchant sales the Notifying Party could not identify the suppliers to whom they should be attributed to.

(215) The Commission undertook two market reconstruction exercises for several reasons. First, the reconstruction was needed to clarify further the respective positions of AFAs suppliers in the EEA, in view of the concerns voiced by market participants. Second, this exercise was deemed necessary because the Notifying Party was unable to identify the suppliers that made up the 'others' category, which according to its submission represented approximately half of the AFAs market.[228] Indeed, from the beginning of the pre-notification discussions notably until the provision of the transaction data and the responses to the internal document requests for information in phase 2 of the investigation, the Parties provided very little information and data to the Commission to supplement their initial submissions. Third, the Commission's market reconstruction was also motivated by the fact that the Notifying Party's estimate of the size of the EEA market for all AFAs in 2021 of […]KMT did not

226 1 KMT = 1 000 metric tonnes.

227 Horizontal Merger Guidelines, paragraph 14.

228 The competitive relevance of these 'unknown' players appears questionable since, as explained in Section below 9.1.4.3.1.3, capabilities and capacity to provide certain (minimum) quantities is important to competitively supply: (i) AFAs and (ii) low-impurity AFAs to automotive customers in the EEA.

appear reliable in view of the Notifying Party's internal estimates[229] and the responses to the Commission's market investigation. Several competitors that responded to the Commission's market investigation indicated a smaller market size at EEA level.[230] Fourth, the Commission's in-depth investigation focused on advanced solid AFAs for which no third-party data were available.

(216) The focus was gathering data on advanced AFAs as defined in recital (111) from both suppliers and customers.[231] The Commission gathered data from 25 customers to identify suppliers producing advanced AFAs. Based on this data, some suppliers previously included in 'Others' were identified. The Commission collected data on sales in the EEA from 23 suppliers,[232] including two traders.[233]

(217) The Commission estimates that the market reconstruction covered approximately 80% of the market for solid advanced AFAs based on the following facts. First, the total reconstructed market size, including solid and liquid advanced AFAs (i.e. 1 164 KMT), is [70-80]% of the estimated total market size in the Form CO in 2021 for solid and liquid PFA and HG AFAs (i.e. […]KMT).[234] Second, the estimated total market size in the Form CO includes both solid and liquid AFAs. In 2019, [80-90]%% of all AFAs was delivered in solid form.[235] If the same proportion of advanced AFAs is assumed to be delivered in solid form in 2021 (i.e. […] KMT), the coverage of the market reconstruction for solid advanced AFAs would be over [80-90]% (i.e. 1 039 KMT in the market reconstruction vs […]% KMT).[236]

(218) The results of the second market reconstruction are shown in **Table 2**.

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229 In 2019, the AFAs market at a European level (excluding Russia) amounted to […] KMT (Annex to the Form CO, 1.2.47). This estimate dates back to 2019 and seems to cover a much wider geographical scope than the EEA, namely Europe (excluding Russia). Still, the 2021 total market size provided by Hydro in the Form CO for the EEA is comparable to the one internally estimated for 2019 for the entire Europe (excluding Russia) which, in addition, dates back to pre-Covid levels.

230 Phase I questionnaire Q1 to competitors of aluminium foundry alloys, question 5.

231 The Commission also undertook a first market reconstruction which was set out in the Article 6(1)(c) decision. This exercise covered only part of the relevant market. Nonetheless, it showed that (i) the combined entity would have a share of [20-30]% and be the clear market leader in all AFAs, (ii) the Parties sales were not evenly distributed across the EEA, but they were most regional and focused on certain countries ([…]) where the market reconstruction showed higher combined market shares.

232 In one instance, the data has been retrieved from import data from Eurostat under the code "HS 76012080".

233 The traded amounts that were clearly identifiable as purchased from one of the suppliers already included in the market reconstruction (based on the country of origin indicated by the trader) have been excluded. However, given the small amounts, the inclusion or exclusion of the traders do not change the Parties' market shares.

234 Form CO, paragraph 293, and Annex 5.4.1.1. In the Form CO, the total market size for PFA and HG AFAs in 2021 is estimated at […]% KMT. The total reconstructed market size for solid and liquid AFAs is 1 164 KMT.

235 Form CO, Annex 5.4.1.1 pag.4.

236 The total estimated market size for solid PFA and HG AFAs would be […] KMT (by considering [80-90]% of the total estimated market size for solid and liquid AFAs) and the total reconstructed market size for solid AFAs is 1 039 KMT.

Table 2: Market reconstruction: solid advanced AFAs market shares in volume, 2021

Company[237]	EEA	CEE[238]
Hydro	[20-30]%	[20-30]%
Alumetal	[0-5]%	[5-10]%
Combined	**[20-30]%**	**[30-40]%**
Primary producer 1	[10-15%]	[10-15%]
Primary producer 2	[10-15%]	[10-15%]
Primary producer 3	[10-15%]	[15-20%]
Primary producer 4	[5-10%]	[0-5%]
Primary producer 5	[5-10%]	[5-10%]
Recycler 1	[5-10%]	[0-5%]
Primary producer 6	[0-5%]	[5-10%]
Recycler 2	[0-5%]	[0-5%]
Recycler 3	[0-5%]	[0-5%]
Recycler 4	[0-5%]	[0-5%]
Recycler 5	[0-5%]	[0-5%]
Recycler 6	[0-5%]	[0-5%]
Recycler 7	[0-5%]	[0-5%]
Recycler 8	[0-5%]	[0-5%]
Recycler 9	[0-5%]	[0-5%]
Recycler 10	[0-5%]	[0-5%]
Recycler 11	[0-5%]	[0-5%]
Recycler 12	[0-5%]	Not active in CEE
Trader 1	[0-5%]	No data available
Trader 2	[0-5%]	No data available
Primary producer 7	[0-5%]	[5-10%]
Total	100%	100%
Total (KMT)	1 039	637
Post-merger HHI	[1000-2000]	[1000-2000]
Delta HHI	[150-300]	[150-300]

Source: Supply side data from the market reconstruction.

(219) Table 2 shows the market shares from the sales data on advanced solid AFAs in 2021. Hydro is the largest player with a market share of [20-30]%, followed by primary producers with market shares below 15%. Alumetal has the one of the highest market shares ([0-5]%) among the recyclers active in the supply of solid advanced AFAs. The merged entity's market share is relatively moderate ([20-30]%) and the market is quite fragmented with a pre-merger HHI at [1000-2000] and a number of sizeable competitors. The Commission notes that, even excluding competitors with a capacity of less than 40 KMT, as explained in Section 9.1.4 , there would be no appreciable changes to the outlined market structure. The Parties' combined market shares remain moderate and there would still be a significant number of competitors with a capacity of more than 40 KMT.

237 In this table the names of the competitors are treated as confidential. The distinction between primary producers and recyclers is approximate and only for the purpose of describing the market structure.

238 Central and Eastern Europe, see recital (222).

(220) The Commission notes that the market structure does not change substantially when considering other scenarios.[239] First, based on the data available from the market reconstruction for 2022, the combined market share is [20-30]% in 2022.[240]

(221) Second, the Commission reconstructed the market in the Central and Eastern European cluster ("CEE") including Czechia, Germany, Poland and Slovakia, where there is a strong geographic overlap between the Parties, as explained in Section 9.1.3.3.6. The third column of Table 2 shows the result of this exercise. In this cluster, Hydro has a market share of [20-30]%, Alumetal of [5-10]%, for a combined share of [30-40]%. This region also includes a number of other suppliers.[241] [242] [243]

(222) The partial data gathered on EEA-based capacity during the market investigation confirms the market fragmentation. In terms of suppliers able to produce advanced AFAs, there is at least one refiner with a capacity comparable to that of the Parties and the merged entity's capacity shares are modest.

(223) Market fragmentation is also in line with multi-sourcing from customers. Based on the data received from customers, only two purchased advanced AFAs in 2021 from only one supplier with multi-sourcing being the most common practice.

9.1.2.2.1. A number of sizeable alternative low-carbon suppliers will still be available post-Transaction

(224) Given the importance of low-carbon AFAs for certain customers and their increasing relevance in the industry, as detailed in Section 7.4, the Commission considered whether post-Transaction there would remain a sufficient number of low-carbon producers active in solid advanced AFAs.

(225) As explained in Section 7, there is not an industry-wide definition of low-carbon suppliers. Low-carbon suppliers are recyclers and suppliers producing from renewable sources of energy. To identify low-carbon producers of solid advanced AFAs, the Commission considered the data on emission estimates provided by the Notifying Party.[244]

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239 The Commission also considered scenarios excluding supply from Russia in view of some customers' feedback (30% of respondents to the Phase I questionnaire Q2 to customers, question 22, explained that they changed their purchasing patterns since the Russian military aggression. The overall market structure and level of the Parties' combined market share remains broadly the same also under these additional scenarios.

240 Based on the data available from the market reconstruction, the combined share would be [20-30]% in 2020 and [20-30]% in 2019 in the EEA.

241 To identify the sales in CEE, the Commission relied on data gathered in the first market investigation for one competitor. For another one, which identified sales to 15 countries including Poland, Czechia and Slovakia, the Commission conservatively estimated that ¾ of its sales take place in CEE. Overall, the market structure and combined shares do not change significantly if a higher or lower portion of sales of these players is included.

242 The Commission underlines that, if also considering advanced AFAs in liquid form, the combined market share for CEE would be [20-30]%.

243 The Commission notes that, even excluding competitors with a capacity of less than 40 KMT, as explained in Section 9.1.4, there would be no appreciable changes to the outlined market structure. The Parties' combined market shares remain moderate and there would still be a significant number of competitors with a capacity of more than 40 KMT.

244 "The Parties do not exert a significant competitive constraint on each other", RBB Report, 5 January 2023.

(226) Based on this data, the Notifying Party is not the only primary supplier able to achieve a low level of emissions (on average across its AFA plants […][245] tCO_2e/t[246]). The emissions from European primary producers are estimated to be 6.7 tCO_2e/t, with some suppliers able to achieve in their EEA-based assets 3 tCO_2e/t. This is close to the emissions from SFA producers which in the report are estimated to be less than 2 tCO_2e/t. Imported volumes of AFAs tend to have higher emissions.

(227) The Commission also refined the market share analysis based on this data by considering only producers, whose assets emit less than 5 tCO_2e/t. This threshold is conservatively set higher than the threshold for low-carbon AFAs indicated by some consumers.[247] At the same time it is lower than the average for the average European production which is 6.7 tCO_2e/t as shown in Figure 52.

(228) Table 3 shows the market shares based on the data on sales of solid advanced AFAs gathered from the market reconstruction for the producers whose assets emit less than 5 tCO_2e/t.[248] [Hydro commercial operations].[249] Table 3 also shows that the Parties' combined share is [30-40]% and the number of competitors does not decrease significantly compared with the baseline set out in Table 2.

Table 3: Market reconstruction: solid advanced AFAs market shares in volume for low-carbon producers, 2021

Company[250]	**EEA**
Hydro	[20-30]%
Alumetal	[5-10]%
Combined	**[30-40]%**
Competitor 1	[15-20%]
Competitor 2	[15-20%]
Competitor 3	[5-10%]
Competitor 4	[5-10%]
Competitor 5	[0-5%]
Competitor 6	[0-5%]
Competitor 7	[0-5%]
Competitor 8	[0-5%]
Competitor 9	[0-5%]
Competitor 10	[0-5%]
Competitor 11	[0-5%]
Competitor 12	[0-5%]

245 Considering the correct emissions for the Slovalco plant as explained in the Notes to Figure 5 of the RBB report of 5 January 2023 and excluding the Qatalum plant. The average is […] tCO_2e/t including the Qatalum plant.

246 Metric tonnes of carbon dioxide equivalent per metric tonne of production.

247 See for instance: Non-confidential minutes of a call with a customer of 13 June 2022, paragraph 13.

248 The Commission notes that, by excluding competitors that emit more than 4 tCO_2e/t, there would be no appreciable changes to the outlined market structure.

249 For the purposes of this table, traders have also been excluded.

250 In this table, the names of the competitors are treated as confidential.

Company[250]	EEA
Competitor 13	[0-5%]
Competitor 14	[0-5%]
Competitor 15	[0-5%]
Competitor 16	[0-5%]
Total	100%

Source: Supply side data from the market reconstruction.

(229) Post-Transaction, there will remain a sufficient number of EEA-based primary producers able to achieve a level of emissions comparable to the one of the Notifying Party pre-Transaction. Moreover, there are a number of SFA producers, which are by definition low-carbon, that are able to supply solid advanced AFAs.

9.1.2.3. Conclusion

(230) Overall, the Commission considers that, as confirmed by the available data under all reasonable scenarios, in the EEA-wide solid advanced AFA market: (i) the Parties' market shares are relatively moderate, (ii) the market is rather fragmented, and (iii) post-Transaction there will still be a number of sizeable alternative suppliers, including low-carbon suppliers.

9.1.3. Closeness of competition between Hydro and Alumetal

9.1.3.1. Legal framework

(231) According to the HMG,[251] a merger between close competitors is more likely to have anticompetitive effects and lead to a significant increase in price. The higher the degree of substitutability between the merging firms' products, the more likely it is that the merging firms will raise prices significantly.[252] The purpose of assessing the closeness of competition between the Parties is therefore to determine whether they currently exert a significant competitive constraint on each other which would be removed post-Transaction and whether other suppliers would be able to sufficiently constrain the Merged Entity.[253]

9.1.3.2. The Notifying Party's arguments

(232) The Parties argue that they are, at most, distant competitors because: (i) sales to common customers largely correspond to non-substitutable products, (ii) Hydro rarely loses sales to Alumetal, and (iii) the Parties are not particularly close competitors in terms of 'low-carbon' AFAs.[254]

(233) Throughout the investigation, the Notifying Party placed a particular focus on the distinction between PFA and SFA claiming that the Parties are, at most, distant competitors since they compete in different markets (i.e. Hydro in PFAs and Alumetal in SFAs).[255] The Notifying Party further argued that if the Commission were to look at a limited area where the Parties' activities would overlap,[256] the

251 Horizontal Merger Guidelines, paragraphs 28 and following.

252 Horizontal Merger Guidelines, paragraphs 28 and following.

253 See Commission's decision of 17 November 2010 in Case M. 5658 - Unilever/Sara Lee Body Care, recital 836.

254 See the Parties' submission of 5 January 2023 by RBB Economics, "The Parties do not exert a significant competitive constraint on each other", Sections 3.1, 3.4, and 3.5.

255 As explained in Section 8.2.1.3.1, these are not the relevant product markets assessed in this Decision.

256 According to the Parties, this area corresponds to AFAs with an iron content between 0.15% and 0.25% - see the RBB report of 5 January 2023, Figure 1.

evidence would show that the Parties are not 'particularly close' competitors.[257] According to the Notifying Party, Hydro and Alumetal are rather distant competitors while other suppliers would be much closer competitors to each Party – other PFA suppliers much closer to Hydro than to Alumetal, and other SFA producers much closer to Alumetal than to Hydro.[258]

(234) As a consequence, the Notifying Party's submissions only marginally assessed closeness between the Parties' offerings based on those parameters of competition that really matter for customers in the EEA market for solid advanced AFAs, such as the focus on particular (automotive) end-uses, geographical closeness, alloy closeness, low-carbon offering.

(235) First, with respect to closeness between the Parties' offerings based on their sales to common customers, the Notifying Party argues that only approximately [5-10]% of total volumes are accounted for by common customers procuring the same groups of AFAs from both Parties.[259] The Notifying Party further argues that this figure is even smaller if the sales were also to take into account the overlap between the Parties' supplies in terms of purity levels.[260]

(236) Second, regarding closeness between the Parties' offering based on the supplied alloys and alloy families, the Notifying Party has consistently claimed during the market investigation that it is not in a position to provide alloy-level or segment level data but ultimately provided these at a later stage of the investigation.[261] For instance, the Response to the Article 6(1)(c) decision simply claims that when looking at AFAs having an iron content of 0.25% down to 0.15% (inclusive), the Parties overlap to a limited extent since, for these AFAs, their sales account only for approximately [20-30]% of Hydro's volumes and approximately [10-20]% of Alumetal's volumes.[262] The Notifying Party did not provide any assessment by reference to specific alloys or alloy families.[263]

(237) Third, as to the closeness between the Parties' low-carbon solid advanced AFAs, the Notifying Party considers that there are a number of other players producing low-carbon AFAs.[264] The Notifying Party further stresses that SFA suppliers would have a carbon footprint significantly below that of PFA suppliers, which distinguishes the Parties, with Hydro being a PFA player and Alumetal an SFA player.[265]

(238) Finally, the Notifying Party did not assess closeness between the Parties' solid advanced AFAs offering at automotive end-use level or for certain specific geographies.

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257 Response to the Article 6(1)(c) decision, paragraph 41.

258 Response to the Article 6(1)(c) decision, paragraph 52

259 Response to the Article 6(1)(c) decision, paragraph 53.

260 Response to the Article 6(1)(c) decision, paragraph 53.

261 Parties' response to the Request for information no 27 and mapping data submitted as Annexes 6.2.c.1 to Form CO.

262 Response to the Article 6(1)(c) decision, paragraph 56.

263 The Notifying Party simply claims that Hydro's most sold AFA group is […] representing approximately [50-60]% of its sales while Alumetal's most sold AFA is […] representing approximately [40-50]% of its sales. Response to the Article 6(1)(c) decision, paragraph 29.

264 Response to the Article 6(1)(c) decision, Section 2.2.3.3.

265 Response to the Article 6(1)(c) decision, paragraph 74.

9.1.3.3. The Commission's assessment

(239) The analysis of closeness of competition between the Parties is helpful to determine which firms active on the EEA market for solid advanced AFAs offer products that are close substitutes to each other, and is informative about the level of competitive constraint that these firms currently exercise.

(240) Whether the Parties exert a close competitive constraint on each other is particularly relevant in a differentiated market such as solid advanced AFAs in the EEA.

(241) As further explained below, the market for solid advanced AFAs is geographically differentiated within the EEA, while demand for solid advanced AFA products is articulated via several different possible segmentations (alloys and alloy families, automotive end-use segments and low-carbon offering).

(242) The mix of various differentiating factors means that closeness between the Parties' offerings can be assessed at different levels. The Commission has therefore not only analysed closeness between the Parties with regard to each key characteristic (such as alloy focus, carbon footprint and customer focus), but also assessed the degree of their overall substitutability from the customers' perspective on the basis of all characteristics combined, as notably evidenced by customers' evaluations from the market investigation.

(243) The Commission notes that, from the beginning of the prenotification discussions until notably the provision of the transaction data and the responses to the internal document requests for information in the Commission's in-depth investigation, the Parties provided very little information, evidence and data to the Commission to enable it to properly assess closeness between the Parties.

(244) Even though the Parties are both able to offer solid advanced AFAs and therefore compete with each other in the EEA market for solid advanced AFAs, the Commission finds on balance, based on all evidence available to it, that, despite some head-to-head competition between the Parties' advanced AFA offerings in particular segments, they are not close competitors for the production and supply of solid advanced AFAs in the EEA, as will be assessed in detail in Sections 9.1.3.3.1 to 9.1.3.3.8.

(245) To reach the above conclusion, the Commission assessed closeness between the Parties' offerings at different levels, which are detailed in the following sections.

9.1.3.3.1. The Parties only partly and in an asymmetrical way focus on the [Hydro product strategy] segments

9.1.3.3.1.1. Within automotive end-uses, Hydro's business focus is on the wheels segments.

(246) The Commission considers that, for the reasons set out in recitals (247) to (249), the Parties have a diverging focus with respect to the supply of solid advanced AFAs for [Hydro product strategy] in this end-use segment.

(247) First, in 2021 and in the EEA, Hydro supplied significant volumes of solid advanced AFAs to [Hydro product strategy] customers (approximately […] KMT), representing approximately [50-60]% of its sales of these AFAs. In contrast,

Alumetal supplied marginal volumes of only […] KMT to [Hydro product strategy] customers, accounting for approximately [0-5]% of its sales.[266]

(248) Second, the lack of closeness between the Parties in this end-use segment is further evidenced by the fact that Alumetal has only [Alumetal product strategy] customers,[267] while Hydro has a [Hydro product strategy]-customer base of approximately [Hydro product strategy] customers covering most of the main [Hydro product strategy] players in the EEA.[268] In addition, as further detailed in recital (274), Alumetal's [Alumetal product strategy] customers source limited volumes from the Parties.[269]

(249) Third, the Parties' own estimates in their internal documents confirm that an important part of this end-use segment is served by other suppliers, which represent approximately [80-90]% of supply. The Parties cover only a moderate part of that end-use segment (approximately [10-20]%) where Alumetal's share is below [0-5]%.[270]

(250) Based on the above, the Commission concludes that the Parties are not close competitors in the [Parties' product strategies] end-use segment.

9.1.3.3.1.2. Within automotive end-uses, Alumetal's business focus is on [Alumetal product strategy] and [Alumetal product strategy]

(251) As further discussed below, these two end-use segments appear to be more of a focus for Alumetal than Hydro since they represent together approximately [90-100]% of Alumetal's 2021 sales of solid advanced AFAs in the EEA compared to only [30-40]% for Hydro.

9.1.3.3.2. The Parties compete closely in [Parties' product strategies] segment, where however other suppliers are also significantly active

(252) The Commission considers that, for the reasons set out in recitals (252) to (260), the Parties compete closely in the [Parties' product strategies] end-use segment, where however other suppliers are also significantly active.

(253) On the one hand, a number of factors indicate that, for [Parties' product strategy], there is a certain degree of closeness between the Parties' activities in the EEA market for solid advanced AFAs.

(254) First, both Parties supply important volumes of solid advanced AFAs for [Parties' product strategy]. In 2021, Alumetal supplied approximately [Alumetal sales] KMT of solid advanced AFAs for [Alumetal product strategy] while Hydro supplied even larger volumes to automotive customers in this segment (approximately [Hydro sales] KMT). The Parties' sales in relative terms further show the importance of this segment to both of them: [40-50]% of Alumetal's sales of solid advanced AFAs to

266 Parties' response to the Request for information no 27.
267 Parties' response to the Request for information no 27.
268 Parties' response to the Request for information no 27.
269 See these [0-5] customers' responses to the phase II market reconstruction.
270 *See Form CO, Annex 5.4.1.1.C.* The Parties' internal documents estimate the [Hydro's product strategy] market to be of [Hydro market analysis]. This market size excludes liquid volumes and is conservative since it relates to 2020, which is the year during which the market contracted most due to the COVID pandemic. In Annex 5.4.1.1 (slide 18) to the Form CO, this market was estimated to be of […] KMT in 2019. Using the 2021 market size would result in even lower combined market shares for the merged entity.

customers in the EEA relate to [Alumetal product strategy] whereas this segment represents [20-30]% of Hydro's sales.[271]

(255) Second, evidence in the Parties' internal documents shows that they both focus on the [Parties' product strategies] end-use segment. This is first underlined by Hydro's email captioned in Figure 39. This email exchange shows that all of Hydro's customers in the [Hydro product strategy] end-use which purchase the [Hydro product strategy] alloy have contacts with, or are also purchasing from, Alumetal.

Figure 39 – Hydro's discussion on common customers in end-use segments

[Notifying Party internal document]

Source: Doc Id:2756-23351 - [Notifying Party internal document]

(256) This closeness is further confirmed by a Hydro internal document captioned in Figure 40, which shows that [Hydro product strategy] is one of the areas where Hydro identified a risk resulting from an overlap between the Parties' activities.

Figure 40 – Hydro's assessment of product overlap by end-use segment

[Notifying Party internal document]

Source: [Notifying Party internal document]

(257) Finally, the Parties' [Parties' commercial strategies] end-use segment also demonstrates their common focus on this end-use segment. Alumetal thus explains that in its ordinary course of business documents: '[Alumetal commercial strategy]'.[272] Hydro also [Hydro commercial strategy].

Figure 41 – Hydro strategy outlook

[Notifying Party internal document]

Source: Form CO, Annex 1.2.47, [Notifying Party internal document].

(258) On the other hand, however, several other suppliers are present in this end-use segment.

(259) First, the Parties' own estimates made in the ordinary course of business show that an important part of the supply in this market is accounted for by other suppliers. Hydro internally estimated the size of the [Hydro product strategy] segment to be of at least [Hydro market analysis] KMT in 2020,[273] resulting in a share of [20-30]% for the merged entity with an increment of [5-10] percentage points. The Parties' competitors thus accounted for [70-80]% of the volumes sold in this end-use segment.[274]

(260) Second, the feedback received from the market investigation also showed that several suppliers are active in this end-use segment since nine of them confirmed that they produce AFA meeting the requirements for [product strategy], while customers confirmed that they source from these suppliers.[275] In line with this, customers confirmed the existence of alternative suppliers of AFAs for [product strategy]. One

271 Parties' response to RFI 27.

272 Form CO, Annex 5.4.2.2, p. 5.

273 [Hydro market analysis]. This market size is conservative since it relates to 2020 which is the year during which the market contracted most due to the COVID pandemic outbreak. Using 2021 market size would result in even lower combined market shares for the merged entity.

274 Alumetal has supplied approximately […] KMT of solid advanced AFAs for structural parts while Hydro approximately […] KMT.

275 Phase I questionnaire Q3 to competitors, question 4.

of them highlighted for instance that "*there are many players that can produce [product strategy] alloys*".[276]

(261) Based on the above, the Commission concludes that the Parties are close competitors in the [Parties' product strategies] end-use segment, where, nevertheless, other competitors are also significantly active.

9.1.3.3.3. The Parties compete closely in the [Parties' product strategies] segment, where however other suppliers are also significantly active

(262) The Commission considers that, for the reasons set out in recitals (263) to (268), the Parties compete closely in the [Parties' product strategies] end-use segment, where however other suppliers are also significantly active.

(263) On the one hand, a number of factors indicate that, for the [Parties' product strategies] end-use segment, there is a certain degree of closeness between the Parties in the EEA market for solid advanced AFAs.

(264) First, the Parties supplied significant volumes of solid advanced AFAs for [Parties' product strategies] parts. In 2021, Alumetal supplied a total of […] KMT to customers active in the engine end-use segment, and more specifically for [Parties' product strategies]. During the same period, Hydro supplied a similar volume of […] KMT to customers for [Parties' product strategies].[277]

(265) Second, Hydro's internal documents captioned in Figure 40 and Figure 41 show that [Hydro product strategy], in particular [Hydro product strategy], is another area where Hydro sees an overlap between the Parties' activities. Hydro's email captioned in Figure 39 shows in particular the fact that Hydro itself sees an overlap between the Parties' main [Hydro product strategy] customers. Similarly, the [Alumetal product strategy] end-use and in particular [Alumetal product strategy] is an area on which Alumetal is focused, as notably shown by the internal document captioned in Figure 33, which shows for instance that the Nowa Sol plant specialises in [Alumetal product strategy] alloys.

(266) On the other hand, however, several other suppliers are also present in this end-use segment.

(267) First, the Parties' own estimates made in the ordinary course of business show that an important part of this market is accounted for by other suppliers. Hydro internally estimated the size of the [Hydro product strategy] segment (excluding liquid deliveries) to be of approximately [Hydro market analysis] KMT in 2020,[278] resulting in a share of [20-30]% for the merged entity.[279] The Parties' competitors thus accounted for [70-80]% of the volumes sold in this end-use segment.

(268) Second, the feedback received from the market investigation also showed that several suppliers are active in this end-use segment since nine of them confirmed that

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276 Minutes of a call with a customer of 13 June 2022, paragraph 11.

277 Parties' response to the Request for information no 27.

278 In the so-called '[Notifying Party internal document]' where Hydro tracks its own sales, sales of its competitors and the resulting market shares, the market size for [Hydro product strategy] excluding liquid deliveries is estimated to be around [Hydro market analysis] KMT. See Form CO, Annex 5.4.1.1.C. This estimate for market size is conservative since it relates to 2020 which is the year during which the market contracted most due to the COVID pandemic. Using 2021 market size would result in even lower combined market shares for the merged entity.

279 Alumetal has supplied approximately […] KMT of solid advanced AFAs for engine and Hydro a […] KMT.

they produce AFA meeting the requirements for [product strategy], while customers confirmed that they source from these suppliers.[280] Customers confirmed the existence of alternative suppliers of AFAs for [product strategy], including [product strategy], and listed suppliers such as Oetinger, Real Alloy and AMAG.[281]

(269) Based on the above, the Commission concludes that the Parties are close competitors in the engine end-use segment (including especially cylinder heads), where nevertheless other competitors are also significantly active.

9.1.3.3.4. The Parties' sales at common customers are rather limited

(270) For the reasons set out in recitals (271) to (280), the Commission considers that, despite some head-to-head competition for certain customers, the Parties do not compete closely at customer level.

(271) On the one hand, there are indications, albeit limited, suggesting that the Parties compete head-to-head to serve certain customers in the EEA market for solid advanced AFAs. Indeed, based on the data directly gathered by the Commission in the course of the investigation from 25 customers of solid advanced AFAs as well as on the Parties' transaction data,[282] the Transaction results in a relatively moderate overlap on Hydro's side and an important overlap on Alumetal's side. In the case of Alumetal, [80-90]% of its 2021 sales of solid advanced AFAs in the EEA were achieved from customers who also source from Hydro.[283] Importantly, out of these [80-90]% of sales giving rise to an overlap at customer level, [70-80]% of the sales were driven by only two customers. On Hydro's side, [30-40]% of its 2021 sales of solid advanced AFAs in the EEA were made to customers who also source AFAs from Alumetal.

(272) In addition, as explained further in recital (287), Hydro has lost orders to Alumetal which indicates an overlap at customer level.

(273) On the other hand, as set out in recitals (274) to (281), the Parties' own sales data as well as data from their common customers do not indicate that they are close competitors. This is not only evidenced by the fact that common customers represent a limited proportion of the Parties' sales of solid advanced AFAs, but also by either the limited share of sales that the Parties achieve at each of these common customers or the overall limited overlap between the Parties' respective customers.[284]

(274) First, as explained in Section 9.1.3.3.1, the Parties have diverging end-use focuses, which translate into a limited number of common customers. Hydro achieves approximately [50-60]%[285] of its sales of solid advanced AFAs in the EEA to automotive customers in the [Hydro product strategy] segment, whereas Alumetal has [Alumetal commercial strategy] customers in this segment representing a negligible proportion of its overall advanced AFA sales in the EEA (approximately [0-5]%).[286] Most of Hydro's sales in the [Hydro product strategy] segment are therefore not achieved through common customers (of all Hydro sales to [Hydro product strategy] customers, approximately [80-90]% are achieved through

280 Phase I questionnaire Q3 to competitors, question 4.
281 Phase I questionnaire Q4 to customers, question 31.
282 Parties' response to RFI 27.
283 Parties' response to RFI 27.
284 Parties' response to RFI 27.
285 The figure is of [50-60]% when all end-use segments are included.
286 Parties' response to RFI 27.

customers that are not common to both Parties).[287] This is in line with the analysis of Hydro's top ten customers in Figure 42, which shows that only [Hydro customer analysis] of them are common customers and [Hydro product strategy].

(275) Conversely, Alumetal achieves [90-100]% of its 2021 solid advanced AFAs sales in the EEA with customers outside of the [Alumetal product strategy] end-use whereas Hydro generates only [50-60]%[288] of its sales with customers outside the [Hydro product strategy] segment. The Parties' common customers are mainly active in end-use segments other than [Parties' product strategies], as evidenced by the fact that, out of Alumetal's top ten customers, [Alumetal commercial strategy] are common customers, of which only [common customer analysis] are active in the [common customer analysis] end-use.[289]

(276) Second, focusing on the abovementioned [common customer analysis] common customers referred to in recital (275) which are also part of Alumetal's top 10 customers, the Commission's analysis further shows that they have high shares of purchases with other competitors and do not have any significant supply relationship with the Parties. Indeed, the combined share of the Parties with most of these customers is limited.[290]

Figure 42 – Sales to each party's top customers (as a % of each party's total solid advanced AFA sales in 2021)

[Parties' sales data]

Source: Commission's calculations based on the Parties' transaction data submitted in response to RFIs 17 and 27.

(277) More specifically, common customer 1[291] sourced in 2021 significant volumes (approximately 91% of its needs) from competitors of the Parties. For this customer, the combined share of the Parties is less than 10% and as such does not indicate any significant supply relationship with the Parties.[292] Similarly, common customer 2 sourced mostly from suppliers other than the Parties, with the Parties' combined share being approximately 27% only.[293] Common customer 3 had a largely diversified supplier base, while at the same time the Parties accounted for less than 20% of its needs.[294] The same applies to common customer 4 and common customer 5, for which the Parties also accounted together for less than 20% of their needs.[295] [296]

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287 Parties' response to RFI 27.

288 The figure drops to only [40-50]% when limited to sales to automotive customers.

289 Parties' response to RFI 27.

290 While the Parties sometimes have a high combined share with certain customers, these combined however represent less than 1% of total market demand for solid advanced AFAs in the EEA. This shows that the Parties are not unavoidable trading partners in the supply for solid advanced AFAs in the EEA.

291 For the sake of confidentiality, common customers are not analysed in the order that they appear in Figure 42 above.

292 Commission's calculation based on the Parties' sales data and this customer response to the Phase II questionnaire to competitors of aluminium foundry alloys, question I.35.1. See also the Parties' response to RFI 27.

293 Common customer 2 response to 1st market reconstruction.

294 Common customer 3 response to 1st market reconstruction.

295 Common customer 4 response to 2nd market reconstruction. See also Alumetal's transaction data: see the Parties' response to RFI 27. The Commission notes a discrepancy between this customer's response and the information provided by the Parties. The Commission used the most conservative data for its assessment.

(278) As to common customer 6, it did not provide its sales data in response to the Commission's market reconstruction. However, in response to the Commission's Phase 1 questionnaire, this common customer listed Alcoa, Rusal and Trimet as the three closest competitors of Hydro, while for Alumetal it mentioned Alcoa, Rusal, Trimet, SAV, Raffmetal and Real alloy as its closest competitors. The Parties were thus not listed as each other's closest competitor from the perspective of this customer.[297] In addition, Alumetal's sales data shows that it only supplied minimal volumes to this customer,[298] which in any event did not raise any concerns with respect to the Transaction.[299]

(279) Common customer 7 has a largely diversified supplier base and significantly increased the volumes sourced from other suppliers compared to the Parties, which indicates that the Parties are not unavoidable suppliers for this customer. [300/301] In the same way, for common customer 8, the Parties do not appear to be unavoidable suppliers despite supplying approximately 55% of this customers' needs since these supplied volumes represent far less than 0.5% of the total market size of solid advanced AFAs in the EEA and can thus likely be easily satisfied by other market players.[302] As to common customer 9, the Parties' combined share of supply is less than 20% while at the same time this customer sources from 9 alternative suppliers.

(280) The above shows that, out of Alumetal's top ten customers, [common customer analysis] that are common with Hydro purchase significant volumes from other suppliers and are not in a significant supply relationship on the Parties. The same is true for the [common customer analysis] common customers out of Hydro's top ten customers. [Common customer analysis] of these Hydro common customers have already been discussed in recitals (277), (278) (279) and (279) while the [common customer analysis], despite having an important supply relationship with Hydro, appear to source from 4 alternative suppliers and only minimal volumes from Alumetal.[303] This is all the more true since, as explained in recital (384), customers multisource and typically qualify several suppliers, which enables them to easily switch when necessary.

(281) Based on the above, the Commission concludes that the Parties lack closeness at customer level as reflected by the overall relatively limited sales achieved through common customers, as well as the limited share of solid advanced AFAs purchases they achieve through each of these common customers.

9.1.3.3.5. The Parties have different alloy focuses

(282) For the reasons explained below, the Commission considers that, despite some head-to-head competition at alloy level (recitals (283) to (287)), the market investigation

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296 Common customer 4 response to 2nd market reconstruction. See also Parties' response to RFI 27. The Commission notes a discrepancy between this customer's response and the information provided by the Parties. The Commission used the most conservative data for its assessment.

297 Phase I questionnaire Q2 to customers, question 17.

298 Parties' response to RFI 27.

299 Phase I questionnaire Q2 to customers, questions 22 and 22.1.

300 Parties' response to RFI 27.

301 Common customer 7 response to 2nd market reconstruction.

302 The Commission's calculation based on the reconstructed total market size of 1 039 KMT for solid advanced AFAs.

303 Hydro's common customer 6 response to 2nd market reconstruction. See also Alumetal's transaction data: see the Parties' response to RFI 27. The Commission notes a discrepancy between this customer's response and the information provided by the Parties. The Commission used the most conservative data for its assessment.

confirmed that the Parties do not compete closely in terms of the types of alloys they supply (recitals (288) to (291)).

(283) On the one hand, a number of factors indicate that, at alloy level, there is a certain degree of head-to-head competition at alloy level between the Parties in the EEA market for solid advanced AFAs.

(284) First, the bulk of the Parties' EEA sales of solid advanced AFAs relate to [Parties' product strategies]. As shown in Figure 43, these [Parties' product strategies] account together for approximately [80-90]% of Hydro's 2021 sales, while they represent [90-100]% for Alumetal.[304]

Figure 43 – Share of total advanced AFA sales (as a % of each party's total solid advanced AFA sales in 2021)

[Parties' sales data]

Source: Commission's calculations based on the Parties' transaction data submitted in response to RFIs 17 and 27.

(285) The market feedback also confirmed that the Parties predominantly supply these [Parties' product strategies]. Overall, the market investigation confirmed that both Parties focus on the [Parties' product strategies] generally or certain alloys within [Parties' product strategies]. For instance, one customer stressed that the Parties are close competitors for "*[Parties' product strategies]*".[305]

(286) Second, the Parties' R&D projects and trials, which aim to increase the share of scrap used to make certain advanced alloys – sometimes also by changing the chemical composition of the customer AFA specification – focus mostly on [Parties' R&D strategies]. In particular, since 2018, [Alumetal R&D strategy].[306] [Alumetal R&D strategy].[307]

Figure 44 : Hydro's trial deliveries

[Notifying Party internal document]

Source: Parties' presentation to the Commission [Notifying Party internal document], slide 13.

(287) Third, head-to-head competition between the Parties for the same alloy families is also evidenced by the existence of orders lost by Hydro to Alumetal, which relate to [Parties' product strategies]. In particular, as shown in Figure 45, Hydro's internal documents suggest that Hydro lost [Hydro commercial operations] orders to Alumetal, which offered the AFA at '[Alumetal commercial strategy] *EUR*'.[308] Similarly, Figure 46 shows that in 2019 Alumetal won a [Alumetal product strategy] KMT order of [Alumetal product strategy and commercial operations], a large customer, while these volumes were previously supplied by Hydro.

Figure 45 – Hydro's lost orders to Alumetal (1)

[Notifying Party internal document]

Source: Form CO, Annex 1.2.2, [Notifying Party internal document]

304 Parties' response to RFI 27.
305 Phase II questionnaire Q8 to customers, question K.B.5.
306 Annex 8.9.a to the Form CO.
307 Technical meeting on Scrap and Recycling, slide 13.
308 Form CO, Annex 1.2.2, [Notifying Party internal document].

Figure 46 – Hydro's lost orders to Alumetal (2)

[Notifying Party internal document]

Source: M.10658ID002794-066639-HYD_0000163601_200903 [Notifying Party internal document]

(288) On the other hand, despite the considerations set out in recitals (283) to (287), the Commission considers that the Parties are not close competitors in terms of the types of alloy they supply. As set out in recitals (289) to (291), the main focus on different alloy families (namely AlSi7 for one party and AlSi10 for the other), the focus on different alloys even within the same alloy family, and customer feedback do not indicate that the Parties are close competitors for the alloys they supply. The following elements support this conclusion.

(289) First, while as shown in Figure 43, [Parties' product strategies] appear to represent a significant share of the Parties' EEA sales of solid advanced AFAs, they at the same time show that each Party is more focused on [Parties' product strategies].[309] Figure 47 shows that, in 2021, Hydro predominantly supplied [Hydro product strategy] alloys (approximately [70-80]% of its solid advanced AFAs sales) while Alumetal [Alumetal product strategy] (approximately [60-70]% of its solid advanced AFAs sales). This is further evidenced by the Parties' respective sales in absolute terms, as illustrated in Figure 47: Hydro sells significantly higher volumes of [Hydro product strategy] than Alumetal does (respectively [Hydro sales] KMT and [Alumetal sales] KMT). Hydro's important focus on this alloy family seems to be driven as explained in recital (246) by its focus on the [Hydro product strategy] end-use segment, where Alumetal has a marginal presence.

Figure 47 – Parties' sales of AlSi7 and AlSi10 alloys families (2021, in KMT)

[Parties' sales data]

Source: Commission's calculations based on the Parties' transaction data submitted in response to RFIs 17 and 27.

(290) Second, within the [Parties' product strategies], the Parties' 2021 sales data show that they focus on [Parties' product strategies]. As illustrated by Figure 48, Hydro sold a total of [Hydro sales] KMT of [Hydro product strategy], while Alumetal sold only [Alumetal sales] KMT of that alloy. Both Parties supplied [Parties' product strategies] of [Parties' product strategies] ([Hydro sales] KMT for Hydro and [Aluemetal sales] KMT for Alumetal). The overwhelming share of [Hydro product strategy] supplied by Hydro do not give rise to any overlap with Alumetal or a very limited one. In any event, the market feedback received confirmed that several suppliers of [product strategy] alloys other than the Parties are active in the market. One competitor explained that "*Alumetal (Poland), Nicromet (Poland), Comax (CZ), Remet (CZ), Amag (Austria), Raffmetal (Italy, strongly growing supplier), Intals (Italy), Oetinger (Southern Germany), Affimet (France), Trimet (Germany), Real alloy (Germany), Stena (Sweden) etc. are all expected to produce* [product strategy]".[310]

Figure 48 – Sales of AlSi7 alloys (2021, in KMT)

[Parties' sales data]

Source: Commission's calculations based on the Parties' transaction data submitted in response to RFIs 17 and 27.

309 Parties' response to RFI 27.

310 Minutes of a call with a competitor held on 4 November 2022, paragraph 13.

(291) Third, regarding [Parties' product strategies] ([…] KMT for Hydro and […] KMT for Alumetal), it is more of a focus for Alumetal than Hydro. As shown in in Figure 43, [60-70] % of Alumetal's advanced AFAs sales in 2021 were made of [Alumetal product strategy] compared to only [10-20] % for Hydro. A closer assessment of the specific alloys supplied by each of the Parties within this family shows a diverging focus. [Hydro product strategy] accounted for [70-80] % of Hydro's 2021 sales ([Hydro sales] KMT out of [Hydro sales] KMT) compared to only [10-20] % for Alumetal ([Alumetal sales] KMT out of [Alumetal sales] KMT). Most of the Parties' 2021 sales in the [Parties' product strategies] family related to non-overlapping alloys or to those for which there is only a very limited one.[311]

(292) Based on the above, the Commission concludes that the Parties do not compete closely in terms of the types of alloys they supply.

9.1.3.3.6. The Parties are geographically close to each other, but a number of other competitors have a similar geographic focus

(293) For the reasons set out in recitals (294) to (297), the Commission considers that the Parties are geographically close to each other, but a number of other suppliers have a similar geographic focus.

(294) On the one hand, there are strong indications that point to the existence of head-to-head competition between the Parties in specific regions within the EEA with regard to solid advanced AFAs. In particular, as shown in Figure 49, in 2021 Alumetal sold [70-80] % of its solid advanced AFAs sold in the EEA in the Central and Eastern European (CEE) countries (defined here as Czechia, Germany, Poland and Slovakia), where Hydro made [70-80] % of its EEA sales.

Figure 49 – Parties share of solid advanced AFAs sales per country (as a % of each party's total solid advanced AFA sales in 2021)

[Parties' sales data]

Source: Commission's calculations based on the Parties' transaction data submitted in response to RFIs 17 and 27.

(295) On the other hand, however, many other suppliers appear to be equally focused on these CEE countries.

(296) As highlighted in recital (221), the Parties' 2021 share in a market for solid advanced AFAs limited to the CEE countries only slightly increases to [30-40]% from [20-30]% at the overall EEA level. Such an increase is moreover not unique to the Parties: the market share of the Parties' three largest competitors also increases in the CEE market for solid advanced AFAs. More specifically, the market share of primary producers 1 and 2 increases but still within the range of [10-15%] while for primary producers 3 it increased from [10-15%] to [15-20%].

(297) Indeed, as shown in Table 4, each of the Parties' three largest competitors achieved in 2021 a significant proportion of their solid advanced AFAs sales in the CEE countries. These countries are thus also a focus for these competitors.

311 Parties' response to RFI 27.

Table 4 – Solid advanced AFAs sales in the CEE countries of the Parties' three largest competitors[312]

Supplier	Share of solid advanced AFAs sales in the CEE countries (%)
Primary producer 1	[60% - 80%]
Primary producer 2	[60% - 80%]
Primary producer 3	[80% - 100%]

Source: Commission's calculations based on its market investigation

(298) Based on the above, the Commission concludes that the Parties are geographically close to each other, but that a number of other competitors have a similar geographic focus, and therefore, this geographic closeness does not indicate that the Parties are close competitors.

9.1.3.3.7. The Parties are not close competitors regarding their respective low-carbon solid advanced AFA offerings

(299) The Commission considers that, for the reasons set out in recitals (300) to (320), the Parties have significantly differentiated offerings with respect to the carbon footprint of their solid advanced AFA sales in the EEA, and therefore do not compete closely in the supply of low-carbon solid advanced AFAs in the EEA.

(300) Carbon footprint is key for the assessment of whether the Parties' low-carbon offerings are close substitutes. Accordingly, in its assessment, the Commission analysed the carbon footprint of the Parties' solid advanced AFA offerings.

(301) First, there is a significant gap between the average carbon footprint of Hydro's assets producing solid advanced AFAs and those of Alumetal. The slide in Figure 50 shows that Hydro's main production plants for AFAs in the EEA (Ardal and Sunndal)[313] have an average carbon footprint of […] tCO_2e/t and […] t CO_2e/t respectively.

Figure 50 – Average emission intensity from Hydro's production plants

[Notifying Party internal document]

Source: Form CO, Annex 6.2.d, [Notifying Party internal document].

(302) While Ardal's and Sunndal's average carbon footprints are below the 'green' limit that Hydro sets internally and uses to define its green brands such as Reduxa (cf. Figure 53) (namely 4 tCO_2e/t), it remains far above the average carbon footprint of Alumetal's production plants. Figure 51 shows that, for each Alumetal plant, the average carbon footprint for produced AFAs is below [Alumetal operational information] tCO_2e/t save for the Gorzyce plant (AG), where the average is of

312 Solid advanced AFAs sales in the CEE countries of the Parties' three largest competitors were calculated based on the Commission's market investigation and are as such confidential. Therefore, for the purpose of this Decision, the Commission is anonymising the names of suppliers identified during its market investigation.

313 Hydro also produced AFAs in its Qatalum plant in Qatar, which has a significantly higher carbon footprint of […] tonCO2e/ton but with very limited sales to the EEA.

[Alumetal operational information] tCO_2e/t and combines both AFAs and master alloys. The average for the production of AFAs in this plant is expected to be in the same range as in other plants (namely below [Alumetal operational information] tCO_2e/t) since, as pointed out in the same slide, the production of master alloys relies on primary aluminium and is thus the main driver of a higher average carbon footprint. Even when focusing on advanced alloys only, the Kety plant (AK), [Alumetal's product strategy], as well the Nowa sol plant (ANS) [Alumetal's product strategy], which accounted together for approximately [90-100] % of Alumetal's solid advanced AFA sales in the EEA in 2021, had a respective average carbon footprint of only [Alumetal operational information] and [Alumetal operational information] tCO2/t.

Figure 51 – Average emission intensity from Alumetal's production plants

[Alumetal internal document]

Source: Form CO, Annex 5.4.2.1, [Alumetal internal document].

(303) This difference in terms of carbon footprint between Hydro's production assets for AFAs and those of refiners such as Alumetal is recognised by Hydro in its internal documents such as the one captioned in Figure 51, where it recognises that aluminium produced from recycled material "*emits much less CO²"* than the one produced from non-recycled material. Hydro further estimates in Figure 52 the average carbon footprint of AFAs produced from recycled material to be of [Hydro market analysis] tCO_2e/t, in line with the observed average for Alumetal in recital (302).

Figure 52– Average emission intensity for recycled and non-recycled AFAs

[Notifying Party internal document]

Source: Form CO, Annex 6.2.d, [Notifying Party internal document].

(304) [Hydro commercial strategy].[314] The fact that Hydro considers adding post-consumer scrap to its already low-carbon AFAs in order to further lower their carbon footprint shows that they are not close substitutes to the AFAs that already contain an important share of scrap as the ones produced by Alumetal.

(305) From this perspective, the Parties' low-carbon offering display a certain degree of complementarity, while they also appear to be substitutable for several customers. For example, one customer explained: "*Hydro has very good competences and produces mainly from primary sources with law [low] CO2 emission and Alumetal produces from scraps (Low CO2)*".[315] This complementarity has been stressed by several market participants.[316] One competitor explained that the Parties' low-carbon solid advanced AFAs are "*complementary",*[317] while a customer explained that the Parties' offers are "*not 1:1comparable. Hydro gets a lot green AFA from Norway water-power and less out of recyclate. Alumetal form [from] Poland gets a lot of recyclate into the alloy*".[318] Another customer stressed that "*Alumetal is ahead using scrap with lower CO2 compare[d] to Hydro primary production at 4kg CO2/Kg Al*".[319]

314 Hydro's response to RFI 19 – [Notifying Party internal document].
315 Phase II questionnaire Q8 to customers, question K.B.21
316 Phase II questionnaire Q8 to customers, question K.B.20
317 Phase II questionnaire Q7 to competitors, question K.B.15.
318 Phase II questionnaire Q8 to customers, question K.B.16.
319 Phase II questionnaire Q8 to customers, question K.B.21.

(306) By relying on post-consumer scrap, Alumetal's low-carbon AFAs have a substantially lower carbon footprint compared to Hydro, which mainly relies on green energy to lower its AFA carbon footprint. Hydro's strategy to increase the share of post-consumer scrap in order to further decarbonise its low-carbon AFAs and achieve similar carbon footprint levels to Alumetal confirms the finding that the Parties' low-carbon solid advanced AFAs are not close substitutes.

(307) Second, customers do not see the Parties as close competitors for low-carbon AFAs.

(308) In the first place, the Commission asked market participants to name and rank the closest competitors of each of the Parties as regards low-carbon solid advanced AFAs for automotive customers in the EEA.

(309) Customers overwhelmingly confirmed that Alumetal is not a close competitor of Hydro and listed Vedanta and Rusal as the two closest competitors of Hydro. Alumetal was only listed as the third closest competitor to Hydro.[320] On the other side, Vedanta, Rusal, Rio Tinto and Alcoa were all considered closer competitors to Alumetal than Hydro.[321] In addition, in the qualitative feedback provided by customers, many of them explained that competitors such as Alcoa, Century and Rusal rely in the same way as Hydro on green energy and are as such close competitors of Hydro. One customer explained that "*[d]ue to geographic and power based options, Alcoa is the closest to Hydro*",[322] while another stressed the importance of "*Hydro power for Alcoa Rusal rta [Rio Tinto] and Century"*.[323]

(310) As to competitors, a clear majority of them identified Oetinger as the closest competitor of Hydro followed by Alumetal as second closest, then followed by Raffmetal;[324] while the closest competitors of Alumetal were Century Aluminium followed by Alcoa and Rio Tinto.[325]

(311) In the second place, market participants were also asked whether Hydro and Alumetal are particularly strong or close competitors in relation to low-carbon solid advanced AFAs for automotive customers in the EEA.

(312) A majority of customers confirmed that Hydro and Alumetal are not close competitors.[326] One customer explained that "*Alumetal is ahead using scrap with lower CO2 compare[d] to Hydro primary production at 4kg CO2/Kg Al*".[327] Another customer stressed that "[i]*t is not 1:1comparable. HYDRO get´s [gets] a lot green AFA from Norway water-power and less out of recyclate. Alumetal form Poland get´s [gets] a lot of recyclate into the alloy*".[328] Competitor feedback was mixed. Half of them considered that they are particularly strong or close competitors while the other half did not.[329]

(313) Third, the Parties' internal documents confirm that they do not view each other as close competitors for the supply of low-carbon solid advanced AFAs in the EEA.

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320 Phase II questionnaire Q8 to customers, question K.B.15.
321 Phase II questionnaire Q8 to customers, question K.B.17.
322 Phase II questionnaire Q8 to customers, question K.B.15.
323 Phase II questionnaire Q8 to customers, question K.B.15.
324 Phase II questionnaire Q7 to competitors, question K.B.9.
325 Phase II questionnaire Q7 to competitors, question K.B.11.
326 Phase II questionnaire Q8 to customers, question K.B.20.
327 Phase II questionnaire Q8 to customers, question K.B.21.
328 Phase II questionnaire Q8 to customers, question K.B.21.
329 Phase II questionnaire Q7 to competitors, question K.B.14.

(314) Various internal documents submitted by Hydro illustrate that Hydro does not consider itself to be a close competitor of Alumetal and other refiners as regards the supply of low-carbon solid advanced AFAs.

(315) For instance, in a presentation entitled [Notifying Party internal document],[330] Hydro provides an overview of competing low-carbon players with a similar offer to Reduxa (i.e. Hydro's AFAs based on electricity from renewable sources) and also to Circal (i.e. Hydro's aluminium products – though currently not AFAs – that have a content of post-consumer aluminium scrap of at least [70-80]%). The slide captioned in Figure 53 provides a comparison of Hydro's competitors offering alternatives to Reduxa. This comparison only lists non-scrap-based suppliers as potential competitors of Hydro in this low-carbon segment. This slide clearly demonstrates that Hydro considers its Reduxa low-carbon AFAs as substitutable with the offering of other non-recyclers. The only supplier of low-carbon AFAs made from recycled material that Hydro lists in the [Notifying Party internal document] presentation (in a different slide) as a competitor to its low-carbon AFAs is Raffmetal.[331] Alumetal is not mentioned in this presentation, which further evidences the fact that Hydro does not see Alumetal as a close competitor.

Figure 53 – Competitors' low-carbon offering that competes against Hydro's Reduxa

[Notifying Party internal document]

Source: Response to request for information n° 24, Annex to question 3, [Notifying Party internal document].

(316) As with the [Notifying Party internal document] presentation in Figure 53, other Hydro presentations on low-carbon offerings contain further evidence that Hydro does not view Alumetal as a close competitor for low-carbon AFAs. This is the case of a presentation entitled [Notifying Party internal document] dated 5 October 2021, captioned in Figure 54, where Hydro compares average emission intensity for Hydro and selected peers as well as the CO^2 intensity footprint for the smelters operated by these competitor. Alumetal does not appear on the slides from the presentation, which illustrates the positioning of Rusal, Alcoa, Rio Tinto, Trimet, EGA and Alba as closer competitors to Hydro than Alumetal in this respect.

Figure 54 – Extract from an internal Hydro presentation dated 5 October 2021

[Notifying Party internal document]

Source: Form CO, Annex 6.2.d, [Notifying Party internal document].

(317) [Internal Alumetal strategic considerations]. This should however be read in light of the fact that Alumetal does not have, contrary to other refiners such as Raffmetal, its own low-carbon brand and the fact that, in any event, most of its production is low-carbon since it relies on recycled material, albeit in variable proportions. Indeed, Hydro and other smelters (as well as Raffmetal) have a branded low-carbon offering, while Alumetal does not in spite of most of its production typically having a much lower carbon footprint than that of these players. This difference alone suggests a lack of closeness between Hydro and Alumetal with regard to their respective low-carbon advanced AFA offerings in the EEA.

(318) Fourth, as a useful metric to quantify and illustrate differentiation among low-carbon offerings, the Commission compiled saved emission shares, shown in Table 5.

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330 Parties' response to request for information 24, Annex to question 3, [Notifying Party internal document].

331 Parties' response to request for information 24, Annex to question 3, [Notifying Party internal document].

Table 5 –Share of saved CO2 emissions compared to the EEA average in 2021[332]

Company	EEA
Hydro	[20-30]%
Alumetal	[10-20]%
Combined	[30-40]%
Competitor 1	[10-20%]
Competitor 2	[10-20%]
Competitor 3	[10-20%]
Competitor 4	[5-10%]
Competitor 5	[5-10%]
Competitor 6	[0-5%]
Competitor 7	[0-5%]
Competitor 8	[0-5%]
Competitor 9	[0-5%]
Competitor 10	[0-5%]
Competitor 11	[0-5%]
Competitor 12	[0-5%]
Competitor 13	[0-5%]
Competitor 14	[0-5%]
Competitor 15	[0-5%]
Competitor 16	- [0-5%]
Competitor 17	- [0-5%]
Competitor 18	- [5-10%]
Competitor 19	- [5-10%]
Total	100%

Source: Commission's calculation based on its market investigation

(319) While Table 5 shows that Hydro is the largest CO2 emission saver in the market, it also shows that Alumetal is only the [Parties' emission data] market player in terms of saved emissions. There are at least [Parties' emission data] competitors of the Parties, both refiners and smelters, which have higher saved emission shares than

332 The share of saved emissions represents what a company has saved by producing advanced AFAs with a carbon footprint below that of the EEA average. These shares were calculated based on the average carbon footprint of each production asset and the advanced AFA production of that assets. The difference between the production asset's carbon footprint and the EEA average AFA carbon footprint is then multiplied by the production asset's total production, in order to arrive at a figure that represents the total emissions this production asset has saved compared to the total amount of emissions it would have had by producing at EEA average. Companies that have negative saved emission shares have a production that emits more CO_2 than the EEA average.

Alumetal has. This again confirms that the Parties do not compete closely in the supply of low-carbon solid advanced AFAs in the EEA.

(320) In any event, the feedback received during the market investigation confirmed that several large other players are active as suppliers of low-carbon advanced AFAs in the EEA. The Parties' competitors confirmed that at least seven of them produce and supply low-carbon advanced AFAs.[333] These include suppliers using renewable energy for their production process as well as well as those relying on recycled input. This is in line with the Commission's finding in Section 9.1.2.2.1 that a number of sizeable alternative low-carbon suppliers would still be available to customers post-Transaction.

(321) Based on the above, the Commission considers that the Parties are not close regarding their respective low-carbon solid advanced AFA offerings in the EEA.

9.1.3.3.8. Conclusion as regards closeness of competition between Hydro and Alumetal

(322) Based on the analysis of the evidence described in this Section, the Commission concludes that, despite some elements of head-to-head competition between Hydro and Alumetal in certain segments, in which they are nevertheless only two players among many suppliers in each of these segments, the Parties are not close competitors in the market for solid advanced AFAs in the EEA.

9.1.4. Alumetal as an important competitive force

9.1.4.1. Legal Framework

(323) The HMG list a number of factors which may influence whether or not significant horizontal non-coordinated effects are likely to result from a merger. One of these factors is whether one or more of the merging parties can be considered an important competitive force. According to paragraph 37 of the HMG a firm may be considered an important competitive force if it has more of an influence on the competitive process than its market shares or similar measures would suggest. A merger involving such a firm may change the competitive dynamics in a significant, anticompetitive way, in particular when the market is already concentrated. There is no exhaustive list of elements characterising an important competitive force, but examples are particularly innovative companies or recent entrants that are expected to exert significant competitive pressure in the future on the other firms in the market.[334]

9.1.4.2. The Notifying Party's arguments

(324) The Notifying Party argues that Alumetal cannot be considered an important competitive force as a supplier of high-purity AFAs made from scrap. In support of this, the Notifying Party submits the following arguments:[335] First, Alumetal [Hydro market analysis]. Second, there are numerous other competitors, refiners and smelters, who will constrain the merged entity post-Transaction. More specifically, Alumetal is one of several similarly positioned refiners supplying low-carbon and high-purity AFAs to the automotive industry. Third, [Hydro market analysis]. [Alumetal operational information].

333 Phase II questionnaire Q7 to competitors, question H.9.
334 Paragraphs 37 and 38 Horizontal Merger Guidelines.
335 Response to the Article 6(1)(c) decision, Section 2.2.3.

9.1.4.3. The Commission's assessment

(325) The Commission notes that, from the beginning of the prenotification discussions until notably the provision of the transaction data and the responses to the internal document requests for information in the Commission's in-depth investigation, the Parties provided very little information, evidence and data to the Commission to enable it to properly assess whether Alumetal would be an important competitive force.

(326) The Commission's assessment outlined below focuses first on Alumetal's role and capabilities and analyses subsequently those of other refiners, and in particular whether these have similar capabilities to those of Alumetal or could at least replicate them within a short period of time and with reasonable investments.

9.1.4.3.1. Role and capabilities of Alumetal

9.1.4.3.1.1. Alumetal is the leading player in producing solid advanced AFAs using scrap, thus typically offering cheaper alternatives to customers

(327) The Commission finds that Alumetal is the leading player in producing solid advanced AFAs using scrap in the EEA. This allows Alumetal, on the one hand, to respond to the increasing demand of customers for low-carbon AFAs to reduce the carbon footprint of the end-product (as explained in Section 7.2). On the other hand, this allows Alumetal to offer solid advanced AFAs that are cheaper than alternative products that are produced from alumina in smelters.

(328) First, as also confirmed by the Notifying Party, while Alumetal does not have any smelters (i.e., the type of production facility that is typically used to produce PFAs in an electrolysis process, as is the case for Hydro), Alumetal is able to supply customers with solid advanced AFAs that it produces in its remelters.[336]

(329) Second, Alumetal's advanced AFAs from scrap tend to be less expensive than advanced AFAs that are produced from alumina. One important difference is that the production of recycled aluminium requires 95% less energy compared to the production of primary aluminium, which reduces costs and the carbon footprint.[337] For example, a customer notes that "[s]*econdary and primary alloy have substantially different pricing approach*".[338] According to a customer common to both Parties "*Alumetal is always able to provide cheaper and more competitive prices than Hydro, including for the same alloys*".[339] Figure 55 shows that Alumetal's yearly average prices for solid advanced AFAs have been consistently and significantly below those of Hydro.

Figure 55 – Average prices for solid advanced AFAs of Alumetal and Hydro (in EUR/metric tonne)

[…]

Source: Commission analysis based on the Parties' transaction data submitted in response to RFIs 17 and 27.

(330) Third, Alumetal emerges as the leading supplier of solid advanced AFAs made from scrap in the EEA.

(331) In the first place and crucially, Alumetal sells by far the most solid advanced AFAs among refiners in the EEA. As shown in Table 2, Alumetal commands the largest

336 Form CO, paragraph 138.
337 Phase I questionnaire Q1 to competitors, question 9.1.
338 Phase I questionnaire Q4 to customers, question 10.1.
339 Minutes of a call with a customer of 11 October 2022, paragraph 7.

market share for the supply of solid advanced AFAs among refiners in the EEA. The solid advanced AFA sales of the next largest refiner are more or less half of Alumetal's sales, and most refiners have negligible shares on the market for solid advanced AFAs. [Alumetal commercial strategy].[340]

(332) In the second place, Alumetal focuses on and has significantly increased its capabilities and production of solid advanced AFAs.

(333) A significant portion of Alumetal's AFA sales is made in the advanced segment. In contrast to the Notifying Party's submission that the production of 'SFAs' (i.e. non-advanced recycled AFAs) accounted for more than [90-100]% of Alumetal's total AFA production output in 2020 and 2021,[341] Figure 56 shows that Alumetal's 'HG' or 'high grade' (i.e. advanced AFA) production represented [50-60]% of its total AFA production (at least in 2019).

Figure 56 – [Notifying Party internal document]

[Notifying Party internal document]

Source: Parties' response to RFI 13, Annex Q21, [Notifying Party internal document].

(334) [Hydro market analysis].[342] As can be seen in Figure 57, Alumetal's production of AFAs has grown significantly over the past years and is expected to grow even further in the future. More recent data shows that Alumetal's sales of solid advanced AFAs grew by [30-40]% between 2019 and 2021.

Figure 57 – '[Notifying Party internal document]'

[Notifying Party internal document]

Source: Parties' response to RFI 13, Annex Q21, [Notifying Party internal document].

9.1.4.3.1.2. Alumetal has crucial metal scrap management facilities and know-how

(335) The Commission finds that Alumetal has metal management and scrap sourcing, sorting and utilisation know-how and capabilities that are crucial to produce solid advanced AFAs from scrap.

(336) First, [Hydro market analysis].[343] A key point for the production of advanced AFAs from scrap is the knowledge to optimally choose and mix the scrap to make high-value AFAs from low-value inputs.

(337) Second, [Hydro market analysis]. The fact that Alumetal produces scrap-based alloys that can replace alloys produced by smelters based on alumina means that (certain) customer specifications that had to be produced from alumina can be produced by Alumetal using scrap (at least partly). Meeting customer specifications was ranked as the most important criteria both by customers and competitors for the purchasing decision for AFAs in the EEA.[344]

Figure 58 – Detailed assessment of 5 competitors

[Notifying Party internal document]

Source: Parties' response to RFI 13, Annex Q21, [Notifying Party internal document].

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340 From CO, Annex 5.4.2.1, [Alumetal internal document].

341 Form CO, paragraph 138.

342 Parties' response to RFI 13, Annex Q21; [Notifying Party internal document].

343 Parties' response to RFI 13, Annex Q21, [Notifying Party internal document].

344 Phase I questionnaire Q1 to competitors, question 36; Phase I questionnaire Q2 to customers, question 33.

(338) Third, over the last 20 years, Alumetal has invested in its capabilities and know-how to source and sort scrap, and it has developed a remarkable expertise to use scrap efficiently in the production of AFAs and even advanced AFAs.

(339) In the first place, as stated by Alumetal in Figure 59, [Alumetal strategic analysis].

Figure 59 – Evolution of Alumetal's metal management

[Alumetal internal document]

Source: Form CO, Annex 5.4.2.1, [Alumetal internal document].

(340) In the second place, most recently, Alumetal invested in a new metal management process at its Nowa Sol plant, called 5GLS. It includes a new aluminium scrap processing line combining shredding, an eddy current system, and an X-ray system, which was planned to start operations in Q4 2022. One of the goals of this investment is to process low-quality secondary scrap grades and to sort good quality scrap raw materials from aluminium mixed waste of low quality.[345] Alumetal invested approximately EUR […] the 5GLS project.[346]

(341) In the third place, the evolution of Alumetal's metal management expertise is exemplified in Figure 60 for the advanced alloy [Alumetal product strategy] (which is typically used for automotive cylinders). While, in 1998-2003, [80-90]% of [Alumetal product strategy] had to be used as input to produce a [Alumetal product strategy] alloy, Alumetal could reduce the requirement to use [Alumetal product strategy] to currently only [0-5]% and increase the use of scrap to [80-90]%. With the 5GLS technology, Alumetal foresees that it will be able to use [90-100]% scrap, out of which [80-90]% would be the least expensive post-consumer wrought scrap.

Figure 60 – Alumetal's evolution of metal management for alloy […] (an advanced AFA typically used for automotive cyliners)

[Alumetal internal document]

Source: Form CO, Annex 5.4.2.1, [Alumetal internal document].

(342) Fourth, metal management capabilities are not limited to the equipment alone, but know-how and expertise are necessary to produce high-value alloys from (cheap) scrap.

(343) In the first place, according to an Alumetal internal document, metal management at Alumetal means: [Alumetal commercial strategy].[347]

(344) In the second place, the majority of customers who expressed a view on the Commission's market investigation indicated that, for solid advanced AFAs, Alumetal is a leader or (very) strong in relation to: (i) use of scrap, (ii) access to (adequate) scrap in sufficient volumes, and (iii) in-house scrap sorting capabilities with sufficient capacity.[348]

(345) In the third place, the majority of market participants indicated that the technical ability/expertise/know-how to make low-impurity products (partly) from scrap is imperative or provides a significant advantage.[349]

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345 Form CO, paragraph 154.

346 Form CO, Annex 5.4.2.1, [Alumetal internal document].

347 Form CO, Annex 5.4.2.1, [Alumetal internal document].

348 Phase I questionnaire Q2 to customers, question 30.

349 Phase I questionnaire Q1 to competitors, question 12 and Phase I questionnaire Q2 to customers, question 12.

(346) Fifth, in the Commission's market investigation, customers confirmed Alumetal's strength as a supplier of solid advanced AFAs in the EEA regarding the following capabilities: (i) EEA-based production; (ii) use of scrap (at least partly); (iii) access to (adequate) scrap in sufficient volumes; and (iv) in-house scrap sorting capabilities with sufficient capacity.[350]

9.1.4.3.1.3. Sufficiently large relevant capacity is important to automotive customers

(347) The Commission finds that sufficiently large relevant capacity is important to automotive customers.

(348) First, the majority of customers who expressed a view on the Commission's investigation indicated that sufficient capacity to provide certain (minimum) quantities is imperative to competitively supply low-impurity AFAs to automotive customers in the EEA.[351] A customer explained for example: "*There are many players that can produce structural alloys; however small players have capacity constraints and therefore are not appropriate for* [the company]".[352]

(349) Second, as shown by Figure 61, Alumetal has significantly enlarged its capacity by internal growth and investments over the last 20 years.

Figure 61 – Alumetal's production capacity historic development

[Alumetal internal document]

Source: Form CO, Annex 5.4.2.1, [Alumetal internal document].

(350) Third, Alumetal has one of the largest production capacity among European refiners with […] KMT (see Figure 62). Raffmetal is the only refiner with a similar capacity ([…] KMT).

Figure 62 – Capacity of top ten European aluminium refiners

[Alumetal internal document]

Source: Annex 5.4.2.1, [Alumetal internal document].

(351) Fourth, [Hydro commercial strategy].

Figure 63 – Minimum asset production capacity assessment

[Notifying Party internal document]

Source: Parties' response to RFI 13, Annex Q21, [Notifying Party internal document]

(352) [Alumetal product capacity].

Figure 64 – Spare capacity comparison

[Notifying Party internal document]

Source: Parties' response to RFI 13, Annex Q21, [Notifying Party internal document].

(353) Contrary to the Notifying Party's statements in the Response to the Article 6(1)(c) decision that [Alumetal spare capacity],[353] [Alumetal spare capacity] Alumetal [Alumetal spare capacity] KMT (see Figure 65).

350 Phase I questionnaire Q2 to customers, question 30.
351 Phase I questionnaire Q2 to customers, questions 12 and 13.
352 Minutes of a call with a customer of 13 June 2022, paragraph 11.
353 Response to the Article 6(1)(c) decision, paragraph 81.

Figure 65 – Hydro estimates of Alumetal's spare capacity

[Notifying Party internal document]

Source: Parties' presentation to the Commission [Notifying Party internal document].

(354) Sixth, in the Commission's market investigation, a majority of market participants indicated that there is only limited spare capacity for AFAs in the EEA,[354] while these market participants expect an increase (small or significant) in overall demand of AFAs in the next years. In relation to low-carbon AFAs, the majority of market participants who expressed a view expects a significant increase.[355] One market participant noted in this regard: '*there is definitely a trend regarding low-carbon AFA and therefore we are expecting an increase*'.[356] Therefore, spare capacity, especially for low-carbon AFAs, is becoming increasingly important.

9.1.4.3.1.4. Alumetal is particularly cost-effective

(355) The Commission finds that Alumetal is a particularly cost-effective supplier of solid advanced AFAs in the EEA.

(356) First, Alumetal is a particularly aggressive competitor offering low prices for its advanced AFAs. In the Commission's market investigation, a majority of competitors explained that Alumetal is a particularly aggressive competitor (e.g. in terms of price and/or other commercial conditions) in the supply of solid advanced AFAs to automotive customers in the EEA.[357] A customer confirmed that "*in terms of flexibility prices and payment conditions Alumetal is the best in class supplier*".[358] Another customer explained "*it [Alumetal] is very competitive, especially [sic] compared to Hydro.*" One customer stated that Alumetal is a particularly aggressive competitor and mentioned "*as a[n] [sic] example their last agreement with tesla*".[359]

(357) Second, at the same time, [Alumetal financial information]. It appears that Alumetal is particularly cost-effective.

Figure 66 – Financial results comparison

[Alumetal internal document]

Source: Form CO, Annex 5.4.2.1, [Alumetal internal document].

(358) In the first place, Alumetal has [Hydro market analysis], according to Hydro.[360]

(359) In the second place, Alumetal invested in high-tech scrap sorting and processing 5GLS technology (see Section 9.1.4.3.1.2). The positive impact on Alumetal's cost-efficiency is twofold. This will, on the one hand, replace manual work and therefore decrease labour costs. On the other hand, further to the 5GLS technology; Alumetal will significantly increase the proportion of (cheap) scrap in advanced alloys, which will also further increase its cost-efficiency. Given that Alumetal launched 5GLS in Q4 2022, these additional cost-efficiencies are likely to materialise in the immediate future.

354 Phase I questionnaire Q3 to competitors, question 34; Phase I questionnaire Q4 to customers, question 32.

355 Phase I questionnaire Q3 to competitors, questions 39 and 40; Phase I questionnaire Q4 to customers, questions 36 and 37.

356 Phase I questionnaire Q4 to customers, question 37.1.

357 Phase II questionnaire Q7 to customers, question K.B.5.

358 Minutes of a call with a customer of 7 November 2022, paragraph 7.

359 Phase II questionnaire Q7 to customers, question K.B.12.

360 Parties' response to RFI 13, Annex Q21, [Notifying Party internal document].

9.1.4.3.1.5. Alumetal is a challenger – especially for automotive end-uses

(360) The Commission finds that Alumetal is a challenger of primary (alumina-based) AFA players, especially for passenger car end-uses. Due to its investments in R&D and scrap processing, Alumetal is likely in the near future to be able to increase its competitive pressure on Hydro.

(361) First, as shown in Figure 67, Hydro considers [Hydro market analysis].[361]

Figure 67 – Alumetal's development

[Alumetal internal document]

Source: Form CO, Annex 5.4.2.1, [Alumetal internal document]

(362) Second, Alumetal has the potential for material future growth, notably in solid advanced AFAs from recycled aluminium. According to Hydro, Alumetal is [Hydro market analysis].[362]

(363) Third, as noted in Section 7.1, and as reflected in Figure 68, [Hydro customer analysis].[363] [Hydro customer analysis]. [364] [Hydro customer analysis].[365] It is exactly in relation to automotive applications where clients (OEMs and Tiers) are expected to continually increase their demand for low-carbon AFAs (see Section 7.2) that Alumetal has a strong position to compete with primary (alumina-based) AFA producers (and notably with Hydro) and to take market share.

Figure 68 – Analysis attractiveness of scrap-based AFAs for Hydro

[Notifying Party internal document]

Source: Parties' response to RFI 13, Annex Q21, [Notifying Party internal document].

(364) In addition, automotive customers work with Alumetal on how to modify/widen the advanced AFA specification in order to get solid advanced AFAs with the highest scrap content possible.[366] Notably, [Alumetal commercial arrangements].[367]

(365) Fifth, Alumetal has managed to win orders for solid advanced AFAs from automotive customers which previously procured these products from primary suppliers [Alumetal sales information]. As shown in Figure 45 and Figure 46, [Hydro sales information]. Similarly, the Commission's share of wallet analysis for the years 2019 to 2021 showed that a number of automotive customers moved their procurement of advanced AFAs from primary producers to Alumetal.

(366) Sixth, Alumetal is [Alumetal product strategy] the key wheels segment. As noted by the Notifying Party, customers traditionally preferred non-recycled AFAs as the purity level of the AFA is particularly relevant for the wheel's mechanical strength.[368] Wheels are the automotive application for which Hydro [Hydro product strategy].[369] As set out in Annex 8.9.a to the Form CO, [Alumetal commercial arrangements].

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361 Form CO, Annex 5.4.2.1, [Alumetal internal document].
362 Parties' response to RFI 13, Annex Q21; [Notifying Party internal document].
363 Parties' response to RFI 13, Annex Q21; [Notifying Party internal document].
364 Parties' response to RFI 13, Annex Q21; [Notifying Party internal document].
365 Parties' response to RFI 13, Annex Q21; [Notifying Party internal document].
366 See examples in the Form CO, Annex 8.9.a.
367 See examples in the Form CO, Annex 8.9.a.
368 Form CO, paragraph 167.
369 See for example Form CO, Figure 5.

(367) In fact, [Alumetal commercial arrangements].[370]

(368) Seventh, given that Alumetal launched 5GLS in Q4 2022 (see Section 9.1.4.3.1.2), it will in the immediate future be able to increase the scrap content while reducing its head-count and input product cost and thus cost base, especially in solid advanced AFAs. Alumetal will therefore be able to offer solid advanced AFAs at even more competitive prices (by reducing the use of standard ingots) and at the same time meet the customers' increasing demand for low-carbon AFAs.[371]

9.1.4.3.2. Role and capabilities of other refiners

(369) In light of Alumetal's position as the leading supplier of solid advanced AFAs made from scrap, the Commission's investigation set out to establish whether Alumetal's position and capabilities may be replicated or are already being replicated by other refiners, which would exert a sufficient competitive constraint on the merged entity. The Commission assessed whether other refiners have: (i) the ability to produce solid advanced AFAs cost-competitively, (ii) the required scrap management capabilities and (iii) further characteristics to be considered, actually or potentially, similar to Alumetal.

9.1.4.3.2.1. Ability and know-how to produce solid advanced AFAs cost-competitively

(370) The Commission found that some, but not all, refiners are able to produce solid advanced AFAs with the required purity levels cost-competitively. Theoretically, all refiners should be able to produce solid advanced AFAs by using large volumes of standard ingots (i.e. solid pure aluminium). This however would not be cost-efficient. To produce cost-competitively, refiners need to use a certain amount of (cheaper) scrap and limit the use of (more expensive) standard ingots in their production process. The Commission's investigation therefore focussed on the ability of refiners to produce solid advanced AFAs cost competitively using at least a certain amount of scrap.

(371) In the Commission's market investigation, a majority of competitors and customers explained that only few refiners are able to cost-competitively produce in the EEA solid advanced AFAs with an iron content of at most 0.55% and a copper content of at most 0.7% a using scrap.[372] For example, one customer explained that "*several refiners only produce standard AFAs*".[373] However, several competitors and customers explained that the following refiners, in addition to Alumetal, are able to produce advanced AFAs cost-competitively: Raffmetal, Aluphoenix, Oetinger, SAV, Befesa, Bobrek, Intals and Real Alloy.[374] Several customers also list these companies as their actual suppliers of solid advanced AFAs,[375] and most of these companies recorded at least some sales of solid advanced AFAs in the data provided to the Commission for the purpose of its market reconstruction. Crucially, some of these

370 Form CO, Annexes 6.2.j and 8.9.a.

371 See also Section 9.1.4.3.1.4 for Alumetal's cost position and paragraph (354) for the expected significant increase in low-carbon AFAs.

372 Phase II questionnaire Q7 to competitors, question K.B.1; phase II questionnaire Q7 to customers, question K.B.8.

373 Phase II questionnaire Q7 to customers, question K.B.9.

374 Phase II questionnaire Q7 to competitors, questions K.B.2 and K.B.4; phase II questionnaire Q7 to customers, question K.B.1. This list of refiners able to produce advanced AFAs cost competitively is not necessarily exhaustive.

375 Phase II questionnaire Q7 to customers, question K.B.10.

refiners significantly increased their sales of solid advanced AFAs in the past years.[376]

9.1.4.3.2.2. In-house scrap sourcing, scrap sorting and scrap management capabilities

(372) As explained in Section 9.1.4.3.1.2, in-house scrap sourcing, sorting and management capabilities are a crucial and core competence of an AFA refiner. Some of the refiners producing advanced AFAs do not have such capabilities, but instead rely on tolling agreements or purchase pre-consumer scrap. However, the Commission's market investigation confirmed that some of the EEA-based refiners have scrap sourcing, sorting and management capabilities which are today or could become in the future similar to those of Alumetal. For example, Raffmetal, Real Alloy, Oetinger and Intals have in-house scrap sorting facilities. [Hydro commercial strategy].[377] The location of Real Alloy's and Oetinger's scrap-hubs in Germany, in particular, gives them an optimal position to access end-of-life scrap from shredding plants in central Europe. Other refiners such as Intals and Raffmetal are developing their scrap-hubs or partnerships with scrap suppliers.[378]

9.1.4.3.2.3. Focus, capacity and geographic footprint

(373) There are a number of other characteristics and capabilities that refiners need to have to be comparable to Alumetal and exert a sufficient competitive constraint, in particular the focus of their activities, their capacity and geographic footprint. Not all the refiners have the same capabilities as Alumetal in this regard.

(374) First, some of the refiners mainly produce advanced AFAs in liquid form, for example Oetinger and Real Alloy.[379] As explained in Section 8.2.1.3.2, liquid advanced AFAs constitute a separate product market with distinct competitive dynamics. As such, refiners producing liquid advanced AFAs are likely not able to exert sufficient competitive constraints on the suppliers of solid advanced AFAs. However, a number of refiners, such as Raffmetal, Intals and Aluphoenix, supply mainly solid advanced AFAs.

(375) Second, not all of the refiners have the capacity required to supply large automotive customers. As detailed in Section 9.1.4.3.1.3, a sufficiently large capacity is important for being able to supply some of the key automotive customers. In the Commission's market investigation, a number of customers explained that most refiners remain small compared to Alumetal and lack the necessary capacity to produce large volumes. Specifically, one customer explained "*Aluphoenix and Heneken probably have the same know-how but not the same capacity size of Alumetal*".[380] However, when asked about their EEA-based capacity in the Commission's market investigation, a number of refiners reported significant capacity volumes and, albeit to a lesser extent, spare capacity for the production of solid advanced AFAs.[381]

(376) Third, in the Commission's market investigation, market participants also pointed to geographic location of a supplier of advanced AFAs as an important parameter of

376 Data supplied by competitors for the purpose of the Commission's market reconstruction.
377 Parties' response to RFI 13, Annex Q21, [Notifying Party internal document].
378 Parties' response to RFI 13, Annex Q21, [Notifying Party internal document].
379 Minutes of a call with a competitor of 4 November 2022, 3:00pm CET, paragraph 18; minutes of a call with a competitor of 4 November 2022, paragraph 8.
380 Minutes of a call with a customer of 11 November 2022, paragraph 14.
381 Phase II questionnaire Q8 to competitors, question E.5.

competition.[382] Alumetal enjoys an advantageous location in Central Europe, close to several important and large automotive customers. Market participants explained that, in particular, refiners based in Italy might not always be able to compete for supplies of solid advanced AFAs to customers based in Central and Eastern Europe due to higher transport costs.[383] For example, a customer explained that "*Italian producers Raffmetall, SAV and Aluphoenix are not able to compete with the delivery to the Company's Eastern European facilities*".[384] However, the Commission notes that Alumetal is not the only refiner located in Central Europe. Suppliers such as Real Alloy, Oetinger, Befesa and Bobrek enjoy a similarly attractive location, or potentially an even better location than Alumetal's.[385] Also, suppliers based in Italy do not only supply solid advanced AFAs to customers based in Italy. While some of them sell a majority of their production to customers based in Italy, others explained that they only sell a minority of their AFA production to customers based in Italy.[386]

9.1.4.3.2.4. Raffmetal appears to have similar capabilities to Alumetal

(377) In particular, Raffmetal appears to be an emerging and credible supplier of solid advanced AFAs made from scrap with capabilities similar to those of Alumetal. First, Raffmetal has the largest capacity of all EEA-based aluminium refiners (see for example Figure 62). Therefore, it not only has significant expertise and market presence, but it can also supply to large and sophisticated customers. Second, Raffmetal generates significant sales of solid advanced AFAs and has increased these over the past years.[387] Third, Raffmetal has invested in and build significant recycling capabilities and expertise. It has a dedicated scrap sorting facility in Odolo, Italy.[388] Fourth, Raffmetal appears to specifically focus, produce and market solid advanced AFAs. Raffmetal sells its solid advanced AFAs made from scrap under the dedicated "*Silval*" brand as "*high-performance recycled primary aluminium alloys, having equal performance compared to primary alloys produced by electrolysis*".[389] Raffmetal also specifically highlights the low-carbon emissions of its solid advanced AFA product offering. The respective solid advanced AFAs are produced in Raffmetal's dedicated "*Special Alloys Plant*" in Vobarno, Italy.[390] Fifth, in the Commission's market investigation, customers located across the EEA, including CEE countries, specifically pointed to Raffmetal as a credible supplier of solid advanced AFAs.[391] For example and specifically with regard to the AlSi7MnMg alloy, a customer explained: *"Most secondary producers are not able to produce this alloy. Only some secondary producers are able to do so if they have a special availability of scrap. […] In contrast to that, Alumetal and Raffmetal can and do produce these high purity alloys.*" Sixth, Raffmetal has sold solid advanced AFAs to

382 Phase II questionnaire Q7 to customers, question I.17.
383 Phase II questionnaire Q7 to customers, question I.19.
384 Minutes of a call with a customer of 11 November 2022, paragraph 14.
385 [Hydro market analysis]
386 Phase II questionnaire Q8 to competitors, question H.19.
387 Data supplied by Raffmetal for the purpose of the Commission's market reconstruction.
388 Raffmetal's press release of 21 May 2021, see https://www.raffmetal.com/web_eng/news-dettaglio.asp?cod=46 (website accessed on 28.3.2023).
389 https://www.raffmetal.com/scarica_file.asp?c=dati/DynChange/upload/pdf_news/&f=BILANCIO_DI_SOSTENIBILITA_ridotto_EN.pdf (website accessed on 28.3.2023).
390 https://www.alcircle.com/news/raffmetal-and-cromodora-wheels-sign-contract-to-produce-primary-aluminium-alloys-wheels-from-recycling-73019 (website accessed on 28.3.2023).
391 Phase II questionnaire Q8 to customers, question I.14.

key automotive customers.[392] For example, Raffmetal entered into an agreement with aluminium wheels producer Cromodora to "*develop, test, and patent innovative high-performance primary alloys wheels from recycling*". [393]

(378) In the Commission's market investigation, market participants also pointed to one key difference between Alumetal and Raffmetal – the location of Raffmetal in Italy. As already explained in Section 9.1.4.3.2.3, there are some indications that refiners based in Italy, such as Raffmetal, might not always be able to supply customers based in Central and Eastern Europe at competitive conditions. One large automotive customer with a manufacturing site in the east of Germany explained that Raffmetal is not a viable supplier due to its distant location.[394] However, it has to be noted that Raffmetal does in principle offer and supply solid advanced AFAs to customers located across the EEA, including in CEE.[395] Therefore, while the Commission finds that Raffmetal's location might result in a competitive disadvantage compared to Alumetal in certain instances, this fact alone does not undermine the conclusion that, within the EEA-wide market for solid advanced AFAs, Raffmetal is a credible alternative to Alumetal.

9.1.4.3.3. Conclusion

(379) The Commission's market investigation has shown that Alumetal is the leading refiner that produces and sell solid advanced AFAs in the EEA with significant know-how and capabilities, an efficient process, and a strategic location. Alumetal's sales have been growing, it has spare capacity and competitors expect it to continue to win market share. However, there is at least one refiner with very similar capabilities. This shows that Alumetal's know-how can be replicated. Also, there are several other refiners supplying solid advanced AFAs in the EEA, and the overall EEA market for solid advanced AFAs cannot be considered as sufficiently concentrated.

(380) Therefore, the Commission considers that, on balance, there are not sufficient elements to consider Alumetal as an important competitive force within the meaning of paragraphs 37 and 38 of the HMG on the EEA-wide market for solid advanced AFAs (or on a potential market for low-carbon solid advanced AFAs).

9.1.5. Sufficient alternatives would remain on the market to constrain the merged entity

(381) The Commission notes that, from the beginning of the prenotification discussions until notably the provision of the transaction data and the responses to the internal document requests for information in the Commission's in-depth investigation, the Parties provided very little information, evidence and data to the Commission to enable it to properly assess whether sufficient alternatives would remain on the market to constrain the merged entity.

(382) The Commission's in-depth market investigation found that, post-Transaction, the Parties are likely to continue to face competitive pressure, both from EEA-based suppliers and to a lesser extent from imports.

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392 Data supplied by customers for the purpose of the Commission's market reconstruction.

393 https://aluminiumtoday.com/news/raffmetal-and-cromodora-together-to-produce-aluminium-wheels-with-primary-alloys-from-recycling (website accessed on 28.3.2023).

394 Minutes of a call with a customer of 13 June 2022, paragraph 34.

395 Phase II questionnaire Q7 to competitors, question H.15; data supplied by customers for the purpose of the Commission's market reconstruction.

(383) First, as explained in Section 9.1.2, there are a number of suppliers of solid advanced AFAs in the EEA, both primary producers and refiners. Indeed, when asked to rate competitors on the basis of a series of commercial/competitive terms (such as for example price, quality, geographic proximity, capacity, capabilities) for the supply of AFAs in the EEA, customers gave high rankings to nearly all competitors proposed, with only two out of 13 receiving an average score inferior to three out of five.[396] When competitors were asked the same question, they ranked all 13 suppliers with an average score superior to three out of five.[397] Furthermore, internal documents from the Parties show that when they assess their AFA competitors, they are usually tracking several suppliers. [Hydro market analysis].[398]

(384) Second, it appears that, at this stage, customers typically multisource, allowing them to reallocate volumes between suppliers from year to year. Indeed, a large majority of customers, when asked to name their qualified suppliers, named three or more competitors.[399] This was also confirmed by the Commission's customer wallet analysis which shows that many customers do multisource, with some of the largest AFA customers purchasing solid advanced AFAs from as many as five foundry alloy suppliers. Furthermore, it appears that, once a customer has qualified a supplier, they can purchase new alloys from that supplier with relative ease. Indeed, as one customer explained: "*for a new supplier, minimum 6 months including: faisability [sic], initial test, quality audit, production test and run at rate. for an existing supplier it can be shorter like 3 months*".[400] This suggests that volumes can be reallocated between suppliers in the case of a cost increase. Indeed, this was confirmed by the Commission's customer wallet analysis, which showed that customers reallocated volumes year to year between their suppliers.

(385) Third, there are some indications that expansion into the market for solid advanced AFAs is possible and happens, in particular from suppliers that already produce standard AFAs.

(386) Generally, the Commission considers that there are significant barriers to enter the EEA-wide market for solid advanced AFAs, both for primary producers and refiners. Smelting or refining aluminium requires expensive equipment and significant expertise. In addition, sophisticated automotive customers require lengthy and complex homologation and proven expertise from their AFA suppliers.[401]

(387) However, refiners that typically supply standard AFAs may enter or expand into the market for advanced AFAs by increasing the purity levels in their production (in particular by using better quality scrap or improving their scrap sorting facilities). As outlined in Section 9.1.4.3.2.4, Raffmetal has recently increased its focus on the production of solid advanced AFAs made from scrap by setting up dedicated scrap sorting and production facilities. Indeed, this has also been Alumetal's development, from a supplier of standard alloys to a significant supplier of advanced alloys. Customers seem open to purchase advanced AFAs from suppliers who have previously focused on standard AFAs. For example, large automotive customers have recently embarked on R&D collaborations to include advanced AFAs made

396 Phase II questionnaire Q8 to customers, question K.B.14.
397 Phase II questionnaire Q7 to competitors, question K.B.8
398 See Hydro's response to RFI19 – [Notifying Party internal document].
399 Phase II questionnaire Q8 to customers, question K.B.4.
400 Phase I questionnaire Q4 to customers, question 39.
401 Phase I questionnaire Q1 to competitors, question 25.2; Phase I questionnaire Q2 to customers, question 20.2.

from scrap in their production. As explained in Sections 9.1.4.3.1.5 and 9.1.4.3.2.4, Alumetal and Raffmetal, for example, have been involved in such projects.

(388) Finally, despite the significant know-how and investments required for the production of low-carbon solid advanced AFAs, the customers' drive to lower their carbon footprint could result in more and more AFA suppliers meeting this demand and expanding into the production of advanced AFAs or more specifically low-carbon advanced AFAs. This can either be achieved by incorporating more scrap in their production or by shifting their energy consumption to renewable sources.

9.1.6. Impact in the market for solid advanced AFAs

(389) The Commission's investigation sought to determine the impact of the Transaction for solid advanced AFAs, as well as considering the potential differentiation for low-carbon or 'green' advanced AFAs. The Commission's assessment focused on: (i) market participants' feedback on the Transaction, in particular regarding its impact on their business, (ii) the Transaction's impact on the market structure for solid advanced AFAs, and (iii) the Transaction's impact specifically focusing on the low-carbon advanced AFA segment, given the Parties' stated Transaction rationale.

9.1.6.1. Market participants' views on the Transaction's impact are more negative than positive

(390) The results of the market investigation with regard to the Transaction's impact on the market for advanced solid AFAs were more negative than positive. A majority of customers and competitors considered that the Transaction would have a negative impact on their business.[402] Furthermore, a majority of customers considered that the Transaction would lead to higher prices for solid advanced AFAs,[403] while competitors were split on the issue.[404]

(391) With regard to other parameters of competition, a majority of customers and competitors considered that commercial terms for solid advanced AFAs for automotive customers would worsen.[405] Conversely, a majority of customers and competitors considered that the quality of solid advanced AFAs for automotive customers would increase or remain the same.[406]

(392) Nevertheless, and as outlined in more detail in recitals (403) to (406), despite the concerns raised by customers, the impact from the Transaction would be limited with regard to the market for solid advanced AFAs.78

9.1.6.2. Concerns about potential negative consequences in particular for low-carbon advanced AFAs

(393) Some market participants are concerned about a negative impact from the Transaction specifically for low-carbon alloys. For example, one customer explained: "[the Transaction] *will change nothing regarding the global Co2 emissions BUT it will drive up the prices of scrap and low CO2 AFAs removing 1 competitor (the best*

402 Phase II questionnaire Q8 to customers, questions J.B.1 and K.C.1; C Phase II questionnaire Q7 to competitors, questions G.C.1 and K.C.1

403 Phase II questionnaire Q8 to customers, questions J.B.3 and K.C.4

404 Phase II questionnaire Q7 to competitors, questions G.C.3 and K.C.3

405 Phase II questionnaire Q8 to customers, question K.C.7; Phase II questionnaire Q7 to competitors, questions G.C.6 and K.C.6

406 Phase II questionnaire Q8 to customers, question K.C.5; Phase II questionnaire Q7 to competitors, question K.C.4

one in term[s] of emission)".[407] Another outlined the "*risk that that Hydro will become, following the Transaction, very strong in the market, especially regarding the low carbon footprint aluminium*".[408] Competitors expressed similar views: "*we see the main conce[n]rs in the low carbon qualities*" and: "[w]*e see negative impact in low carbon competition, Hydro will decrease carbon footprint in merged organization, will have better position on the market*".[409] Furthermore, [Hydro pricing strategy]. However, some market participants also highlighted that the Transaction could lead to positive effects for low-carbon AFAs, with some outlining that "[p]*robably Hydro, thanks to Alumetal know-how in scrap treatment, will increase its capacity on recycling*". [410]

Figure 69 – Green surcharge from low-carbon AFAs

[Notifying Party internal document]

Source: Hydro's response to RFI 19 – [Notifying Party internal document]

(394) Regarding the drive towards low-carbon alloys, the Commission notes that a key part of the Transaction rationale is to strengthen Hydro's position in this segment. In the Parties' internal documents, the Notifying Party outlines that [Hydro market analysis].[411] [Hydro market analysis].

Figure 70 – Example of customer requests for recycled content

[Notifying Party internal document]

Source: Hydro's response to RFI 19 - [Notifying Party internal document].

Figure 71 – Importance of recycling content for CO2 footprint

[Notifying Party internal document]

Source: Hydro's response to RFI 19 - [Notifying Party internal document].

(395) Furthermore, [Hydro commercial strategy].

Figure 72 – Hydro's recycling strategy – R&D

[Notifying Party internal document]

Source: Hydro's response to RFI 19 – [Notifying Party internal document].

Figure 73 – Hydro's recycling strategy

[Notifying Party internal document]

Source: Hydro's response to RFI 19 – [Notifying Party internal document].

(396) In order to increase the scrap-based content of its advanced AFAs, the Notifying Party explored different options for entering the scrap-based AFA market: [Hydro commercial strategy].

Figure 74 – Entry into recycling – potential strategies

[Notifying Party internal document]

Source: Hydro's response to RFI 19 – [Notifying Party internal document].

(397) Ultimately, the Notifying Party elected to purchase Alumetal. The Transaction rationale as communicated publicly highlights Hydro's wish to increase the recycling content of its advanced AFAs, as shown by the Notifying Party's press release

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407 Phase II questionnaire Q8 to customers, K.C.2.
408 Minutes of a call with a customer on 6 May 2022, paragraph 19.
409 Phase II questionnaire Q7 to competitors, question G.C.2 and K.C.2
410 Phase II questionnaire Q7 to competitors, question K.C.2
411 Hydro's response to RFI 19 – [Notifying Party internal document].

following the announcement of the Transaction: "[w]*ith the transaction, Hydro will strengthen its recycling position in Europe and widen its product offering in the low-carbon and scrap-based foundry alloy market*".[412]

(398) Furthermore, in the Response to the Article 6(1)(c) decision, the Parties argued that the rationale of the Transaction is to increase the proportion of scrap in their advanced AFA production, with the aim of decarbonising their offering.[413] [Hydro commercial strategy].

(399) [Hydro commercial strategy].[414]. [Hydro commercial strategy].[415]

(400) In practice, this could mean that Alumetal's low-carbon advanced AFA production would disappear from the market. *First*, because Hydro would divert the pure scrap sourced by Alumetal necessary for this production to its own production. Indeed, many market participants have outlined to the Commission the low availability of high-quality scrap in the European market. For example, one customer explained that "*it is difficult for some producers to source scrap*".[416] Another market participant explained that "[a]*ccess to quality scrap poses a challenge*".[417] Therefore, as a result of the Transaction, it is possible that Alumetal would be unable to access the quality of scrap required to produce advanced AFAs.

(401) *Second*, because the remelting of such scrap would leave Alumetal with less capacity for AFA production. Indeed, [Parties' commercial strategy];[418] [Parties' commercial strategy].[419]

Figure 75 – Post-Transaction strategy discussion

[Notifying Party internal document]

Source: Hydro's response to RFI19 – [Notifying Party internal document]

(402) Therefore, and as outlined in recitals (393) to (401), the Commission's market investigation revealed possible negative effects from the Transaction relating to low-carbon advanced AFAs specifically. Nonetheless, as will be outlined in Section 9.1.6.3, these negative effects are dispelled by the market structure post-Transaction.

9.1.6.3. Market structure post-Transaction limits the possible negative consequences of the Transaction

(403) The Commission on balance finds that the possible negative impact of the Transaction on competition is not likely to materialise or would be limited. Firstly, with regard to the EEA market for solid advanced AFAs, the market structure post-Transaction as described in Section 9.1.2, does not indicate that the Transaction is likely to have a negative impact on the market. Indeed, the Parties' combined market share in 2021 for solid advanced AFAs in the EEA was [20-30]%. Furthermore, the market structure is not oligopolistic. Indeed, this is reflected in the post-merger HHI index, at [1000-2000] with a delta of [150-300], which is below that for which the

412 https://www.hydro.com/en-AR/media/news/2022/norsk-hydro-announces-tender-offer-for-100-of-the-shares-of-the-polish-recycler-alumetal-s.a/ (website accessed on 3.3.2023).
413 Response to the Article 6(1)(c) decision, paragraph 3.
414 Parties' presentation to the Commission [Notifying Party internal document].
415 Parties' response to RFI 24, question 28.2.
416 Minutes of a call with a customer held on 6 May 2022, paragraph 12.
417 Minutes of a call with a market participant held on 25 October 2022, paragraph 29.
418 Parties' response to RFI 24, question 28.2.
419 Parties' presentation to the Commission dated [Notifying Party internal document].

Commission would be likely to identify horizontal competition concerns.[420] While the Parties would be the largest player post-Transaction for solid advanced AFAs in the EEA, there would remain many suppliers with significant market shares, such as [Supplier 1] (with a market share of [10-15%]%), [Supplier 2] and [Supplier 3] (with a market share of [10-15%]% each), and [Supplier 4] (with a market share of [5-10%]%). For a hypothetical CEE geographic market, Hydro would have a market share of [20-30]% and Alumetal of [5-10]%, giving a combined share of [30-40]%. This region also includes a number of other suppliers, including three with a market share above 10%.[421]

(404) Secondly, the current fragmented market structure has been further confirmed in the market investigation. Indeed, a share of wallet analysis of common customers shows that many of these common customers multi-source, with at least three suppliers each. Furthermore, in the responses to the market investigation, common customers indicated that they would be able to turn to alternative suppliers, in the event of a price increase by the Parties post-Transaction.[422] Finally, market participants confirmed that there would be alternative suppliers post-Transaction, with the majority of customers citing at least three alternatives.[423]

(405) Thirdly, with regard to low-carbon advanced alloys specifically, the Commission has found that the Parties would have a limited ability to raise prices post-Transaction in the EEA. On this segment, the Parties would, post-Transaction, continue to face competition, not only from primary aluminium producers using low-carbon electricity, such as Alcoa and Glencore, but also from refiners producing advanced AFAs, such as Raffmetal, S.A.V., Aluphoenix. As outlined in Section 9.1.4, other refiners have recently increased their sales of advanced low-carbon AFAs. Furthermore, as outlined in Section 7, there have been recent entries into the market from refiners in the low-carbon advanced AFA segment, suggesting that Alumetal's offerings can be replicated. Therefore, it is unlikely that the removal of Alumetal's solid advanced AFA offering would result in a significant reduction of competition or an increase in prices for low-carbon solid advanced AFAs.

(406) In conclusion, despite the concerns raised by some customers and competitors, the in-depth investigation found that the impact of the Transaction on the market for solid advanced AFAs in the EEA would be limited, due to: (i) moderate combined market shares and a fragmented market structure, and thus (ii) a sufficient number of suppliers – both primary and secondary and even considering low-carbon AFAs – remaining post-Transaction.

9.1.7. Conclusion on competitive assessment regarding the production and supply of solid advanced AFAs in the EEA

(407) Given (i) the Parties' moderate combined market shares and low post-merger concentration levels, as well as the sufficient number of alternative suppliers – both primary and secondary, as well as low-carbon – remaining post-Transaction (see Section 9.1.2), (ii) the fact that overall the Parties are not close competitors (see Section 9.1.3), (iii) the fact that on balance there are not sufficient elements to consider Alumetal as an important competitive force (see Section 9.1.4), and (iv) the limited impact likely resulting from the Transaction, the Commission considers that

420 Horizontal Merger Guidelines, paragraph 20.
421 Please see Table 2 and recital (222) for more detailed information.
422 Phase II questionnaire Q8 to customers, question L.7.
423 Phase II questionnaire Q8 to customers, question K.B.1

the Transaction would not significantly impede effective competition in the internal market or in a substantial part of it as a result of horizontal non-coordinated effects in the market for the production and supply of solid advanced AFAs in the EEA.

9.2. Aluminium Master Alloys – competitive assessment

9.2.1. Legal framework

(408) As already discussed in Section 9.1.1, horizontal effects arise when the parties to a concentration are actual or potential competitors in one or more of the relevant markets concerned. The Commission appraises horizontal effects in accordance with the guidance set out in the HMG.

(409) Non-horizontal effects arise when the parties to a concentration operate on different levels of the supply chain (vertical effects) or in neighbouring markets (conglomerate effects). The Commission appraises non-horizontal effects in accordance with the guidance set out in the Non-Horizontal Merger Guidelines.[424]

(410) Both the Horizontal and Non-Horizontal Merger Guidelines distinguish between two main ways in which mergers may significantly impede effective competition, namely coordinated and non-coordinated effects.

(411) In non-horizontal mergers, non-coordinated effects may arise when the concentration gives rise to foreclosure. In vertical mergers, foreclosure can take the form of input foreclosure, where the merger is likely to raise costs of downstream rivals by restricting their access to an important input; and/or the form of customer foreclosure, where the merger is likely to foreclose upstream rivals by restricting their access to a sufficient customer base.[425]

(412) In assessing the likelihood of an anticompetitive foreclosure scenario, the Commission examines whether the merged entity would have post-transaction the ability to foreclose access to either inputs or customers, whether the merged entity would have the incentives to do so and whether such foreclosure strategy would have a detrimental effect on competition.[426]

(413) This Decision will examine whether the Transaction gives rise to competitive concerns as to its compatibility with the internal market in relation to the vertical relationship arising between the: (i) upstream production of AMAs; and (ii) the downstream production of AFAs.

9.2.2. The Notifying Party's arguments

(414) The Notifying Party considers that the Transaction does not lead to any potential upstream or downstream foreclosure. The Notifying Party argues that the combined entity would have no ability and incentive to implement 'input foreclosure' due to:

1. Alumetal's upstream and Hydro's downstream market shares are well below 30% and do not meet the threshold as to be considered affected markets. Second, Alumetal's EEA-wide limited market share of [10-20]% in 2021 by volume for the production of AMAs overall would not give the merged entity the power to restrict its downstream rivals access to an important input;
2. the existence of enough AMAs suppliers in the EEA; and

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424 Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings (OJ C 265, 18.10.2008, p. 6).

425 Non-Horizontal Merger Guidelines, paragraph 30.

426 Non-Horizontal Merger Guidelines, paragraph 30.

3. Alumetal's AMA capacity which is greater than the needs of Hydro (Hydro's AMAs needs cover only […] of Alumetal's capacity, the rest would be sold on the market to not lose profits). Since the combined entity would lack the market power upstream therefore it would lack the ability to foreclose. The input foreclosure strategy would make no commercial sense since the downstream competitors that need AMAs would simply switch to alternative AMA suppliers and would create a profit loss for the merged entity.[427]

(415) The Notifying Party argues that the combined entity would have no ability or incentive to implement 'customer foreclosure' because Hydro's share on any of the downstream markets is estimated at below 30%, which is below the level that could be regarded as conferring a significant degree of market power.[428]

9.2.3. Commission's assessment

(416) The Proposed Transaction give rises to a vertical relationship between Alumetal's upstream production of AMAs and the Parties' downstream activities in the production of solid advanced AFAs,[429] without giving rise to vertically affected markets. However, the Commission received concerns from some market participants regarding a possible foreclosure related to the Parties' vertical integration with respect to: (i) the upstream production of AMAs overall and (ii) the downstream segment of solid advanced AFAs. The Commission therefore investigated these concerns in-depth, coming to the conclusion that these concerns are not warranted, as explained in the following competitive assessment.

Table 6 – Parties' market shares in the EEA for 2020-2022

Upstream market						
	2020		2021		2022	
	Hydro	**Alumetal**	**Hydro**	**Alumetal**	**Hydro**	**Alumetal**
Production of AMAs overall in volume	-	[10-20]%	-	[10-20]%[430]	-	[10-20]%
	Downstream market					
	2020		2021		2022	
	Hydro	**Alumetal**	**Hydro**	**Alumetal**	**Hydro**	**Alumetal**
Solid advanced AFAs market shares in volume	[20-30]%	[0-5]%	[20-30]%	[0-5]%	[20-30]%	[5-10]%
Combined	[20-30]%		[20-30]%		[20-30]	

Source: Supply side data from the market reconstruction; Parties' response to RFI 30, question 19; Form CO, tables 7 and 8.

427 Response to the Article 6(1)(c) decision, paragraphs 102-104.

428 Form CO, paragraph 224.

429 The Transaction gives rise to a vertical relationship between Alumetal's production of AMAs upstream and the downstream production of other casthouse products that Hydro sells, namely in: (i) extrusion ingots, and (ii) sheet ingots. These products are similarly not affected, and, because no concerns were raised in this respect, they were not investigated further. In any event, the same vertical reasoning to dispel concerns applies also to: (i) extrusion ingots, and (ii) sheet ingots.

430 The market share would be [10-20]% including captive consumption (see Form CO, paragraph 308).

9.2.4. Input foreclosure

(417) The Commission considers that, post-Transaction, the merged entity will not have the ability or incentive to pursue any plausible input foreclosure strategy in the AMAs overall segment in the EEA for the reasons set out below.

9.2.4.1.1. Ability to foreclose

(418) First, Alumetal has a small upstream market share. Based on the data provided by the Parties, for the upstream market, Alumetal has an estimated market share of [10-20]% for AMAs overall in the EEA in 2021. For the downstream market (i.e. solid advanced AFAs in the EEA), based on the data provided by the Notifying Party and the Commission's market reconstruction set out in Table 6, Hydro's market shares would be below 30% on EEA-wide level.

(419) Second, the market investigation revealed that the majority of customers do not view Alumetal as an important supplier for AMAs overall.[431] Also, customers mentioned a number of companies in the EEA as viable alternatives to Alumetal for AMAs overall: KBM Affilips, Stanchem Sp. Z.o.o, Hoesch, Aleastur, Adial, Ampere System Iberica S.L, Avon Metals, FO.MET.A.L., Tandom Metallurgical, and AMG.[432] Also, the following companies: KBM Affilips, Stanchem Sp. Z.o.o, Hoesch, Aleastur, Alumetal, Adial and Ampere System Iberica S.L, are viewed by customers amongst the top five producers of AMAs overall in the EEA.[433]

9.2.4.1.2. Incentive to foreclose

(420) First, as already mentioned in the above Section 9.2.4.1.1, customers identify a number of EEA companies as viable alternatives to Alumetal. Moreover, the majority of customers that expressed a view on this point claim that they typically homologate more than three suppliers for each type of AMA.[434] As markets became more volatile in the past years, [435] the usual length of AMA contracts has shorten and the majority of customers mention contracts lasting around 3 or 4 months.[436] In the event that the merged entity would stop supplying them with AMAs, they would have alternative suppliers on a short-term basis.

(421) Second, even though the majority of customers have mixed views regarding the merged entity's ability or incentive to increase the prices to competing producers for AMAs overall,[437] they also mention that they would have supply alternatives for these alloys[438] and that the merged entity would not have the ability and incentives to reduce supply on the EEA market.[439] In such market conditions, the merged entity would not have the incentive to reduce supply or increase prices as customers would just switch to the other available suppliers.

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431 Phase II questionnaire Q7 to competitors, question L.B.2; Phase II questionnaire Q8 to customers, question G.B.1.

432 Phase II questionnaire Q7 to competitors, question L.B.3; Phase II questionnaire Q8 to customers, questions G.B.3 and G.B.4.

433 Phase II questionnaire Q8 to customers, questions G.B.3.

434 Phase I questionnaire Q4 to customers, question 39. Phase II questionnaire Q8 to customers, question G.B.6.

435 Phase II questionnaire Q8 to customers, question G.B.12.

436 Phase II questionnaire Q7 to competitors, question L.B.8; Phase II questionnaire Q8 to customers, question G.B.11.

437 Phase II questionnaire Q8 to customers, question G.C.4-1.

438 Phase II questionnaire Q7 to competitors, question L.C.2-1; Phase II questionnaire Q8 to customers, question G.C.5.

439 Phase II questionnaire Q8 to customers, question G.C.4-1.

(422) Third, the majority of customers consider that there is spare capacity in the EEA for the production of AMAs,[440] including for the types of AMAs where the capacity was seen as limited in the Phase I investigation: AlCu, AlMg, AlV, AlZn and AlZr.[441] Moreover, Alumetal has a production capacity of […] KMT and Hydro's demand for AMAs ([…] KMT in 2021) represents only [30-40]% of Alumetal's production capacity of AMAs. Even in the situation where the merged entity were to meet all of its demand for AMAs captively (approximately […] KMT in 2021), it would still have more than [60-70]% of its total production capacity to serve third-party customers.[442]

9.2.4.1.3. Effects

(423) Given the likely absence of ability and incentive to foreclose Hydro's competitors downstream, it is unlikely that an input foreclosure strategy post-Transaction would significantly impede effective competition.

(424) First, the majority of customers do not expect any impact from the transaction on their businesses.[443]

(425) Second, even if customers' views are mixed in terms of impact on the Transaction on price, available capacity and security of supply, quality, commercial terms, innovation, etc. for overall AMAs in the EEA,[444] they also mentioned that they would have enough remaining suppliers in the event that the merged entity would stop supplying, or decrease significantly the supply of, AMAs overall in the EEA.[445]

(426) Third, even though it is outside the scope of the product market, customers indicated that the merged entity might have the ability and the incentive to increase the prices or reduce supply to competing producers for AlV and AlZr master alloys.[446] However, even for this specific alloys, the majority of customers mentioned that they would have sufficient alternative suppliers,[447] and also indicated them Hoesch, Stanchem Sp. Z.o.o, AVON Metals, Aleastur, KBM Affilips.[448]

(427) In light of the above, the Commission considers that the merged entity would not have the ability or the incentive to engage in an input foreclosure strategy against its downstream competitors in the production of solid advanced AFAs in the EEA.

9.2.5. Customer foreclosure

(428) The Transaction is not likely to lead to customer foreclosure as, post-Transaction, the Parties would likely not have the ability or the incentive to foreclose the merged entity's upstream competitors for the following reasons.

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440 Phase II questionnaire Q7 to competitors, question L.B.7; Phase II questionnaire Q8 to customers, question G.B.9.

441 Phase II questionnaire Q7 to competitors, question L.C.2-1; Phase II questionnaire Q8 to customers, question G.C.5.

442 Form CO, paragraph 314.

443 Phase II questionnaire Q8 to customers, question G.C.1.

444 Phase II questionnaire Q7 to competitors, question L.C.1-2; Phase II questionnaire Q8 to customers, question G.C.3.

445 Phase II questionnaire Q7 to competitors, question L.C.2-1; Phase II questionnaire Q8 to customers, question G.C.5.

446 Phase II questionnaire Q8 to customers, question G.C.4-1.

447 Phase II questionnaire Q7 to competitors, question L.C.2-1; Phase II questionnaire Q8 to customers, question G.C.5.

448 Phase II questionnaire Q7 to competitors, question L.B.4; Phase II questionnaire Q8 to customers, question G.B.6.

9.2.5.1.1. Ability to foreclose

(429) Considering Hydro's moderate market shares for the supply of solid advanced AFAs in the EEA, there will remain a sufficiently large customer base in the downstream market for Alumetal's AMA competitors to provide their products post-Transaction. Even in terms volume of sales, out of a total […] KMT AMAs sold in the EEA in 2021,[449] Hydro purchased for its operations approximately […] KMT.[450] Moreover, AMAs are also used in the production of other downstream aluminium products besides AFAs, namely: (i) extrusion ingots, and (ii) sheet ingots, and the AMAs producers would have more customers for their products than the AFAs producers would have.[451]

9.2.5.1.2. Incentive to foreclose

(430) Since there would be a sufficient number of alternative downstream customers, in the event that the merged entity would stop purchasing from other suppliers of AMAs, this situation would not reduce the ability of upstream suppliers to compete in the AMAs market, and, therefore the merged entity would not be able to raise the costs of downstream competitors by making it harder for them to obtain supplies of the input under similar prices and conditions absent the merger.

9.2.5.1.3. Effects

(431) Given the likely absence of ability and incentive to foreclose Alumetal's competitors upstream, it is unlikely that a customer foreclosure strategy post-Transaction would significantly impede effective competition.

(432) First, the majority of competitors expect no impact from the transaction on their businesses.[452]

(433) Second, while the majority of customers' views are mixed in terms of impact on the Transaction on price, available capacity and security of supply, quality, commercial terms, innovation, etc. for overall AMAs in the EEA,[453] customers also mentioned that they would have enough remaining suppliers in the event that the merged entity would stop supplying, or significantly decrease the supply of, AMAs overall in the EEA.[454]

(434) In light of the above, the Commission considers that the merged entity would have neither the ability nor the incentive to engage in a customer foreclosure strategy against its upstream competitors in the markets for the production of AMAs in the EEA.

9.2.6. Conclusion

(435) Based on the considerations set out in recitals (418) to (434), and in light of the results of the market investigation and of the evidence available to it, the Commission considers that the Transaction would not significantly impede effective competition in the internal market, or in a substantial part of it, as a result of vertical

449 Form CO, paragraph 307, Table 8.
450 Parties' response to RFI 30, question 18.
451 Form CO, paragraph 306.
452 Phase II questionnaire Q7 to competitors, question L.C.1-1.
453 Phase II questionnaire Q7 to competitors, question L.C.1-2; Phase II questionnaire Q8 to customers, question G.C.3.
454 Phase II questionnaire Q7 to competitors, question L.C.2-1; Phase II questionnaire Q8 to customers, question G.C.5.

non-coordinated effects in the upstream market for the production of AMAs overall and the downstream market for the production of solid advanced AFAs in the EEA.

10. CONCLUSION ON THE COMPATIBILITY OF THE NOTIFIED TRANSACTION WITH THE INTERNAL MARKET

(436) For the reasons set out in Section 9, the Commission finds that the notified concentration would not significantly impede effective competition in the internal market or in a substantial part of it within the meaning of Article 2(2) of the Merger Regulation and Article 54 of the EEA Agreement.

HAS ADOPTED THIS DECISION:

Article 1

The notified operation whereby Norsk Hydro acquires sole control of Alumetal within the meaning of Article 3(1)(b) of the Merger Regulation is hereby declared compatible with the internal market and the functioning of the EEA Agreement.

Article 2

This Decision is addressed to:

Norsk Hydro ASA
Drammensveien 264
PO Box 980 Skøyen
NO-0240 Oslo
Norway

Done at Brussels, 4.5.2023

For the Commission

(Signed)
Margrethe VESTAGER
Executive Vice-President