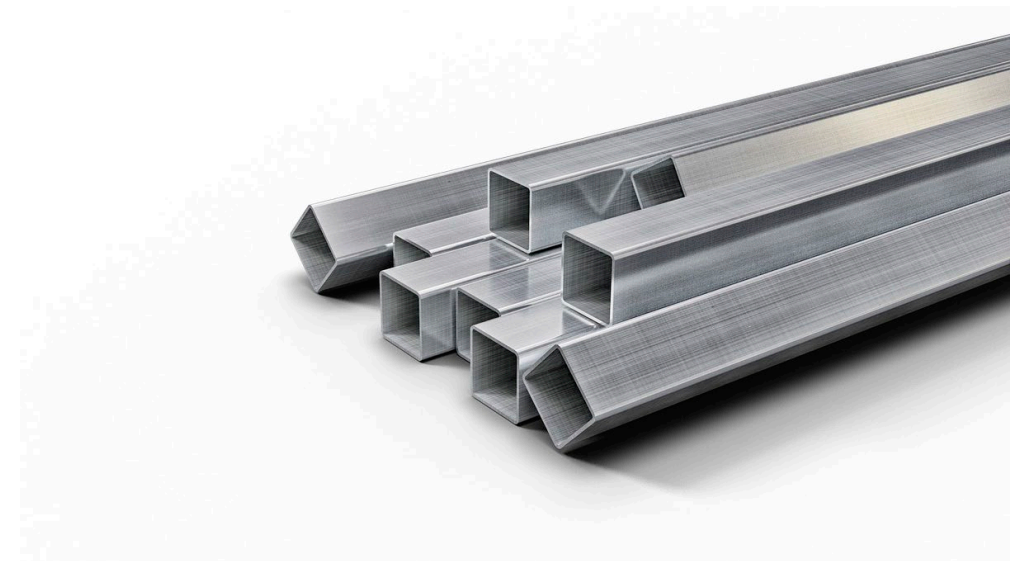


OVERVIEW AND DEVELOPMENT STRATEGIES FOR ALUMINIUM SECTOR IN VIETNAM

Vietnam Aluminium Association



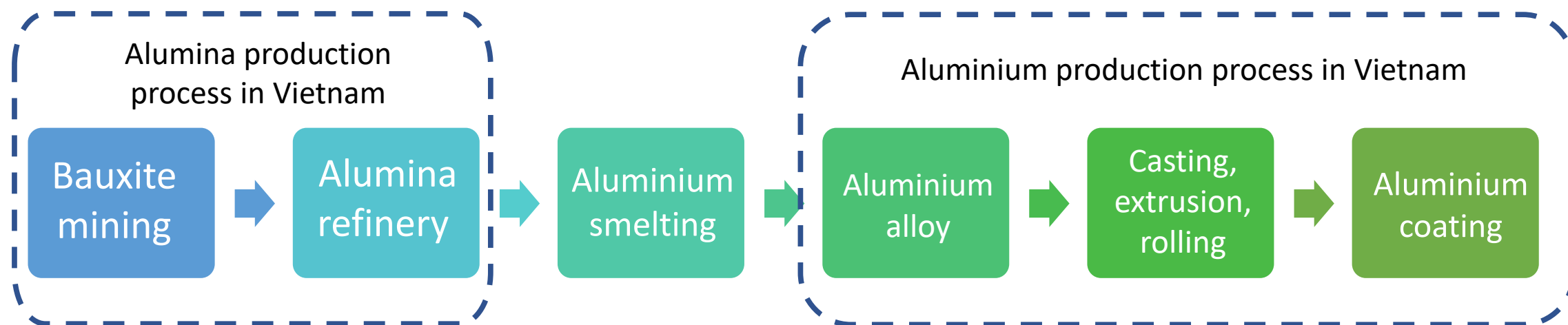


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I. Sectoral overview

A. Production process



- In Vietnam, bauxite-alumina industry is relatively young and has only developed over the last ten years. All alumina produced in Vietnam is **exported**.
- Vietnam currently does not have the capacity to smelt aluminum. Enterprises in the aluminum industry are still completely **dependent on imported aluminum ingots and billets** to produce aluminum products..



I. Sectoral overview

B. Production and export

Production in Vietnam

Year	Alumina production (mil. ton)	Aluminium production (mil. ton)
2018	1.03	1.31
2019	1.33	1.37
2020	1.42	1.39
2021	1.42	1.4

Source: Statista

Export value

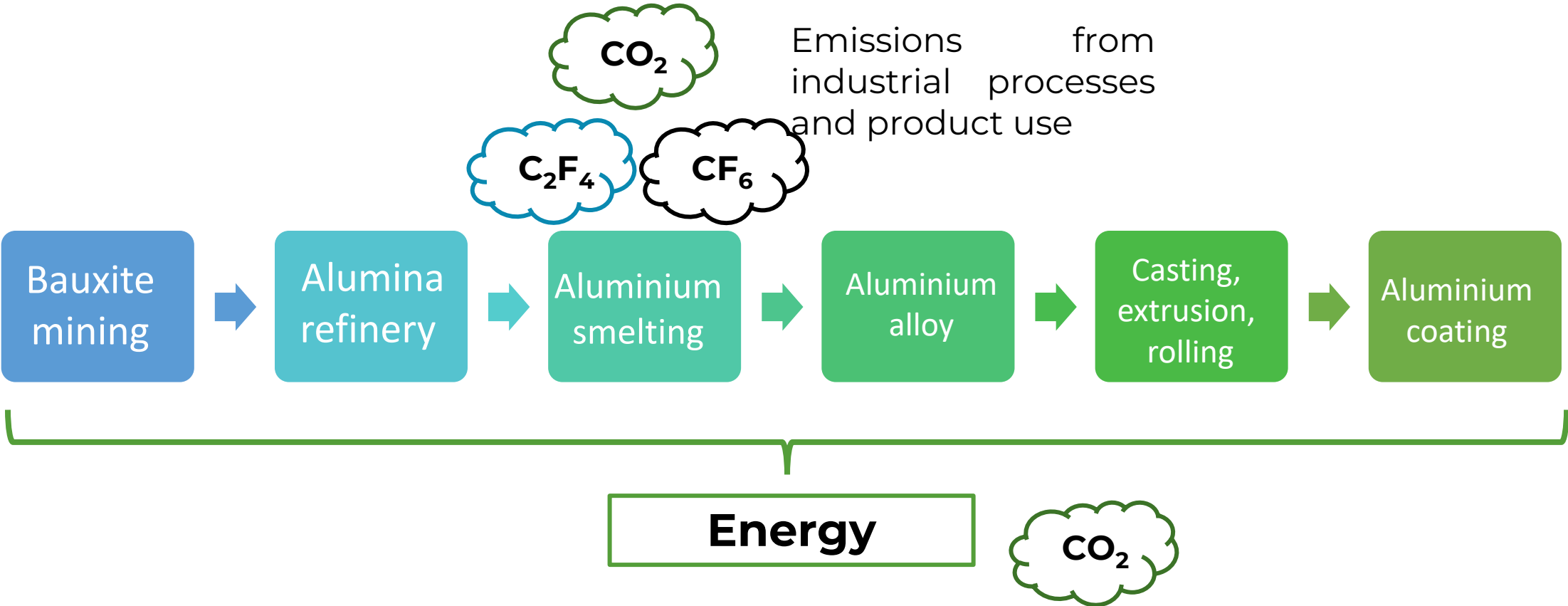
Year	World (mil. USD)	EU	
		Value (mil. USD)	Proportion (%)
2018	1,163.77	56.09	4.82%
2019	1,270.78	64.83	5.10%
2020	1,419.21	56.33	3.97%
2021	2,039.21	198.00	9.71%
2022	2,127.61	307.66	14.46%

Source: Trademap.org



II. GHG emissions and emission reduction measures

A. GHG emission sources in aluminium production



II. GHG emissions and emission reduction measures

B. Emission reduction measures

1. Improve energy efficiency
 - Improve the efficiency of electrical equipment (motors, compressors, lighting, etc.)
 - Reduce furnace heat loss during alloying, casting, extrusion, aluminum rolling
2. Mixing activated carbon to recover aluminium in aluminium slag to reduce the rate of aluminium loss in slag





III. Sectoral development strategy

- Zoning plan for exploration, mining, processing and use of bauxite ore in the 2007-2015 period with a vision to 2025 (Decision 167/2007/QD-TTg dated 1/11/2007).

Production	Before 2015	2015	2025
Alumina (mil. ton/year)	0.7 – 1	6.0 – 8.5	13 - 18
Electrolyzed aluminium (mil. ton/year)	0.2 – 0.4	Depend on market demand	

Plants	Capacity Mil.ton/year	Timeline
First aluminium electrolysis plant	0.2 – 0.4	2012-2015
Second aluminium electrolysis plant	0.2 – 0.4	2017-2020



III. Sectoral development strategy

- The first aluminium smelter in Vietnam, Dak Nong Aluminium Smelter is under construction with capacity of 450,000 tonnes/year and expected to produce the first batch of aluminium using alumina from Nhan Co Aluminium Plant in 2024 .
- **There is no specific emission reduction target/strategy for the aluminum industry.**



IV. Conclusion

- There are 26 establishments in the aluminium sector on the list of enterprises that must carry out a mandatory GHG inventory and reduce GHG emissions.
- According to VAA, Vietnam's aluminium sector is oriented toward gradually increase export to other countries, including the EU.



IV. Conclusion

- Therefore, reducing GHG emissions in the sector will help businesses proactively prepare for and mitigate the impacts of CBAM.
- Near term measures includes:
 - Develop domestic aluminum smelting industry to take advantage of domestic alumina sources, reduce dependence on imported raw materials for aluminum production, thereby helping to control emission sources and reduce emissions.
 - Research and develop policies for the development of the bauxite-alumina-aluminum industry, including the sector's export and GHG emission reduction strategy.

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Thank you!