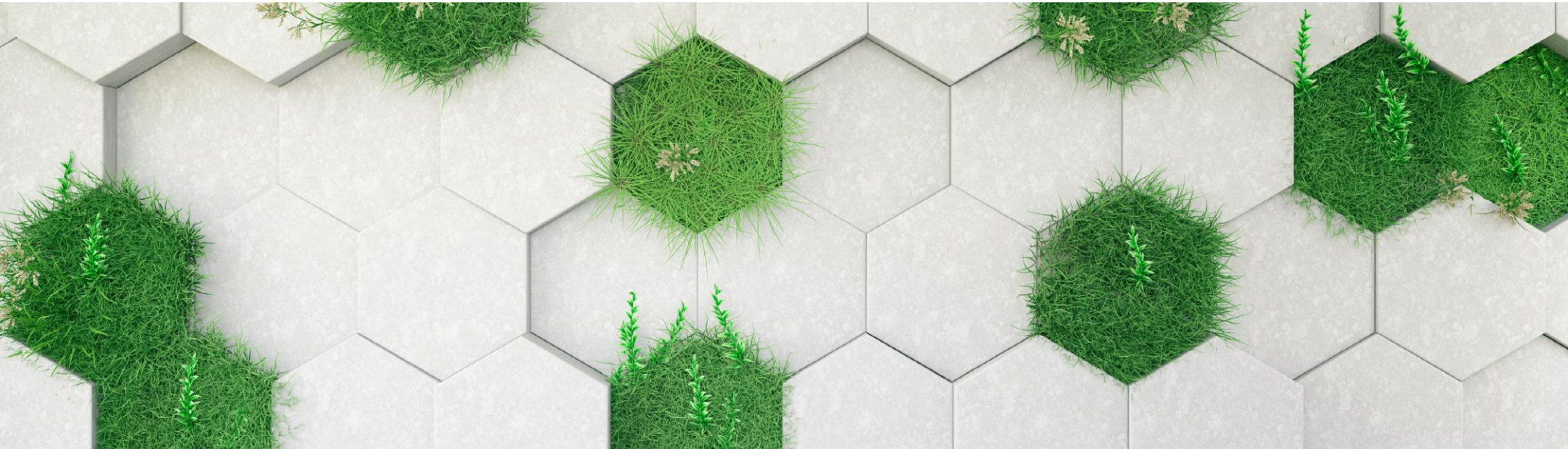


CO₂ COSTS IN CEMENT SOME CALCULATIONS

CEMBUREAU



1. Cement production costs 2021 estimated at 46 - 58 euro/ton (excluding CO₂ costs).
(Based on literature information and inflation correction.)
2. **CO₂ costs for the average EU27 cement in 2021 estimated at 4.42 euro/ton (@55 euro/EUA), corresponding to 8 - 10% of total costs.**
This is based on the difference between the emissions performance with subtraction of the free allowances at 100% of the benchmark level.

Parameter	2021	Unit
Cement production costs (excluding CO ₂)	46 - 58	euro/ton cement
CO ₂ price	55 (assumption)	euro/EUA
Clinker to cement factor	74%	ton clinker /ton cement (average EU27)
Benchmark	693 <i>Estimated 512</i>	kg CO ₂ /ton clinker kg CO ₂ /ton cement
Average emissions	810 <i>Estimated 600</i>	kg CO ₂ /con clinker kg CO ₂ /ton cement
CO ₂ costs	4,42 = 8-10% of total costs	euro/ton cement %

Sources used on production costs:


- [Report](#) of Ecorys, WIFO and National Institute of Economic and Social Research for the EU Commission, 2018 – “Competitiveness of the European Cement and Lime Sectors”
 - Production costs: *“The average EU production cost is around €48 per tonne (2012 official data), but within the sample, the costs per tonne range within the EU from €35 (minimum) to €73 (maximum). Main cost components are the energy costs, raw materials, maintenance costs and labour costs; these costs vary per kiln and per region. “*
 - Market prices: *“Industry representatives indicate that cement is currently (2017) sold for an average ex-factory price around € 60 per tonne, although this may vary significantly.”*
- [Report](#) from Agora Energiewende, April 2021 – “Breakthrough Strategies for Climate Neutral Industry in Europe”
 - *“Productions costs for reference cement plants: € 46/t of cement ”*

- Inflation data

- <https://www.inflation.eu/en/inflation-rates/europe/historic-inflation/hicp-inflation-europe.aspx>

Table – historic harmonised inflation Europe (HICP) – by year

annual inflation (dec vs. dec)	inflation	annual inflation (dec vs. dec)	inflation
HICP Europe 2020	-0.27 %	HICP Europe 2010	2.22 %
HICP Europe 2019	1.33 %	HICP Europe 2009	0.93 %
HICP Europe 2018	1.52 %	HICP Europe 2008	1.64 %
HICP Europe 2017	1.34 %	HICP Europe 2007	3.11 %
HICP Europe 2016	1.10 %	HICP Europe 2006	1.92 %
HICP Europe 2015	0.09 %	HICP Europe 2005	2.28 %
HICP Europe 2014	-0.17 %	HICP Europe 2004	2.36 %
HICP Europe 2013	0.85 %	HICP Europe 2003	2.02 %
HICP Europe 2012	2.22 %	HICP Europe 2002	2.32 %
HICP Europe 2011	2.75 %	HICP Europe 2001	2.09 %

Display all years 

- CO₂ costs: 55 Euros/ton in 2021