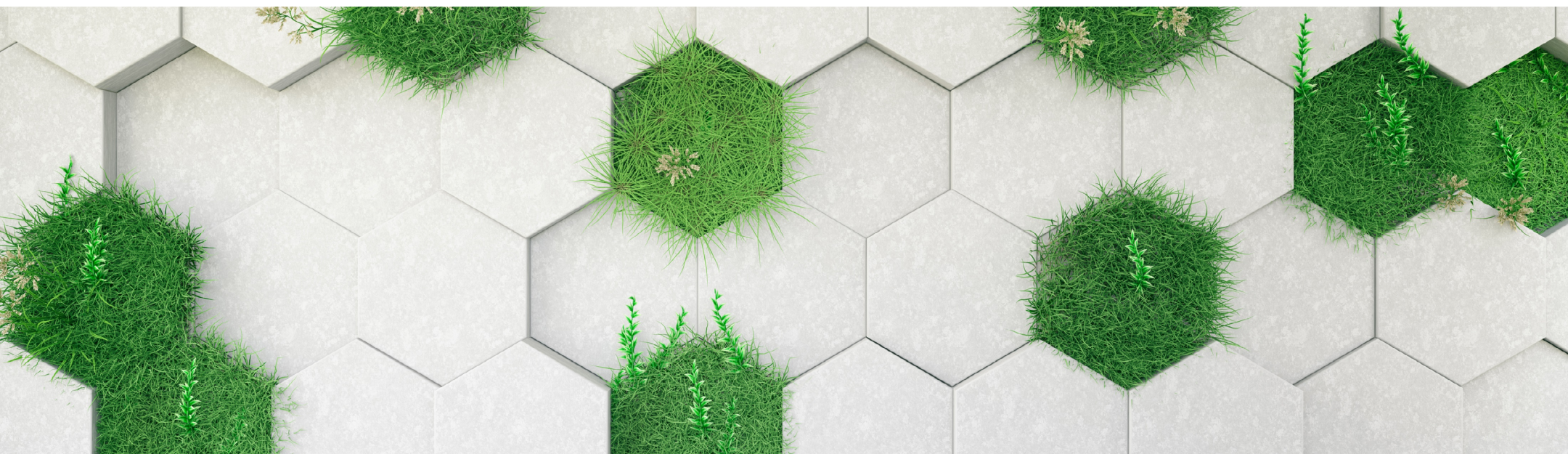


# CO<sub>2</sub> COSTS IN CEMENT SOME CALCULATIONS

CEMBUREAU



1. Cement production costs 2021 estimated at 46 - 58 euros/ton (excluding CO<sub>2</sub> costs).  
*(Based on literature information and inflation correction)*
2. **At an EU ETS price of 55 Euros/EUA, CO<sub>2</sub> costs for the average EU27 cement plant are estimated at 4.42 euros/ton, 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*
3. **At an EU ETS price of 90 Euros/EUA, CO<sub>2</sub> costs for the average EU27 cement plant are estimated at 7.23 euros/ton, corresponding to 12-15% of total costs**

Parameter	2021	Unit
Cement production costs (excluding CO <sub>2</sub> )	46 - 58	euro/ton cement
CO <sub>2</sub> price	55 / 90 (assumption)	euro/EUA
Clinker to cement factor	74%	ton clinker /ton cement (average EU27)
Benchmark	693 <i>Estimated 512</i>	kg CO <sub>2</sub> /ton clinker kg CO <sub>2</sub> /ton cement
Average emissions	810 <i>Estimated 600</i>	kg CO <sub>2</sub> /con clinker kg CO <sub>2</sub> /ton cement
<b>CO<sub>2</sub> costs at a price of 55 Euros/EUA</b>	<b>4,42</b> <b>= 8-10% of total costs</b>	<b>euro/ton cement</b> <b>%</b>
<b>CO<sub>2</sub> costs at a price of 90 Euros/EUA</b>	<b>7,23</b> <b>= 12-15% of total costs</b>	<b>euro/ton cement</b> <b>%</b>

## 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

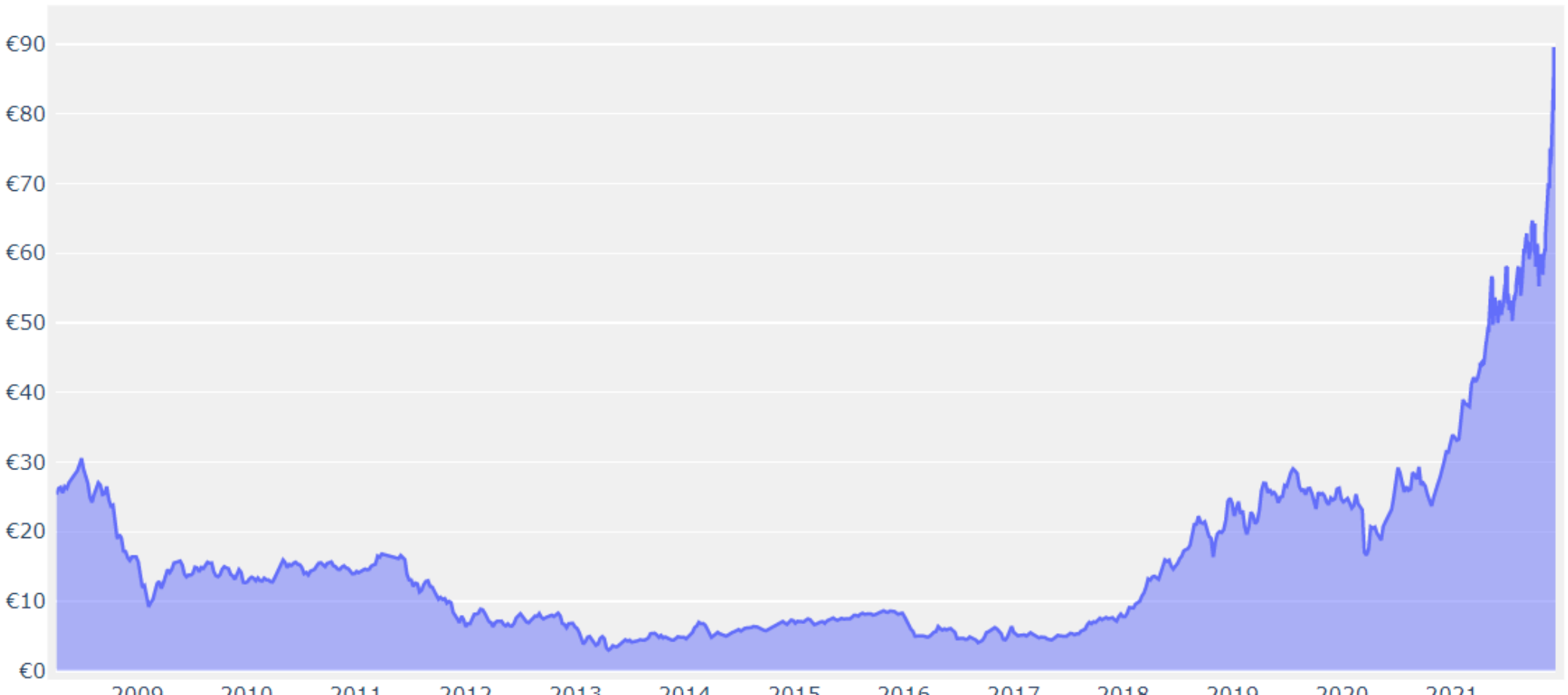
annual inflation (dec vs. dec)	inflation	annual inflation (dec vs. dec)	inflation
<a href="#">HICP Europe 2020</a>	-0.27 %	<a href="#">HICP Europe 2010</a>	2.22 %
<a href="#">HICP Europe 2019</a>	1.33 %	<a href="#">HICP Europe 2009</a>	0.93 %
<a href="#">HICP Europe 2018</a>	1.52 %	<a href="#">HICP Europe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

Display all years 

- CO<sub>2</sub> costs: 55 Euros/ton / 90 Euros/ton

<https://sandbag.be/index.php/carbon-price-viewer/>

CO2 emission allowance





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The European Cement Association