

Steel	Key technology	Earliest possible market readiness
	Direct reduction with hydrogen and smelting in the electric arc furnace	before 2025 (initially with natural gas)
	Alcaline iron electrolysis	2040 – 2045
	Hlsarna® process in combination with CO ₂ capture and storage	2030 – 2035
	CO ₂ capture and utilisation of waste gases from integrated blast furnaces	2025 – 2030
Chemicals	Key technology	Earliest possible market readiness
	Heat and steam generation from power-to-heat	From 2020
	CO ₂ capture at combined heat and power plants	2030 – 2035
	Green hydrogen from renewable energies	2020 – 2030
	Methanol-to-olefin/-aromatics route	2025 – 2030
	Chemical recycling	2025 – 2030
	Electric steam crackers	2035 – 2045
Cement	Key technology	Earliest possible market readiness
	CO ₂ capture with the oxyfuel process (CCS)	2025 – 2030
	CO ₂ capture in combination with electrification of the high temperature heat at the calciner	2025 – 2030
	Alternative binders	2020 – 2030 (depending on product)