Industry: Industry CCS

This lever controls the sub-levers listed in the table, and ambition levels are for the end year shown on the right-hand side.

Carbon capture and storage (CCS) involves capturing CO_2 emissions from burning fuels or from industrial processes and piping them to geological features found underground for permanent storage, thus preventing their escape into atmosphere. CCS processes have an energy demand of their own, which may add to the amount of CO_2 that must be stored.

Combining bioenergy sources with CCS (BECCS) achieves negative emissions because the emissions absorbed by the biomass during growth are prevented from re-entering the atmosphere. This can be achieved in industry by combining CCS with biomass or biomethane if the gas grid is converted.

Currently in the UK there is no industrial CCS. However, much of industry is clustered together meaning CCS networks emerging in these clusters could make it economical for large proportions of industry to connect to these networks.

Key Interaction

This lever controls how much CCS would be used across industry. The amount of CO_2 actually captured and stored by industrial CCS depends on the capture rate defined by the CCS Capture Rate lever.

Level 1

None of the emissions from industry are captured and stored.

Level 2

CCS is applied to around a quarter of the emissions from industry.

Level 3

CCS is applied to over half of the emissions from industry.

Level 4

CCS is applied to all of the emissions from industry.

Default Timing

Start year: 2025, End year: 2060

Share of CO2 emitting processes with CCS applied

Sub-Lever	Units	2015	Level 1	Level 2	Level 3	Level 4
Metal Production	share	0%	0%	23%	51%	100%
Cement, ceramics, glass	share	0%	0%	24%	51%	100%
Chemicals	share	0%	0%	25%	58%	98%
Other Industry	share	0%	0%	30%	60%	100%
Refineries	share	0%	0%	25%	58%	100%