Industry: Industry Shift to Gas

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

Switching to gas from liquid hydrocarbon in the industry such as cement, ferrous and nonferrous metal, chemicals, refineries and other industries can reduce carbon emissions. This is because gas has a lower carbon content than liquid hydrocarbon. In addition, the gas can be decarbonized using hydrogen and/or biomethane (via the Hydrogen and Biomethane Gas Share levers). If switching to natural gas is achieved, the gas can be converted to hydrogen, and emissions will not be reduced and industrial Carbon Capture Storage (CCS) will not necessary, since CCS is assumed not to be applied to hydrogen production.

Key Interaction

Decarbonization of the gas by increasing the shares of biomethane and hydrogen can reduce emissions from gas consumption in industry (the Hydrogen Gas Share and Biomethane Gas Share levers from the gas sector).

Level 1

Gas usage in industry stays roughly the same as in 2015.

Level 2

Ambition level is 1/3rd of the difference between Level 1 and Level 4. Around half of industry energy needs is met by gas.

Level 3

Ambition level is 2/3rd of the difference between Level 1 and Level 4. Around two thirds of industry energy needs is met by gas.

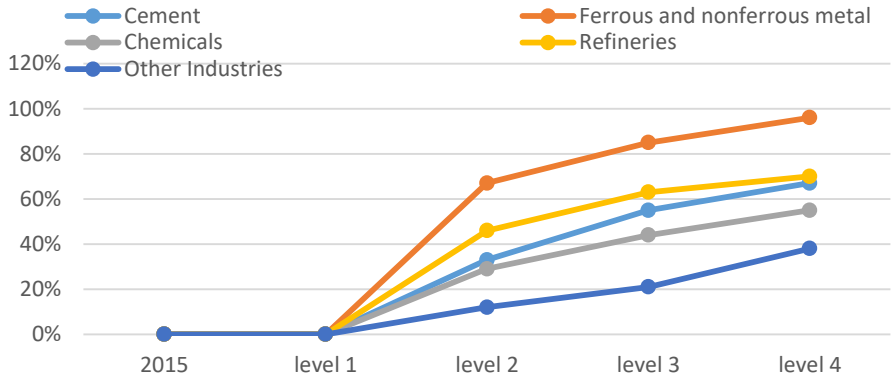
Level 4

Gas switching in industry reaches maximum potential suggested by expert opinion.

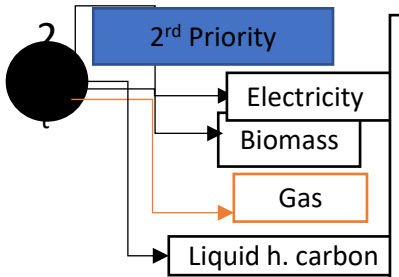
Default Timing Start year: 2020, End year: 2050

Shift to gas

Sub lever	Share	2015	level 1	level 2	level 3	level 4
Cement	%	0	0	33	55	67
Ferrous and nonferrous metal	%	0	0	67	85	96
Chemicals	%	0	0	29	44	55
Refineries	%	0	0	46	63	70
Other Industries	%	0	0	12	21	38



Shift to gas and levels



Gas is the third in the priority order for supplying process energy to industry. Where supply would exceed demand, then measures lower in the priority order will be superseded by those above them. Liquid hydrocarbon will meet any shortfall in demand