

Industry: Industrial Electrification

This lever controls all the sub-levers such as cement, ferrous and non-ferrous metal, chemicals, refineries and other industries as listed in the table

The ambition levels for the end year are shown on the right-hand side. Electrification in the industry allows for carbon emissions to be avoided at the point of use and it also supports the decarbonization of the energy system as a whole. However, it is technically feasible in many instances, electrification may not be the most cost-effective means to decarbonize. Different industrial sectors have different degrees of electrification that are possible due to the suitability of electrifying certain processes.

Key Interaction

Nigeria must increase electricity generation from hydro, wind, solar, and modular nuclear power to sustain power for industrial sector.

Level 1

In 2050, the share of electricity used does not change from the base year.

Level 2

Between a quarter of energy demand in industry is met by electricity.

Level 3

Around half of the energy demand is met by electricity.

Level 4

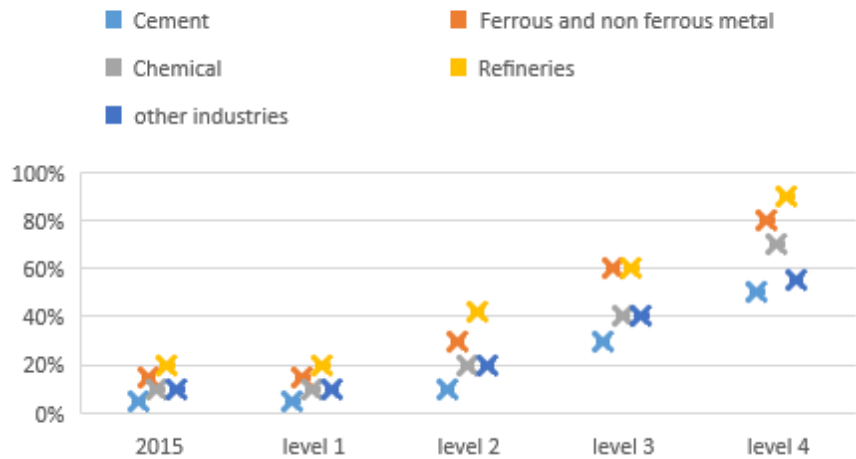
The maximum potential for electrification of industry is achieved, although it may not be the most cost-effective approach.

Default Timing Start year: 2020. End year: 2050

Industrial Electrification

| Sub lever | Share | 2015 | level 1 | level 2 | level 3 | level 4 |
|-------------------------------|-------|------|---------|---------|---------|---------|
| Cement | % | 5 | 5 | 10 | 30 | 50 |
| Ferrous and non-ferrous metal | % | 15 | 15 | 30 | 60 | 80 |
| Chemical | % | 10 | 10 | 20 | 40 | 70 |
| Refineries | % | 20 | 20 | 42 | 60 | 90 |
| other industries | % | 10 | 10 | 20 | 40 | 55 |

Share of Electricity in Industrial sector



Lever Priority

Electricity is first in the priority order for supplying process energy to industry. Where supply would otherwise exceed demand, measures lower in the priority order will be superseded by those above them. High carbon fossil fuels (liquid hydrocarbon) meet any shortfall in demand.

