

Scenarios for the Growth of Gross Domestic Product

The Gross Domestic Product of a country is an essential underlying assumption for any energy scenario building exercise. In the India Energy Security Scenarios, 2047 Version 1.0, the projections were based on only one scenario of GDP growth (7.4% CAGR till 2047). In Version 2.0 of the exercise, keeping in mind the changing economic growth conditions of the country and variability due to a long term perspective, three levels of GDP growth have been offered to the user, on the basis of which the energy demand outputs are generated. A detailed exercise was undertaken to determine the elasticity of activity levels in different sectors to three assumed GDP growth rates. The final energy demand thus generated builds upon these elasticities and the levels of activity demand. Naturally, at higher GDP growth rates, the energy demand is higher.

The tool also enables the user to witness the cost implications of his pathway as a percentage of the chosen scenario of GDP. This will enable him/her to put the cost implications of his chosen scenario into perspective.

The default scenario in the tool is Scenario A, i.e. 7.4% CAGR till 2047. The other scenarios can be chosen by selecting the different choices in the 'Growth of the Economy' section.

To be in line with different modelling studies, the IESS, 2047 tries to consider the possible ranges of GDP growth rates for India as have been used by different modelling studies all over the world.

SCENARIO A

Scenario A assumes a 7.4% Compounded Annual Growth Rate till the year 2047.

This figure has been adopted from a projection done by TERI for Indian GDP till the year 2052.

SCENARIO B

Scenario B assumes a 6.7% Compounded Annual Growth Rate till the year 2047.

This figure has been adopted from the growth rate assumptions of the International Monetary Fund for the 12th Five Year Plan (2011-12 to 2016-17)

SCENARIO C

Scenario C assumes a 5.8% Compounded Annual Growth Rate till the year 2047.

This figure has been adopted from the growth rate assumptions of the International Energy Agency

Note: All GDP assumptions and projections have been done at 2011-12 prices.