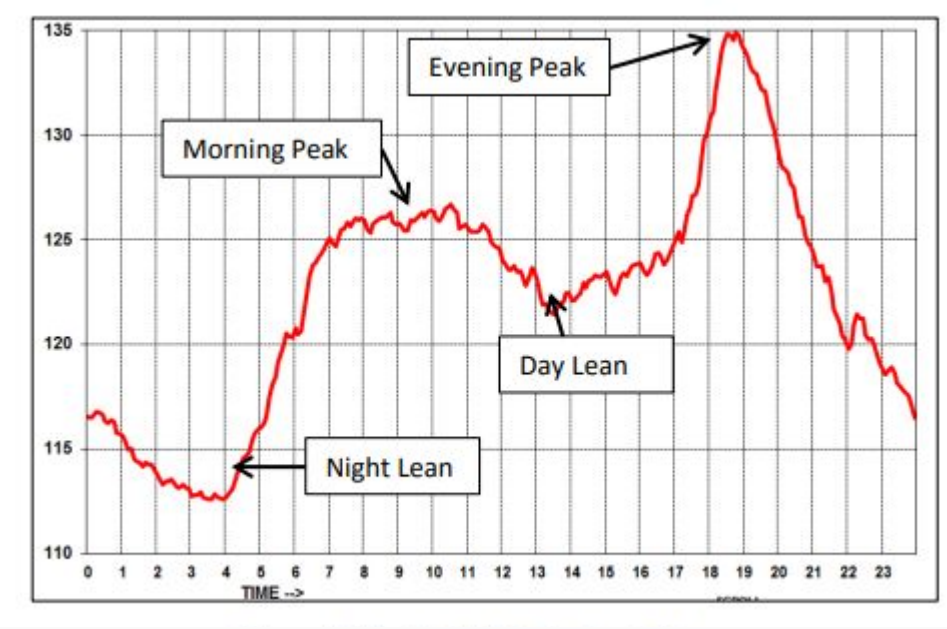
What should we base the Baseload on?

Group 15

India’s Load Curve



Typical Load curve for India (GW)

Source: POSOCO

INDC targets

- Reduction greenhouse emission intensity of its GDP by 33 to 35% from the 2005 level by 2030.
- Achieve installed power generation capacity of more than 40% from Non-fossil fuels.

Scenarios:

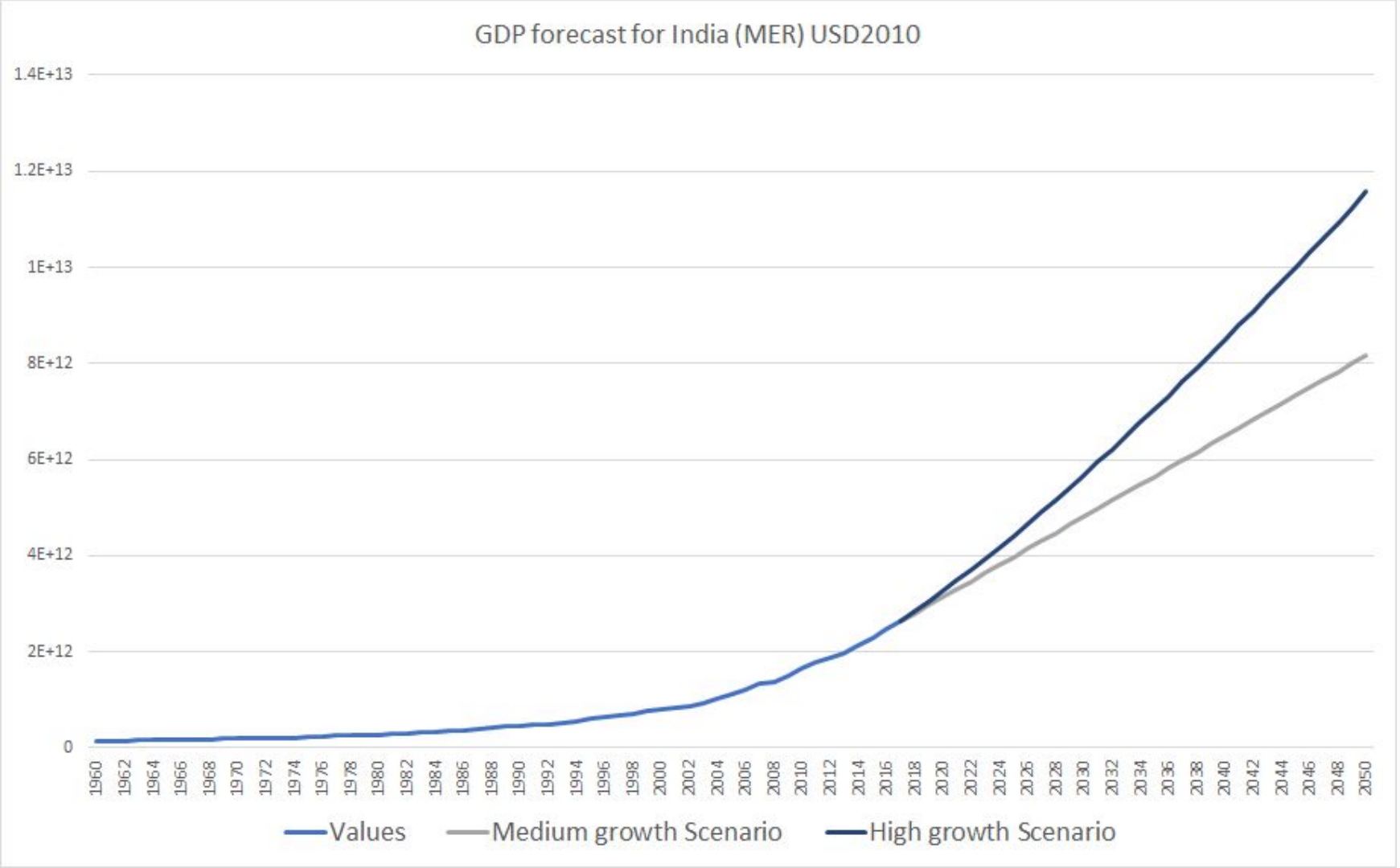
For 2050

Medium GDP growth:

8.2 trillion USD

High GDP growth

11.6 trillion USD


GDP forecast for India (MER) USD2010
1.4E+13
1.2E+13
1E+13
8E+12
6E+12
4E+12
2E+12
0
1960
1962
1964
1966
1968
1970
1972
1974
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2046
2048
2050
Values
Medium growth Scenario
High growth Scenario

Scenarios:

For 2050

	Scenario - 1 (Medium GDP growth)	Scenario -2 (High GDP growth)
GDP at 2050	8.2 trillion USD	11.6 trillion USD
Electricity Demand (at 2050)	4250 TWh/year	5000 TWh/year
Assumed emission intensity reduction wrt 2030	25%	50%
Emission intensity target	0.48 kg CO_2/USD	0.32 kg CO_2 / USD
Permissible CO_2 emission from coal (45% of total)	1764 $MtCO_2$	1665 $MtCO_2$
Extra generation requirement	1406 TWh/yr	2193 TWh/yr
Total investment required at generation from coal:	4.39 trillion	4.14 trillion

Few observations

- India is likely to achieve its INDC target without much effort
- The cost of solar to be established at base load is high
- Nuclear as base load option can viably meet the demand.

We need a new and clear focus on nuclear.

Thanks!