

DOMESTIC COAL PRODUCTION

Coal contributes over half of India's primary commercial energy. Though the share of renewable energy is gradually expected to increase in the coming years, coal is likely to remain India's most important source of energy for the coming decades. After nationalization of coal mines in 1973, coal production improved significantly. However, there is continued shortage of coal and hence imports have been increasing briskly in the last few years. Finally, while official numbers of coal resources and reserves, have been published every year with an average increase of almost 2.5 % per year for last two decades, the quantity of actual techno-economically mineable coal reserves in the country it is still not clear. The present analysis offers 4 choices of quantum of coal production, impacted by percentage of mine-able levels and production of coal.

Level 1

Level 1 assumes that only the currently operating, on-going and planned coal mining projects by CIL (437 Million Tonnes Per Annum (MTPA)) and SCCL (41 MTPA) and currently allocated captive blocks (43 billion ton geological reserves) will come online. Production from current (non-captive) mines will reduce by 17% every 5 years (consistent with mine life of 30 years) due to closure of mines. Production from captive blocks will start reducing only from 2027 onwards, as most of the currently producing captive blocks are new. Coal reserves and mine ability of all reserves will remain at present values. In this scenario, coal production gradually increases from 582 MTPA in 2011-12 to peak at 866 MTPA in 2037, and then start declining and reach 619 MTPA in 2047. About 85% of the mineable coal reserves will have been extracted by

2047 in this scenario as no new reserves are added, and there is no improvement in mine ability.

Level 2

Level 2 projections are consistent with realistic projected scenario in the 13th Five Year Plan till 2022. Given that the production for 2012-13 fell about 18 million tons short of the target of 575 million tons, we assume that the total shortfall from the target in 2017 would be 50 million tons. This results in an annual production increase of about 5% per annum up to 2017, and about 4% up to 2022. Proved coal reserves will grow at a reduced pace of 1% p.a. as most of the prognosticated coal bearing area (75%) has been explored. There would be some improvement in mine ability due to technological improvement. In this scenario, coal production will grow to peak at 1195 MTPA in 2037 and decline marginally by 2047 to 1163 MTPA. About 62% of mineable coal reserves would have been extracted by 2047.

Level 3

Level 3 is consistent with the optimistic scenario projections till 2022 in the 12th Five Year Plan, tempered by slower-than-expected increase in production. The rate of increase of production reduces slightly going forward. Proved coal reserves will grow at about 1.3% p.a. and there would also be further improvement in mine ability. With these positive conditions for coal based energy supply, coal production will be 1407 MTPA in 2047. About 55% of mineable coal reserves would have been extracted by 2047.

Level 4

Level 4 is the most optimistic, assuming full encouragement for coal based energy supply. Proved coal reserves will grow at 1.5% p.a., production will reach about 1400 MTPA in 2032 as anticipated in the

Integrated Energy Policy document, and mine ability will increase better than in other levels. In this scenario, coal production will increase to about 1602 MTPA in 2047, almost consistent with the high-case scenario of global coal production as per Global Coal Production Outlook. In this scenario, about 48% of mineable coal reserves would have been extracted by 2047.

