Solar Photovoltaic (SPV) Power Plant

The role of solar is not significant as of now in the energy mix of Assam. The total installed capacity in the state was around 11 MW as on January 2017. As per NISE estimates, the state has a potential of 13.8 GW. Due to low level of solar potential, Assam's installed capacity in solar is also quite less. In addition, Assam has some issues in terms of land availability which is restricting the growth of solar based capacity in Assam and APDCL is continuously falling short in meeting the Solar RPO target. To meet the growing demand for power in the state and reduce emissions, MNRE has proposed a target of 663 MW of solar PV capacity.

Level 1

Level 1 assumes that solar PV capacity addition will be significantly slower as compared to targets set for the state. Lack of land availability for developing large, Limited forecasting of RE projects and environment related externalities of conventional power will be un-priced. Capacity will reach around 0.3 GW by 2025 and then will gradually increase to 1.4 GW by 2050.

Level 2

Level 2 assumes that the capacity addition would follow the trajectory of 1.5 GW by 2030, as was planned in the State Renewable Energy Action Plan for the state. Thereafter, the capacity will increase as per historical trend and reach 4.9 GW by 2050. Full potential of 38.5 GW will still not be realized owing to challenges related to large scale integration of solar power.

Level 3

Level 3 assumes that due to further decrease in prices of solar modules and development of REMC for real time monitoring of output from RE projects, capacity addition will follow the trajectory set by central government of achieving 663 by 2022. Thereafter, the capacity will increase as per historical trend and reach 9.3 GW by 2050.

Level 4

Level 4 is a more aggressive scenario assuming a large increase in solar capacity, which could be likely if technology costs continue to fall, fossil fuel prices increase, or supportive government policies. This level assumes no barriers to capacity additions in solar power. Ancillary markets will be developed to support large scale grid integration of renewable energy. The state will reach full potential of 13.8 GW by 2050.