Industry: Energy intensity

Level 1

Level 1 assumes that Industries will follow the PAT compliance and improve their efficiency level by 3-18% by the end of 2050. PAT industries are assumed to improve their efficiency level marginally from the baseline of 2015. For Others sub group, the energy intensity reduction is assumed to be with a CAGR of 4%.

Level 2

Level 2 assumes implementation of energy efficiency and renewable energy related project in industries. The implementation will be additional to PAT activities and each industry will adopt new financially viable technologies available and improve efficiency level by 10-20%. It is assumed that this will drive the non PAT DCs to accelerate the EE project implementation. For Others sub group, this level assumes improvement in the energy intensity with a CAGR of 4-5%.

As per the Power for All report by Ministry of Power, industrial sector in the state of Andhra Pradesh accounted for nearly 35% of the total energy consumption in 2015. For demand analysis, the industrial sector in the state of Andhra Pradesh is divided among Perform-Achive-Trade (PAT) industries and non-PAT industries (Others). The PAT industries are the large energy intensive industries which are covered under PAT scheme. Out of 11 PAT sectors, this tool considers only 5 sectors namely cement, iron & steel, pulp & paper, chlor-alkali and fertilizer. Industries of textile and aluminum sectors in Andhra Pradesh are not covered in PAT cycle 2. The industries which are not covered in PAT sectors are considered in Other Sub-group. Others sub-group considers all the MSMEs and non PAT industries. The energy consumption and performance profile of PAT Designated Consumers (DCs) in Andhra Pradesh is compared with the overall PAT DCs for each sector. Different levels are defined for each sector separately considering the present efficiency level of each sectors.

Level 3

Level 3 assumes the implementation of best available technology in each sector. Due to large scale implementation, the costs of technologies are expected to be reduced which makes them viable for other industries to implement the projects. The efficiency level of the industries are expected to improve by 20-30%. Others sub group is assumed to improve its energy intensity level with a CAGR of 4-5%

Level 4

Level 4 is the most optimistic scenario which assumes maximum possible improvement in the energy efficiency level and there is no financial barrier for implementation of the EE and RE related projects. The efficiency level of the industries are expected to improve by 30-45%. The Others sub group is assumed to improve with a CAGR of 5-6%.