

Fuel for Irrigation

Level A

In Level A, it is assumed that only 10 percent of pumping demand will be met through solar and 88% percent through electricity grid. Diesel will continue to be used as a back-up and will meet 2% of energy requirement.

Level B

Government policies like fiscal support for solar water pumps and complete deregulation of diesel prices can decrease the share of diesel gradually and the share of solar based agricultural pumping will increase up to 25 percent.

In 2015, there were around 1.8 million agricultural pumps in the state. The average efficiency of pump-sets remains low at 30-35 % and offers significant scope for savings. State government is implementing DSM programs to replace existing inefficient pumps with energy efficient pumps. Solar water pumps scheme has also been launched for agriculture connections applicants of 5 HP to 20 HP. There are very few diesel pump-sets that are mainly used for back-up purposes. They are estimated to meet about 7% of the total pumping energy demand in 2015. The aggregate pumping demand in 2015 was ~12.4 TWh. The share of each fuel, i.e. diesel, electricity, and solar PV in overall pumping requirement is defined as a choice variable, ranging from A to D.

Level C

Level C assumes that diesel will not be used for pumping. Further share of solar energy-based pumping will increase up to 30%. This could be because of increased reliability of electricity supply from grid and fiscal support from state government.

Level D

The share of solar energy-based pumping increases to 50%. This could be because the price of the solar energy pumping equipment decreases sharply. Diesel will not be used for agriculture pumping. This could also be as a result of high prices. Only 50% of energy demand will be met through grid.

