

# Fuel for Irrigation

## Level A

In Level A, it is assumed that only 10 percent of pumping demand will be met through solar and 80 percent through electricity grid. Diesel will continue to be used as a back-up and will meet 10% of energy requirement.

## Level B

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

There are around 1.6-1.7 million agricultural pumps in the state. The average efficiency of pump-sets remains low at 30-35 percent and offers significant scope for savings. State government is implementing DSM programs to replace existing inefficient pumps with energy efficient pumps through Energy Efficiency Services Limited. A pilot project has been implemented at Rajanagaram Mandal wherein around 2,500 pumps will be replaced. There are very few diesel pump-sets that are mainly used for back-up purposes. They are estimated to meet about 8 percent of the total pumping energy demand in 2015. The aggregate pumping demand in 2015 was 11 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 1 to 4.

## Level C

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

## Level D

Prices of solar energy based pumping will decrease sharply, due to which share of solar energy based pumping will be 50%. Diesel will not be used for agriculture pumping due to high prices. Only 50% of energy demand will be met through grid.

