

Options for Saving Electricity





Electricity is equally the important and costlier utility in any plant like the natural gas, coal and oil. There are many ways for saving electricity; some of them are very cheaper and some are a little costlier, but every expense made as a return of investment. Saving electricity does not only help the industry economically, but also helps reducing the Carbon Footprint from the environment. Following are some of the proven case studies.

Case Study –1	Power factor improvement to unity through installation of capacitors
Before CP	<p>The source of outside power for the plant is from UGVCL (Uttar Gujarat Vij Company Ltd.) grid at 11 kV. The 11 kV supply is stepped down through common Discom transformer and supplied to the plant at 420 V. For the type of connection plant has UGVCL do not have clause for power factor penalty or rebate, but UGVCL charges Rs. 0.10 per kVARh which is recorded due to low power factor maintained within plant.</p> <p>The total amount paid to UGVCL against reactive power consumption by the plant during January 2015 to December 2015 was Rs. 32,190</p>
After CP	Through power factor maintained near to unity, plant can reduce the reactive power consumption which will save additional charges in electricity bill. Power factor is improved by the installation of capacitors and replacement of the de-rated existing capacitors.
Benefit	
Economical	<p>Investment: Rs. 25,000/- (for capacitors) Approx. Annual Savings: Rs. 32,000/- per annum Payback Period: 10 months</p>