

## **A Study to Assess the Energy Saving Potential and Economic Analysis of an Agro Based Industry in Karnataka, India**

**Authors :** Sangamesh G. Sakri, Akash N. Patil, Sadashivappa M. Kotli

**Abstract :** Agro based industries in India are considered as the micro, small and medium enterprises (MSME). In India, MSMEs contribute approximately 8 percent of the country's GDP, 42 percent of the manufacturing output and 40 percent of exports. The toor dal (scientific name *Cajanus cajan*, commonly known as yellow gram, pigeon pea) is the second largest pulse crop in India accounting for about 20% of total pulse production. The toor dal milling industry in India is one of the major agro-processing industries in the country. Most of the dal mills are concentrated in pulse producing areas, which are spread all over the country. In Karnataka state, Gulbarga is a district, where toor dal is the main crop and is grown extensively. There are more than 500 dal mills in and around the Gulbarga district to process dal. However, the majority of these dal milling units use traditional methods of processing which are energy and capital intensive. There exists a huge energy saving potential in these mills. An energy audit is conducted on a dal mill in Gulbarga to understand the energy consumption pattern to assess the energy saving potential, and an economic analysis is conducted to identify energy conservation opportunities.

**Keywords :** conservation, demand side management, load curve, toor dal

**Conference Title :** ICEPE 2016 : International Conference on Electrical and Power Engineering

**Conference Location :** Chicago, United States

**Conference Dates :** September 19-20, 2016