# *Description of the project*

**Purpose of the project activity:**

Project description: Raus Power Limited is intending to establish a biomass based power plant, where poultry litter is used as a fuel. The objective of the project is to generate 3.66 MW power from Industrial Wastes (Poultry Litter) and other agricultural residues and export power to the Eastern Power Distribution Corporation of A.P. Ltd. through 33/11 kV substation at Duppalapudi Village.

The project is located in the East Godavari District of Andhra Pradesh. East Godavari is an important industrial district of the state, specialising in agri-business & food processing, poultry farms, pulp and paper products, chemicals & pharmaceuticals and engineering, among others.

The three states of Andhra Pradesh, Tamilnadu and Maharashtra account for a major portion of the poultry industry in our country. Among these states, Andhra Pradesh has the largest population of poultry birds in the country. These birds generate significant quantities of litter. This poultry litter has high calorific value, which can be utilised for Power generation through combustion of the litter.

The current practice of poultry litter management involves unhygienic method of dumping on readily available land and this is an environmental hazard. The poultry litter in open dumps decomposes over a period of time liberating enormous quantities of Methane and Carbon Di Oxide into the atmosphere. Both the gases are important greenhouse gases and the poultry litter dumps are a potential source of greenhouse gases.

The other general practice for the disposal of poultry litter has been the bulk spreading of the material over agricultural lands. The intent of land application of litter is the enrichment of soil with nutrient laden material while concurrently providing a means of disposal for the poultry growers. However over application of the litter in geographically concentrated areas will deteriorate the quality of environment. Poultry litter in bulk form tends to decompose rapidly by releasing soil nutrients. When over applied these water soluble or leachable nutrients are dissolved in water, which feeds into water sheds. Nutrient rich run off water feeds explosive algae growth, removing dissolved oxygen from streams and lakes, resulting poor water quality, causing serious environmental damage.

As on today very few power plants are fuelled by poultry litter. Those are in operation are mostly located in United Kingdom, where four plants aggregating to 100 MW are in operation. Considering the growing demand for biomass based power plants in India some of the boiler manufacturers are doing extensive research and were successful in burning poultry litter in the boilers. Burning of poultry litter in a properly designed boiler will ensure control of environmental pollution.

Samples were collected from various poultry farms and were analysed for parameters like calorific value, volatile solids, N:P ratio etc. to test the feasibility of poultry litter for combustion. The analysis indicated that it has a calorific value of 2800 kcal/kg and volatile solids concentration ranging between 50% and 90%, which is suitable for combustion.

The proposed project site is located in Duppalapudi Village, Anaparthy Mandal, East Godavari District, Andhra Pradesh. The project site is accessible by road and rail. Nearest railway station is at Anaparthy which is at 2.5km from the project site which is located on roadway connecting Anaparthy and Rajanagaram. RPL intends to generate 3.66 MW from the poultry litter using direct combustion technology. The company requires around 165 MT of litter every day. As per the studies conducted by the company and the information provided by the poultry federation and National Egg Coordination Committee the total litter available in and around the proposed project site will be around 1000 MT/Day. Out of this the required fuel of 165 Mt will be available within a radius of 15 Km from the proposed site.

RPL has entered in to a 10 years agreement with poultry farmers for uninterrupted supply of the fuel.