

Waste to Energy Opportunities in India

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Abstracts

India is a developing nation housing second largest population in the world. Industrialization is the key to sustain the growth story of India. Industrialisation has led to urbanization and has therefore induced life style changes, giving rise to generation of increasing quantities of wastes leading to increased threats to the environment. In India, 62 million tonnes of waste is generated annually. The per capita waste generation in Indian cities ranges from 200 grams to 600 grams per day. Out of 62 million tonnes of waste, 43 million TPA is collected, 11.9 million is treated and 31 million is dumped in landfill sites, which means that only about 75-80% of the municipal waste gets collected and only 22-28 % of this waste is processed and treated. Waste generation in India is expected to increase rapidly in the future. As more people migrate to urban areas and as incomes increase, consumption levels are likely to rise, as are rates of waste generation. As per Energy Statistics 2015, waste-to-energy potential in India is approx. 2,556 MW, of which approximately 114.04 MW has been harnessed till December, 2016. It is estimated that the amount of waste generated in India will increase from 62 million tonnes to about165 million tonnes in 2030. This will have significant impact on the amount of land that is and will be needed for disposal, economic costs of collecting and transporting waste, and the environmental consequences of increased MSW generation levels.

In developed countries, environmental concern is the prime motivator for the countries to invest in waste-to-energy projects, which help in treating and safe disposition of wastes. Energy or power is considered as a by-product, improves the viability of such projects.

In an aim to boost WTE sector in India, Ministry of Environment and Forests has revised Solid Waste Management Rules which has introduced responsibility on generators to segregate waste into three categories – Wet, Dry and Hazardous Waste. The new Rules also assign responsibility on local bodies having 1 million or more population to



set up waste processing facilities within two years. India, with its ambitious target of adding 175 GW of renewable energy to the grid by 2022 plans to add 10 GW of electricity generation capacity from bio-power. Further, the Tariff Policy 2016 mandates power distributors to buy all the electricity generated from waste-to-energy plants in a state and the remunerative tariff set for it by the Central Electricity Regulatory Commission (CERC) has helped raise investor interest in this segment. The municipal corporations are expected to receive Rs.15,000 crore over the next three years under the Swachh Bharat Mission for cleanliness, waste-management and waste-to-energy projects. Also, the government is also setting up a \$1.25 billion fund, backed by state-owned Power Finance Corp. Ltd and Rural Electrification Corp. Ltd along with some private institutions. These allocations, together with private partnerships, could result in an investment of about Rs.65,000 crore in these projects over the next three years.



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