

Special Report

WASTE TO ENERGY 2018

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SEGMENT ANALYSIS, TRENDS AND OUTLOOK

Current Status

- ❖ Only about 18 per cent of the waste generated by Indian urban population is treated
- ❖ A growing number of landfills are coming up around megacities of India
- ❖ Indian megacities generate only 1/4th of per capita MSW as compared to developed countries
- ❖ Waste to energy (WtE) is being looked upon as the most viable option for waste treatment
- ❖ There has been an overall increasing trend in the grid-interactive as well as off-grid WtE capacity
- ❖ Grid-interactive WtE capacity added in 2017-18 exceeded the target for the year

Government Initiatives

- ❖ Battery-operated electric buses as the most suitable and feasible for the Indian scenario
- ❖ The government has been taking a number of initiatives to promote this segment
- ❖ A noteworthy step has been the launch of Swachh Bharat Mission
- ❖ This is complemented well by the Smart Cities Mission
- ❖ The government revised the Municipal Solid Waste rules in 2016
- ❖ Remunerative tariffs have been set by CERC
- ❖ WtE has been kept out of the purview of competitive bidding guidelines for renewables
- ❖ NITI Aayog is planning to set up a WtE authority, called Waste-to-Energy Corporation of India
- ❖ The CFA level for WtE is likely to be revised upwards

Business Models and Economic Viability

- ❖ WtE projects are awarded under the DBFOT model, with inappropriate scope of work
- ❖ Several projects are contracted with either nil tipping fees or royalty fees
- ❖ New business models are emerging with permutations of tipping fee, user charge and VGF
- ❖ In Nagpur, the revenue is being shared by the ULB and the discom
- ❖ Gurugram has a user fee and user charges to be collected by the developer, but no tipping fee
- ❖ Self-funded EPC by ULBs and third party-funded EPC model are some models that need testing

Outlook and the way forward

- ❖ The country is likely to face an insurmountable waste crisis
- ❖ Waste management will be on high priority with municipal authorities playing a key role
- ❖ However, these ULBs are under-resourced, underpowered and subject to political manipulations
- ❖ There is a need for skilled staff and appropriate technology
- ❖ Innovative and localised business models and technologies are needed for different cities
- ❖ A number of successful projects have already emerged
- ❖ The interest revival in WtE projects will change the size and scale of this segment in future

1. Executive Summary

SECTION A: MARKET OVERVIEW, TRENDS AND OUTLOOK

2. Current Scenario

- ❖ Waste Generation Potential in India
- ❖ Size and Growth of Waste to Energy
- ❖ Leading Cities in Waste to Energy Development
- ❖ Waste Treatment and Processing Practices
- ❖ New Technology Advancements
- ❖ Market for Waste Residues/Byproducts

3. Enabling Policy Framework

- ❖ Policy and Regulatory Challenges
- ❖ Policy and Regulatory Landscape
- ❖ Competitive Bidding for WtE Projects
- ❖ Solid Waste Management Rules, 2016
- ❖ Environmental Norms for WtE Projects
- ❖ Swachh Bharat Mission and Smart Cities Mission
- ❖ IREDA's Scheme and Incentives for WtE Projects
- ❖ Other Key Initiatives
- ❖ Waste-to-Energy Tariffs
- ❖ Gujarat's WtE Policy

4. Future Outlook and Market Opportunities

- ❖ Capacity Addition and Investment Outlook
- ❖ Future Growth Drivers
- ❖ Upcoming Projects
- ❖ Market Opportunities
- ❖ The Way Forward

5. Analysis of Operational Projects

- ❖ State-wise Analysis
- ❖ Segment-wise Analysis
- ❖ City-wise Analysis of Waste to Energy Capacity

6. Economics and Financing

- ❖ Cost Economics
- ❖ Key Financiers
- ❖ Year-wise CFA and Sanctions
- ❖ New Financing Tools and Instruments
- ❖ Emerging Business Models for Project Development
- ❖ Key Risks and Concerns
- ❖ Project IRRs

SECTION B: SEGMENT ANALYSIS

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- ❖ Waste to Energy Potential in India
- ❖ Waste to Energy Potential by State
- ❖ Growth Drivers
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- ❖ Key Issues and Challenges
- ❖ Key Project Case Studies

8. Industrial Waste-based Power Projects

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- ❖ Size and Growth
- ❖ Waste to Energy Potential in India
- ❖ Waste to Energy Potential by State
- ❖ Growth Drivers
- ❖ Key Issues and Challenges
- ❖ Key Project Case Studies

9. Biogas Projects

- ❖ Introduction
- ❖ Size and Growth
- ❖ Growth Drivers
- ❖ Upcoming Projects
- ❖ Key Issues and Challenges
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10. Bio-CNG Projects

- ❖ Introduction
- ❖ Size and Growth
- ❖ Market Potential
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- ❖ Upcoming Projects
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- ❖ Key Project Case Studies

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