

Conference on
**SMART WASTE
MANAGEMENT**

April 5, 2018
Le Meridien, New Delhi



Lead sponsor:

ashbee

Smart
Waste
Management

Conference on

WASTE TO ENERGY AND FUEL

April 6, 2018
Le Meridien, New Delhi



Organisers:

**Indian
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Mission

- Management of municipal smart waste (MSW) in a scientific manner is one of the biggest issues faced by urban India. For decades, the provision of services for managing and handling smart waste has been neglected. The challenge of delivering MSW services is growing rapidly with the continuous expansion of city limits and migration from rural/semi-rural areas. With this, there has been a significant change in the quantity and quality of waste.
- Current waste management practices, despite some promising initiatives, are far from satisfactory. Barring a few large urban areas such as Ahmedabad, Surat, Pune, Hyderabad and Mumbai, smart waste management infrastructure in most cities is characterised by the absence of door-to-door collection, inadequate transportation infrastructure, dumping of waste at unapproved sites, unscientific disposal of waste, and inadequate treatment capacity.
- The situation is slowly changing with increased interest from the government and the private sector in efficient and smart waste management. Over the past few years, there has been a significant increase in the use of information technology (IT) for various aspects of waste management including collection, transportation, treatment, disposal, asset mapping, network management and customer service. This has primarily been driven by the need for efficiencies in operations, loss reduction and improvement in customer satisfaction.
- Some of the popular IT systems/solutions being deployed by urban local bodies (ULBs) include RFID-based smart bins, GPS-based tracking systems and management information systems for control and monitoring. ULBs in Amritsar, Surat, Pune, Chennai, Navi Mumbai and Chennai have been particularly active in deploying smart waste technologies.
- Further, utilities are deploying advanced systems such as smart landfill solutions, mobile applications and internet of things (IoT)-based waste management systems. Scientific disposal of waste is slowly catching attention. Waste-to-energy initiatives are gaining traction. Also, there is a renewed focus on the recovery and recycle of waste. Schemes like the Swachh Bharat Mission, the Smart Cities Mission and the Atal Mission for Rejuvenation and Urban Transformation have also laid special emphasis on improving waste management practices.
- That said, the investment requirement is huge and the sector presents sizeable opportunities. The private sector is expected to play a larger role in the creation of smart waste management infrastructure. Inherent challenges such as the absence of data, inefficiencies in user charges and poor financial health of ULBs will also need proactive attention.
- **The mission of this conference is to examine the state of the MSW sector in India, highlight new smart waste management initiatives and projects, and discuss new opportunities and key challenges. The conference will also showcase noteworthy projects and promising technologies.**

AGENDA/STRUCTURE

KEY TRENDS AND OUTLOOK

- ❖ What is the current state of MSW services?
- ❖ What are the recent trends and developments in the sector?
- ❖ What are the key issues and challenges?
- ❖ What is the sector outlook?

MoUD'S PERSPECTIVE

- ❖ What are the government's plans and perspective with regard to smart waste management in India?
- ❖ What are MoUD's programmes and incentives to promote smart waste management?
- ❖ What are the key issues?
- ❖ What are the upcoming policy initiatives in this space?

INDUSTRY PERSPECTIVE

- ❖ What are the initiatives taken by the private sector/ULBs for smart management of municipal smart waste?
- ❖ What has been the experience in terms of implementation, execution and financing of such projects?
- ❖ What are the key challenges?
- ❖ What are the opportunities for contractors, developers and technology providers in their respective cities?

SMART WASTE COLLECTION SOLUTIONS AND TECHNOLOGIES

- ❖ What are the current practices in waste collection?
- ❖ What are the smart solutions and technologies for waste collection? What are some of the noteworthy initiatives in this regard?
- ❖ What are the global best practices?
- ❖ Which of these can be adopted by Indian cities?

FOCUS ON FLEET AND ASSET MANAGEMENT

- ❖ What are the smart solutions and technologies for fleet and asset management?
- ❖ What has been the experience so far? What are the key issues and challenges?
- ❖ What are the global best practices? Which of these can be adopted by Indian cities?

FOCUS ON TREATMENT TECHNOLOGIES

- ❖ What are the technology options for waste treatment and disposal (composting, anaerobic digestion, refuse-derived fuel, etc.)?
- ❖ What role can IT play in this respect (SCADA, GIS, etc.)? What are the new functionalities and technologies being offered by the industry?
- ❖ What are some of the noteworthy projects? What are the key learnings?

ROLE OF ICT IN WASTE MANAGEMENT

- ❖ What role can ICT play in smart waste management (mobile applications, online bill payment, grievance redressal, intelligent remote monitoring, etc.)?
- ❖ What are some of the noteworthy initiatives in this regard? What specific benefits can ULBs draw from these initiatives?
- ❖ What are the emerging global trends?

FOCUS ON LANDFILL MANAGEMENT

- ❖ What are the current practices in landfill management?
- ❖ What role can technology play in landfill management?
- ❖ What has been the experience so far? What are the global best practices?

SMART WASTE RECYCLING SOLUTIONS

- ❖ What are the current practices in waste recycling and reuse?
- ❖ What are some of the IT solutions in use? What are the key issues?
- ❖ What are the best practices globally and which ones are relevant to Indian needs?

Target Audience: The conference is targeted at officials and managers from:

ULBs/Municipalities	Waste storage and handling companies	Technology providers	State infrastructure development corporations
Waste management companies	Certification and inspection companies	Financial institutions	Environment consulting and solutions firms
Waste collection companies	Policymakers and regulators	Facility management companies	Pollution control boards (central and state)
Waste sorting, recycling and service companies	Equipment manufacturers	Relevant government agencies	Research and development organisations
Waste transportation companies	Public health departments	Consulting organisations	Etc.

Mission

- India has tremendous potential to produce energy from the residue of municipal solid waste (MSW), the processing and cement industries, and agriculture. According to industry estimates, India produces over 151,816 tonnes per day (tpd) of smart waste, which has the potential to generate over 1,100 MW of power.
- However, most cities in the country lack proper segregation, transportation and storage facilities to tap this potential. Only 23 per cent of the total waste generated is processed. Moreover, in most cities, collection services are not extended to unauthorised and remote settlements, which are either inaccessible or lack the capacity to pay for these services.
- Currently, India has more than 33 waste-to-energy (WtE) plants with a cumulative installed capacity of over 275 MW. Apart from a few successful examples, most of these projects are struggling to cope with regulatory impediments and local unrest.
- Nevertheless, a number of significant developments have taken place over the past two to three years. The government has launched different programmes for the support and promotion of WtE in India. Under the Swachh Bharat Mission, one of the key components is the development of WtE facilities with central support of up to 20 per cent of the project cost. The Ministry of New and Renewable Energy is also implementing a programme on Energy Recovery from MSW. A financial assistance of Rs 20 million per MW, subject to a maximum of Rs 100 million per project, is provided for WtE projects.
- The pace of technology adoption in the WtE segment has also improved over the years. Urban local bodies (ULBs) are deploying advanced control and automation solutions for WtE facilities. In the waste treatment segment as well, new technologies such as pyrolysis and gasification are being adopted. Further, ULBs are taking steps to ensure proper collection and transportation of biodegradable, recyclable and other high-calorific value waste directly to the processing facility.
- Going forward, a continuous increase in the country's population, coupled with increasing public health and environmental concerns, will create substantial demand for WtE facilities. Another factor that would boost investments in the WtE segment is strong government support. In the next two to three years, at least 31 WtE plants with a potential to generate over 240 MW of energy from waste are expected to become operational.
- As the WtE market matures, more advanced technologies and processes are likely to be developed to provide efficient and low-cost solutions. This is expected to attract more private sector participation that will result in increased opportunities for technology providers for business collaborations and linkages.
- **The mission of this conference is to examine the state of the WtE segment in India, analyse key trends and developments, highlight new government programmes, and discuss new opportunities and key challenges. The conference will also showcase noteworthy projects and promising technologies.**

AGENDA/STRUCTURE

KEY TRENDS AND OUTLOOK

- ❖ What is the current scenario of the WtE segment in India (in terms of total installed capacity, energy generation, etc.)?
- ❖ What are the recent trends and developments in the WtE segment?
- ❖ What are the key issues and challenges?
- ❖ What is the sector potential?

GOVERNMENT PERSPECTIVE

- ❖ What are the government's plans and perspective with regard to WtE in India?
- ❖ What are the major government programmes and incentives to promote WtE projects?
- ❖ What are the key issues? What are the upcoming policy initiatives in this space?

ULBS' PERSPECTIVE

- ❖ What is the current state of the WtE segment in your city? What has been the experience so far?
- ❖ What are the trends in tariff/tipping fee, revenue collection, and capital and operations and maintenance expenditure?
- ❖ What are the key issues? How are they being addressed?

DEVELOPERS' PERSPECTIVE

- ❖ How has been the experience of developers' so far?
- ❖ What are the different PPP models used for WtE projects?
- ❖ What are the operational constraints being faced by the industry?
- ❖ What are the expectations from ULBs and the government?

REGULATION AND COMPLIANCE

- ❖ What are the standards and norms for energy recovery from waste?
- ❖ What steps are being taken by developers/operators to ensure compliance with norms?
- ❖ What can the industry expect in terms of future standards and norms?

FINANCING OF WTE PROJECTS

- ❖ How has WtE financing evolved? What is the financiers' perception of the sector?
- ❖ What are the new and innovative financing structures for WtE projects?
- ❖ What are the key sources of revenue? What are the new revenue options being explored?

WASTE TO FUEL

- ❖ What has been the experience so far with conversion of waste to fuel (petrol/gasoline, diesel, jet fuel, etc.) in India?
- ❖ What are the various technologies being adopted in this area?
- ❖ What are the global best practices?

FOCUS ON TECHNOLOGY

- ❖ What are the prevalent WtE technologies? What are their key features (per unit energy production, capex and opex requirements, other byproducts, etc.)?
- ❖ What are the emerging technologies?
- ❖ What are the best practices followed globally?
- ❖ What are the opportunities for technology providers?

EQUIPMENT SHOWCASE

- ❖ What are the key trends in the equipment market?
- ❖ What are the recent developments and innovations in India and globally?
- ❖ What are the key issues and challenges? What are the market opportunities?

PROJECT SHOWCASE

- ❖ What are some of the noteworthy WtE projects?
- ❖ What are their key characteristics? What is the financing pattern?
- ❖ What are the key challenges and what lessons can be learnt?

ROLE OF IT AND AUTOMATION IN PLANT OPERATIONS AND MANAGEMENT

- ❖ What is the role of IT and automation in WtE plant operations and management?
- ❖ What is the current state of IT adoption in the WtE segment?
- ❖ What are the emerging requirements?
- ❖ What are the key issues and challenges?

MARKET FOR WASTE RESIDUES/BYPRODUCTS (green energy, refuse-derived fuel, manure, fly ash, etc.)

- ❖ What types of residues or byproducts are generated from WtE plants?
- ❖ What are the key applications of these products? What are the costs and returns?
- ❖ What are the key issues and challenges? How are they being addressed?

Target Audience: The conference is targeted at executives, managers and decision makers from:

ULBs/Municipalities	Environment consulting and solutions firms	Power trading companies	Financial institutions
Polymakers and regulators	Gencos, transcos and discoms	Facility management companies	Captive plant operators
Technology providers	Renewable energy developers	Consulting organisations	Certification and inspection companies
Research and development organisations	Relevant government agencies	Independent power producers	Automobile companies

Previous participants at related conferences

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REGISTRATION FORM

- I would like to register for the “SMART WASTE MANAGEMENT” conference (April 5, 2018, Le Meridien, New Delhi)
- I would like to register for the “WASTE TO ENERGY AND FUEL” conference (April 6, 2018, Le Meridien, New Delhi)
- I would like to register for **both the conferences**

I would like to register for the conference. I am enclosing Rs _____ vide cheque/demand draft no. _____ drawn on _____ dated _____ Company GST No. _____ in favour of India Infrastructure Publishing Pvt. Ltd. payable at New Delhi.

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REGISTRATION FEE

ANY ONE CONFERENCE

Delegates	Fee			
	INR	GST @18%	Total INR	Total USD
One delegate	12,000	2,160	14,160	236
Two delegates	20,000	3,600	23,600	393
Three delegates	28,000	5,040	33,040	551

BOTH CONFERENCES

Delegates	Fee			
	INR	GST @18%	Total INR	Total USD
One delegate	20,000	3,600	23,600	393
Two delegates	32,000	5,760	37,760	629
Three delegates	44,000	7,920	51,920	865

- Delegate fee is inclusive of 18 per cent GST.
- There is a special low fee of Rs 3,000 per participant for urban local bodies, state owned regulatory authorities, academic and research institutions and government agencies (not public sector corporates).
- The fee will be Rs 5,000 per participant for those attending both the conferences.

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- Full payment must be received prior to the conference.
- Conference fees cannot be substituted for any other product or service being extended by India Infrastructure Publishing Pvt. Ltd.
- Conference fee includes lunch, tea/coffee and conference material.

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The conference is being organised by **India Infrastructure Publishing**, a leading provider of information on the infrastructure sectors through magazines, newsletters, reports and conferences. The company also publishes **Indian Infrastructure**, **Smart Utilities** and **Renewable Watch** magazines. It also publishes series of reports on the infrastructure sectors including **Water and Wastewater in India**, **Industrial Water Sector**, **Municipal Water Sector**, **Sewage Treatment Market in India** and **Municipal Solid Waste in India**, etc. It also publishes **Urban Water & Sanitation News** (a weekly newsletter) and the **Water Industry Directory & Yearbook**.

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