

Concept Paper		
Webinar on Waste-to-Energy Municipality-level Demonstration Project in Selected Areas of Member States		
Webinar	PRG-161/2019/PROMO	SEC

Background:

The ever-increasing generation of municipal solid waste (MSW) in the fast-growing cities of developing countries has led to increasing public concerns with regards to the resultant health and environmental impacts. An urban citizen in South Asian region generates on average between 100 and 250 kg of MSW per year. In SAARC region, organic waste is the most relevant fraction which ends up in the formal waste stream and needs treatment. However, within SAARC region, there is a lack of a robust MSW management system to handle, monitor, coordinate, finance, plan and control the entire waste flow chain from generation, collection, transportation, disposal, treatment and re-use.

Waste-to-Energy (WtE) technologies offer attractive option to solve not only the pressing waste disposal problems but several other challenges simultaneously such as shortages in power generation, limited space for landfills, and greenhouse gas emissions from inappropriate waste disposal. WtE refers to a family of technologies that treat waste to recover energy in the form of heat, electricity or alternative fuels such as biogas. The scope of the term ‘Waste-to-Energy’ is very wide, encompassing a range of technologies of different scales and complexity. These can include the production of cooking gas in household digesters from organic waste, collection of methane gas from landfills, thermal treatment of waste in utility size incineration plants, co-processing of Refuse Derived Fuel (RDF) in cement plants or gasification.

In South Asia, it is estimated that there is a potential to produce around 8 million tons of compost worth an estimated US\$ 709 million, or alternatively, an estimated 3,340 million kilowatt-hours/year of electricity (from biogas) with a market value of around US\$ 701 million/year.¹ The Member States must consider only those WtE technologies which are suited best to their localized conditions. There are a number of factors to be considered for choosing a suitable technology for treating different components of wastes before their final disposal. The technology options available for processing the MSW are based on either bio-chemical conversion or thermal conversion.

Introduction:

SEC, under its thematic area of “Programme to Minimize Oil Imports (PROMO) through improvements in Energy Efficiency and Fuel Substitution”, proposes a webinar on “Waste-to-Energy (Municipal Solid Waste) Projects in SAARC Member States”.

The proposed webinar will be a 3 to 5 hours long activity, and will consist of presentations from various experts having knowledge of the experiences and initiatives of WtE technologies, consideration of factors before selecting a technology such as type, quantity and calorific value of

¹ Towards Sustainable Municipal Organic Waste Management in South Asia, ADB, 2011

waste; lowest carbon footprint of WtE technology; available mechanism for community-based source segregation of waste; separate collection and resource recovery systems etc.

Objectives:

The objective of the webinar is to introduce different WtE based technologies to the participants. The webinar will share suitability, viability and other aspects of these technologies with reference to businesses, Government officials, investors, and project developers.

Major Aspects /Topics to be covered during the Webinar:

The following aspects of WtE projects shall be covered in the webinar:

- a) Waste type and content
- b) Waste Management and WtE technologies
- c) World best practices
- d) Successful business models
- e) Expected Challenges

Relevance, Coherence and Sustainability:

SEC, in the past, had conducted workshop on application of biogas technologies in SAARC region. Through this webinar, SEC shall enhance knowledge of participants on the available technologies. This will in turn give multiples benefits i.e., overcoming energy shortage, processing waste sustainably and creation of jobs. The same type of activity will also continue in future activities of SEC.

Potential Professional Resource:

The experts/speakers from WtE companies shall be engaged during the webinar. They shall deliver their presentations during the webinar and respond to questions by the participants. SEC Program Coordinator will finalize the event program in close coordination with the speakers.

Venue of the Workshop:

The Webinar shall be broadcasted from office of SAARC Energy Centre.