Waste Recycling and Recovery Business

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IMPORTANT POINTS TO TAKE INTO ACCOUNT FOR WASTE RECYCLING AND WASTE RECOVERY BUSINESS

PROJECT DEVELOPMENT

- Project development on solid waste management solutions depend heavily on efficient collection systems and waste characterization
- Solutions need to take into account – different stakeholders, such a civil society, waste policy managers, and end –users
- There are no standard solutions for all cities.

IMPORTANT POINTS TO TAKE INTO ACCOUNT
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WASTE APPLICATIONS

- Asia needs efficient collection methods due to the need to transport big amounts of waste with both distance and time constraints concerning landfill locations.
- Waste sorting and recycling are important not only as a first step to avoid having big landfills, but also better allocation of high value land + population growth in big cities.

Waste-to-energy Facility in Haiti

- An integrated solid waste management Project: collection, waste sorting, recycling, Anaerobic Digestion Plant (2MW), Waste-to-Energy Plant (75MW), sludge drying

- **This project has been audited by UNEP Post Conflict and Post Disaster Unit.** It was a project developed after Haiti's 2010 Earthquake
  - Amount of Waste collected/day: 2000 tn
  - Energy Generated: 50MW
  - Waste Treatment includes MBT – Mechanical Biological Treatment and Refuse Derived Fuel (RDF)
  - Recycling Facilities
  - Project will generate at least 3000 jobs - direct jobs.
  - Promote a Zero Landfill policy
  - Leachate Treatment Facilities
  - EU and International Regulations for gas emissions

- Public - Private Partnership agreement, signed in 2013. Construction commences in 2015.

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IMPORTANT DIFFERENCES BETWEEN ANAEROBIC DIGESTION AND WASTE-TO-ENERGY FACILITIES

- **Anaerobic Digestion Plants**
  - European Anaerobic Digestion facilities are subsidized and able to pay tipping fees in excess of 100 €/ton. It helps to cover for Capital and Overhead Expenditures.
  - Can be used as energy generation facilities and/or fuel for vehicles facilities.
  - Require more effort from end-user on reuse, recycling and disposal

- **Waste to Energy Plants**
  - Creates high-value, technical and managerial opportunities
  - Stimulates the creation of upstream and downstream small business, add-on value businesses from by-products
  - No need for subsidies for through tipping fees.
  - 100% waste collected
  - Fully capitalized system, lower social impact
  - Cleaner environment promotes investment, tourism and trade.
  - Paradigm shift in attitude towards waste.

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The MBT facility in Aveiro , Portugal (shown below):
capable of processing 190,000 tons per year and incorporates waste separation, drying, and processing.

ANAEROBIC DIGESTION PLANTS

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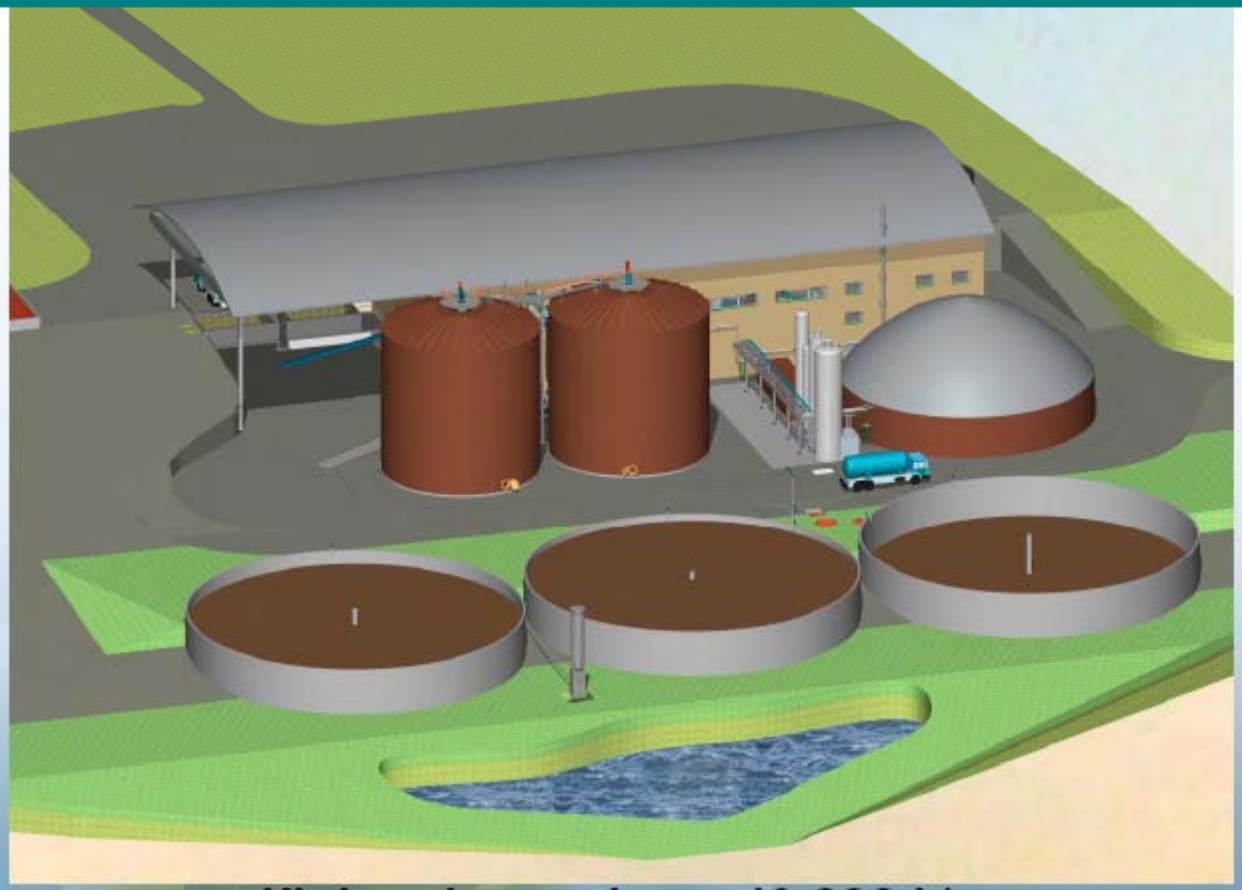
Ros Roca biogas plants in Europe



Kielen, Luxemburg 48.000 t/y
Energy crops, cow manure, cow dung, biowaste, organic industrial waste

WASTE to ENERGY FACILITY - WtE

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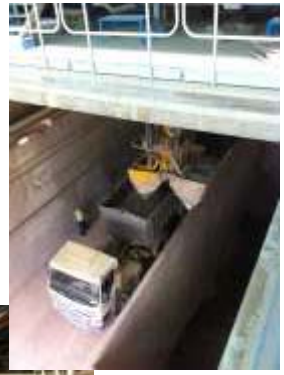

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