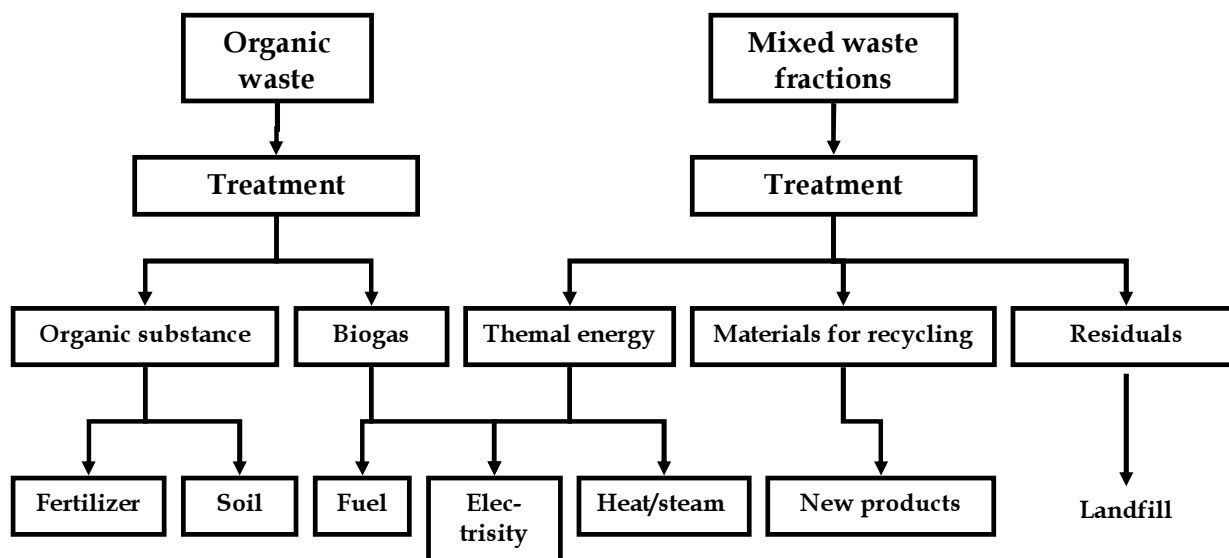


Waste to Energy, biological and thermal treatment



Waste treatment - a big industry

In order to deal with the increasing waste amounts and fulfil EU directives there is a need to build up new treatment capacity, especially in Middle Eastern Europe. EU has different programmes with funding for necessary investments.

Biological treatment of separated organic waste will more and more be introduced. Today a combination of biogas production and composting can result in both high energy recovery and recycling of biomass as fertilizer.

Thermal treatment of residual waste and fuel production based on different waste streams will be important elements in future waste treatment structure. This is based on energy recovery for electricity, steam for industry and district heat.

Modern flue gas systems ensure low emissions from these facilities compared with other thermal energy systems.

Land filling will also in future be a part of a total solution, based on modern technology and good environmental standard.

Mepex share knowledge

Mepex can perform all kinds of planning activity for new waste treatment facilities, be contract engineer and project leader for execution. This includes evaluation of technologies, cost and profitability analysis and environmental analysis.

We can also make feasibility studies according to EU standards and help with application for funds.

We cover following treatment processes:

- Thermal treatment
- Refused derived Fuel production
- Special treatment hazardous waste
- Flue gas, slag and ash system
- Composting and biogas plant
- Landfill/biocells
- Mechanical pre-treatment

Mepex has long experience with different kinds of treatment facilities. Selected references are shown on next page.

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Selected reference projects

Biological treatment of waste

Client	Project in short
9 Communities in region of Drammen	Feasibility study, pre-design and tender documents for biological treatment based on biogas and soil production.
GLØR and 15 communities in region of Mjøsa	Feasibility study and regional strategy for treatment of food waste and sludge. High temperature sterilization and biogas production.
IVAR, intercommunal company Stavanger	Feasibility study and pre-design for biological treatment of food waste on different locations.
HIAS, intercommunal company Hamar	Project design and project leadership for execution of biogas plant for sewage sludge based on thermal hydrolysis.
Oslo community and EGE	Feasibility study for biological treatment of food waste and environmental impact study

Thermal treatment of waste and flue gas system

Holmen Bioenergi AS	New waste to energy facility in Alvdal, Norway for production of steam used for industrial processes and district heating. Feasibility study and environmental impact study.
BIO-EI AS	New waste to energy facility in Fredrikstad, 22 MW for production of electricity and district heat. CFB-technology.
Hafslund Production AS	New waste to energy CFB-facility in Sarpsborg, 30 MW for process steam production. Project management, pre-design, contract engineering.
FREVAR IKS	Waste to energy facility in Fredrikstad, 90.000 tons municipal waste. Operation assistance and execution of task to enlarged capacity in existing lines. Planning activities for new line 125.000 tons.
Oslo community, Brobekk and Klemetsrud plant	Waste to energy facility in Oslo for 100.000 tons of municipal waste. Project leader for design, contracts and execution of total renewal at Brobekk and flue gas systems. Operation and maintenance assistance.
City of Amsterdam	Monthly technical and financial audits during execution of 2 new lines for waste to energy facility in Amsterdam (70 tons per hour.)

Sorting plants and RDF production

Veolia Environment, Region East Norway	Project planning and project leader for execution of new sorting line for mixed waste from commercial.
Veolia Environment, Region South Norway	Project planning for sorting line for household waste and commercial waste.
PIL/Norwegian Industry	National research project for development of quality standards for Refuse derived Fuel products based on environmental requirements.