Waste-to-Energy in Europe

Instrumental in EU Waste and Energy Policy Goals

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Confederation of European Waste-to-Energy Plants
CEWEP represents over 200 Waste-to-Energy Plants in 13 European countries.

Member associations and plants provide necessary public infrastructure –

• Careful handling of waste
• Conserving natural resources
• Minimising possible emissions
The plants, represented by CEWEP, annually treat about 30 million tonnes of waste in an environmentally sound way.

This covers about 60 % of the whole European waste incineration market.

The annual turnover is approximately €4500 million.
Membership of CEWEP underlines a Waste-to-Energy Plant’s commitment to high environmental standards, achieving very low emissions by operating best available technique and maintaining state of the art energy production from otherwise unusable materials.
Waste treated by CEWEP Members in 2003

<table>
<thead>
<tr>
<th>MEMBERS</th>
<th>Treated waste in 2003 (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUSTRIA, Fernwärme Wien, ENAGES, KRV</td>
<td>582.296</td>
</tr>
<tr>
<td>CZECH REPUBLIC, Pražské služby, SAKO Brno, Termizo, Sdružení STEO</td>
<td>436.527</td>
</tr>
<tr>
<td>DENMARK, Reno-Sam</td>
<td>912.179</td>
</tr>
<tr>
<td>FRANCE, Séché Environnement</td>
<td>82.000</td>
</tr>
<tr>
<td>GERMANY, ITAD</td>
<td>13,004,912</td>
</tr>
<tr>
<td>HUNGARY, FKF Budapest</td>
<td>192,300</td>
</tr>
<tr>
<td>IRELAND, Indaver</td>
<td></td>
</tr>
<tr>
<td>Indaver Ireland currently have two plants in the planning stages</td>
<td></td>
</tr>
<tr>
<td>ITALY, Federambiente</td>
<td>2,884,861</td>
</tr>
<tr>
<td>PORTUGAL, VALORSUL</td>
<td>591,432</td>
</tr>
<tr>
<td>SPAIN, AEVERSU</td>
<td>1,451,682</td>
</tr>
<tr>
<td>SWEDEN, RVF</td>
<td>3,132,500</td>
</tr>
<tr>
<td>THE NETHERLANDS, VA incl. AEB</td>
<td>5,029,000</td>
</tr>
<tr>
<td>SWITZERLAND, VBSA</td>
<td>2,973,753</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>31,273,442</strong></td>
</tr>
</tbody>
</table>
Waste-to-Energy Plants in Europe
Operating in 2003
Treated waste in million tons /year
The role of Waste-to-Energy
WtE: Complementary in the waste management system

• recovers energy from waste not recycled by other means
Not all household waste can be adequately sorted and recycled. Why not use this un-sorted waste as a resource to produce energy?

Considering that more than half of MSW is biodegradable (62 %) this part is considered biomass and thus a renewable energy source (RES Electricity Directive 2001/77/EC).

• hand-in-hand with recycling
It is no coincidence that the EU Member States with the highest recycling rates, also have the highest levels of Waste-to-Energy Production.

• is instrumental to fulfil the EU Landfill Directive
WtE: Instrumental in EU Waste Policy

According to the Landfill Directive (1999/31/EC) biodegradable municipal waste going to landfills must be reduced: to 35 % of the total amount (base year 1995) by 2016.

Methane emissions
• According to a German study http://www.bmu.de/files/pdfs/allgemein/application/pdf/klima_abfall050907.pdf the application of the Landfill Directive will save 74 million tons CO$_2$-equivalents by 2016, thanks to avoided landfill gas (methane) emissions.
• The study estimates that the saving of CO$_2$-equivalents could increase to 134 million tons if a landfill ban on unpretreated waste would be implemented across Europe.

WtE helps to fulfill the Landfill Directive while also contributing to climate protection through the substitution of fossil fuels.
WtE: Contribution to Climate Protection

50 million tons thermally treated in Europe

Equivalent to

7.4 billion l Oil

Equivalent to 20.2 million tons CO₂

= 6% of the EU-15 Kyoto targets by 2012.

30.6 million tons Lignite (brown coal)

Equivalent to 30.3 million tons CO₂

= 9% of the EU-15 Kyoto targets by 2012.
WtE: Complementary in the Energy Production System

- provides electricity and heat
  50 million tons of MSW annually treated

  27 TWh of electricity
  (= population of the NL, Denmark and Finland)

  63 TWh of heat
  (= population of Austria, Ireland and Estonia)
“in 1990 one third of all dioxin emissions in Germany came from waste incineration plants, for the year 2000 the figure was less than 1%” (BMU July 2005).

Source: German Federal Environment Ministry (BMU), July 2005.
CEWEP’s aims

- Boost renewable energy from waste
- End landfilling of combustible waste
- Promote high environmental standards for ALL waste facilities - a level-playing field
- Promote transparency for the public
- Information point for the public, NGO’s and decision makers (local, national and EU-level.
In summary

• Waste-to-Energy plants are an essential part of both the waste management and the energy supply network.

• provides solutions for EU and Member States Waste Management policy and climate protection goals.

• creates jobs and know-how in a world leading technology
Further questions?

Please contact us if you would like some further information about Waste-to-Energy

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