



Confederation of European Waste-to-Energy Plants



Heating and Lighting the Way to a Sustainable Future

Waste-to-Energy Plants produce energy through the thermal treatment of waste. They are an essential part of both the waste management and energy supply network.

CEWEP e.V. – the Confederation of European Waste-to-Energy Plants

CEWEP is the umbrella association of the owners and operators of Waste-to-Energy Plants, representing 372 Waste-to-Energy Plants from 17 European countries and one from the USA. They make up 85% of the Waste-to-Energy capacity in Europe.

Waste-to-Energy Plants thermally treat (incinerate with energy recovery) household and similar waste that remains after waste prevention, reuse and recycling by generating energy from it.

They provide necessary public infrastructure for:

- Careful handling of waste
- Conserving natural resources
- Minimising possible emissions.

The plants represented by CEWEP are operated both by municipalities and private companies. Members are mostly national associations, but also individual plants.

Membership of CEWEP underlines a Waste-to-Energy Plant's commitment to ensuring high environmental standards, achieving low emissions by operating Best Available Techniques and maintaining state of the art energy production from not otherwise reusable or recyclable materials.

Recycling and Waste-to-Energy are complementary waste treatment methods. Together they are instrumental to fulfil the targets of the European Landfill Directive, to divert biodegradable waste from landfills.

CEWEP members annually treat about 63 million tonnes of household and similar waste that remains after waste prevention, reuse and recycling, in an environmentally sound way.

CEWEP Members	Thermally treated MSW in 2010 (tonnes)
Austria , Fernwärme Wien, KRV	676,858
Belgium , Belgian Waste-to-Energy	2,549,068
Czech Republic , Pražské služby, SAKO Brno, Termizo, Sdružení STEO	511,346
Denmark , RenoSam	1,122,804
Finland , Ekokem Oy Ab, JLY *	151,882
France , SVDU, Séch� Environnement, Savoie D�chets	11,778,462
Germany , ITAD	19,978,821
Hungary , FKF Budapest	409,104
Ireland , CEWEP Ireland **	**
Italy , Federambiente	4,690,617
Netherlands , Dutch Waste Management Association	6,169,793
Norway , Avfall Norge	1,158,389
Portugal , AVALER	1,124,441
Spain , AEVERSU	1,959,271
Sweden , Avfall Sverige	5,100,370
Switzerland , VBSA	3,720,000
UK , Waste Recycling Group	491,981
USA , Energy Answers International	998,976
Total	62,592,183

* Plant in planning stages

** The Meath plant started operation in 2011, other plant in planning stages

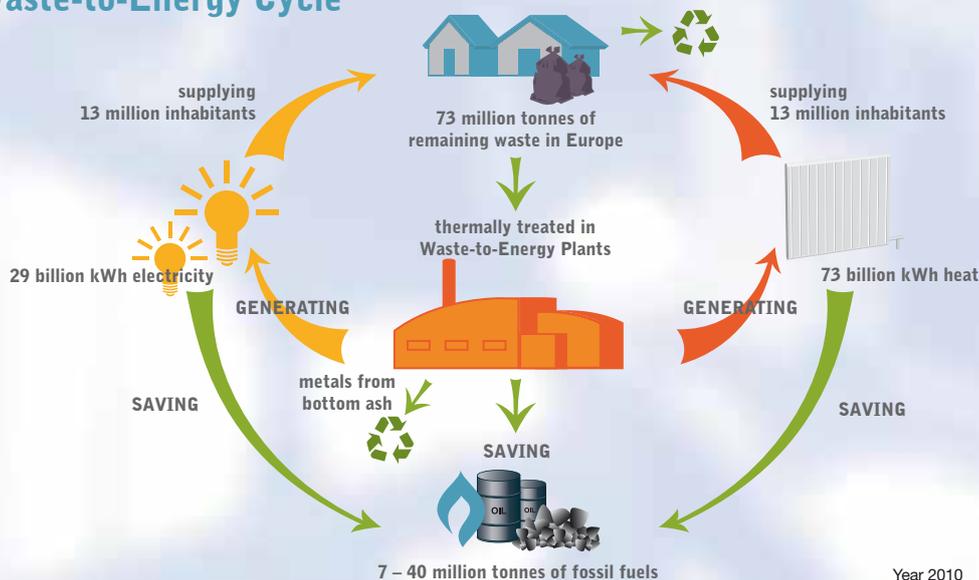
Waste-to-Energy Plants use waste as an alternative resource to produce sustainable energy.

Sustainable Energy from Waste

Waste-to-Energy Plants produce heat and electricity from waste, delivering it to households and industry, thus replacing the energy produced by conventional power plants, using fossil fuels. This is how they help to reduce CO₂ emissions and reaching the aims of the Kyoto-protocol. There is a close link between the sustainable management of natural resources and energy recovery.

To optimize the Waste-to-Energy process CEWEP members not only invest heavily in sophisticated filtering devices to minimise the emissions into the atmosphere, but also in increasing the energy efficiency of the plant so that it can generate as much sustainable energy from the waste as possible. CEWEP provides practical solutions to the EU and Member States on waste management policy and climate protection goals.

Waste-to-Energy Cycle



On the basis that about 73 million tonnes of household and similar waste that remains after waste prevention, reuse and recycling, was treated in Waste-to-Energy Plants across Europe in 2010 (see map on last page), 29 billion kWh of electricity and 73 billion kWh of heat can be generated.

Then between 7 – 40 million tonnes of fossil fuels (gas, oil, hard coal and lignite) can be substituted annually, emitting 20 – 40 million tonnes of CO₂.

Replacing these fossil fuels, Waste-to-Energy Plants can supply annually about 13 million inhabitants with electricity and 13 million inhabitants with heat.

This is equivalent to the entire population of Denmark, Finland and Latvia that can be supplied with electricity and the entire population of Denmark, Finland, Estonia that can be supplied with heat from Waste-to-Energy Plants throughout the year.

Waste-to-Energy Contributing to Resource Efficiency

Valuable parts of bottom ash, which is the residue from the combustion of household waste, can be recycled. The combustion process cleans and separates metals and inerts from mixed waste, which could not otherwise be recycled. As a result further recycling of these metals is possible. For example, the remaining ferrous and non-ferrous metals in the waste can be extracted from the bottom ashes and recycled into new products such as aluminium castings for the automotive

industry. Other remaining minerals can be used as secondary aggregates, e.g. in road construction or in building products.

Due to the extra quantities of materials recovered from bottom ash Waste-to-Energy Plants contribute further to achieving a recycling society and thus helps to improve Europe's Resource Efficiency, using unavoidable waste as a valuable resource wherever possible.

In order to achieve sustainable waste management across Europe to high environmental standards with primary energy savings



CEWEP aims

Boost alternative energy from waste

A major part of household and similar waste that remains after waste prevention, reuse and recycling, is biodegradable. This waste is considered as biomass and therefore a source of sustainable energy.

This alternative energy source should be promoted for its:

- *contribution to climate protection* by reducing fossil fuel consumption and landfill methane emissions, and
- *security of energy supply* for Europe, as Waste-to-Energy is a stable and reliable local energy source.

Reducing dependence on landfills

CEWEP aims to highlight that recycling and energy recovery are complementary options in order to divert waste from landfilling.

To avoid wasting natural resources and reducing landfill methane emissions combustible waste should not be landfilled, but treated, in a more sustainable way, in Waste-to-Energy Plants that produce energy from the waste.

Level playing field

The main challenge facing EU waste policy is to move towards a level playing field for waste treatment across the Community. This means applying the same environmental requirements for all plants. Industrial plants that co-incinerate waste should also meet the same requirements on emissions as Waste-to-Energy Plants.

To prevent 'eco-dumping' and 'sham recovery', quality standards for recovery should be determined. Once this is the case, the incentives for inappropriate waste shipments should decrease.

Promote Public Participation

CEWEP provides information to the public on emission levels, energy efficiency, on the technology of Waste-to-Energy and the Plants' contribution to climate protection in order to raise citizens' awareness of the role Waste-to-Energy plays in sustainable waste management.

Representation at the European level

CEWEP represents European Waste-to-Energy Plants at the EU level, through thorough analysis of environmental legislation, on sustainable development and by providing information on the Waste-to-Energy sector to the Commission, Council and European Parliament.

Through this work CEWEP intends to participate in the decision making process from the earliest stage, closely in contact with the decision makers in Europe.

Promote exchange of experience, research and development

CEWEP serves as a platform for the exchange of experience between members, advances scientific, technical and practical aspects of Waste-to-Energy and promotes research, development and dissemination of knowledge towards sustainable waste management and energy recovery.



Members

Austria

Fernwärme Wien Gesellschaft m.b.H.
www.fernwaermewien.at

KRV Arnoldstein

Kärntner Restmüllverwertungs GmbH
www.krv.co.at

Belgium

Belgian Waste-to-Energy (BW2E)
www.bw2e.be

Czech Republic

Pražské služby, a.s.
www.psas.cz

SAKO Brno, a.s.

www.sako.cz

Termizo, a.s.

www.termizo.cz

Sdružení STEO

www.steo.cz

Denmark

RenoSam

www.renosam.dk

Finland

JLY - Jätelaitosyhdistys ry

(Finnish Solid Waste Association)
www.jly.fi

Ekokem Oy Ab

www.ekokem.fi

France

SVDU

www.incineration.org

Séché Environnement

www.groupe-seche.com

Savoie Déchets

www.savoie-dechets.com

Germany

ITAD

Interessengemeinschaft der
thermischen Abfallbehandlungs-
anlagen in Deutschland e.V.
www.itad.de

Hungary

FKF RT

Fővárosi Közterület-fenntartó Rt.
www.fkf.hu

Ireland

CEWEP Ireland

www.cewepireland.com

Italy

Federambiente

www.federambiente.it

The Netherlands

Dutch Waste Management Association/Vereniging Afvalbedrijven

www.verenigingafvalbedrijven.nl
and www.wastematters.eu

Norway

Avfall Norge

www.avfallnorge.no

Portugal

AVALER

www.aval.pt

Spain

AEVERSU

Sweden

Avfall Sverige

www.avfallsverige.se

Switzerland

VBSA

Verband der Betriebsleiter und
Betreiber Schweizerischer
Abfallbehandlungsanlagen
www.vbsa.ch

UK

FCC Environment

www.fccenvironment.co.uk

USA

Energy Answers International

www.energyanswers.com



Waste-to-Energy in Europe in 2010

- Waste-to-Energy Plants operating in Europe (not including hazardous waste incineration plants)
- Waste thermally treated in Waste-to-Energy Plants in million tonnes



Data supplied by CEWEP members unless specified otherwise

* From Eurostat

** Includes plant in Andorra

CEWEP e.V.

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